

# Michael B. Schrimpf, Ph.D.

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Postdoctoral Fellow  
Cornell Lab of Ornithology  
Cornell University  
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## Research Interests

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I am broadly interested in how birds are distributed across land- and seascapes, and I use that information to measure how populations change and communities are structured as those distributions are impacted by human activity. 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.

## Education

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### **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

## Professional Appointments

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### **Postdoctoral Fellow**

Cornell Lab of Ornithology, Cornell University

2022-present

### **Postdoctoral Fellow**

Natural Resources Institute, University of Manitoba

2020-2021

## Peer-reviewed Publications

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Wagner E. L., Pearson S. F., Good T. P., Hodum P. J., Buhle E. R., Schrimpf M.B. 2023. Resilience to a severe marine heatwave at two Pacific seabird colonies. *Marine Ecology Progress Series*. HEATav4.

<https://doi.org/10.3354/meps14222>

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)

## Teaching and Mentoring

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As instructor:

*Applied Ecology and Conservation Biology* 2018  
Stony Brook University  
Undergraduate Biology/Ecology and Evolution (BIO 356/BEE 587)

*Ecology Laboratory* 2016-2019  
Stony Brook University  
Undergraduate Biology/Ecology and Evolution (BIO 352/BEE 571)

*Introduction to Statistical Thinking and Practice* 2015  
Stony Brook University  
Center for Science and Math Education (CSM 599)

As teaching/laboratory assistant:

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

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

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

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

*Practical Oceanography* 2011-2013  
Various supervisors; Sea Education Association  
Aboard the sailing school research vessels *Corwith Cramer* and *Robert C. Seamans*

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

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

*Terrestrial Field Ecology* 2004  
Dr. Jodi Sedlock; Lawrence University  
Biology (BIOL 345)

As mentor:

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

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

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

*Project Advisor*; Bryant Science Fair 2009  
Bryant Elementary School

## Postdoctoral Funding Collaborations

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These are grants awarded to others to support me as a postdoc and for which I played a collaborative role in the project development.

*Measuring Southern Ocean seabird distributions.* \$396,235 2022-2024  
Primary PI: Christopher Wood, Cornell Lab of Ornithology. Source: Viking Expeditions (active)  
Role: project development and co-PI for research

*COVID-19 impacts on wildlife.* \$37,000 2020-2021  
PI: Nicola Koper, University of Manitoba. Source: NSERC (Alliance COVID-19 Grants)  
Role: collaboration in project conception and postdoctoral work

## Grants and Fellowships

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*Southern Ocean seabird observation analysis via eBird.* \$6000 2024  
Source: Experiential Learning Awards to support undergraduate mentorship,  
Cornell Lab of Ornithology. Role: postdoctoral PI and mentor

<i>Antarctic seabird dietary analysis using DNA metabarcoding.</i> \$600	2017
Source: Robert R. Sokal Fund for Research in Statistical Biology, Dept. of Ecology & Evolution, Stony Brook University. Role: graduate student co-applicant	
<i>Accounting for non-detection in Antarctic seabird breeding distributions derived from opportunistic site visits.</i> \$750	2015
Source: Robert R. Sokal Fund for Research in Statistical Biology, Dept. of Ecology & Evolution, Stony Brook University. Role: graduate student applicant	
<i>Ecology and Evolution Recruitment Fellowship.</i> \$2000	2013
Source: Stony Brook University. Role: graduate student applicant	

## Other Honors/Awards

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• President's Award for Excellence in Teaching by a Graduate Student Stony Brook University	2018
• 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; 37 <sup>th</sup> Annual Meeting of the Pacific Seabird Group	2010
• Best Student Poster; 35 <sup>th</sup> 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

## Selected reports and other manuscripts

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Schrimpf, M.B. & C. Wright. 2023. eBird Southern Ocean Calibration: 2022-23 season report & progress update.  
[https://michaelschrimpf.weebly.com/uploads/2/4/6/7/24672251/cornell-viking\\_report\\_2022-23.pdf](https://michaelschrimpf.weebly.com/uploads/2/4/6/7/24672251/cornell-viking_report_2022-23.pdf)

Schrimpf, M.B. & C. Wright. 2022. eBird Southern Ocean Calibration: 2021-22 season report.  
[https://michaelschrimpf.weebly.com/uploads/2/4/6/7/24672251/cornell-viking\\_report\\_2021-22.pdf](https://michaelschrimpf.weebly.com/uploads/2/4/6/7/24672251/cornell-viking_report_2021-22.pdf)

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.

## Invited Presentations

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Schrimpf, M. Using distance sampling to understand how sea-going citizen scientists detect marine birds. Centre for Research into Ecological and Environmental Modelling, University of St. Andrews. 24 May 2023.

Schrimpf, M. How volunteer-collected data helps us understand ecological patterns in birds, from your backyard to Antarctica. Carleton College, Department of Biology. 24 April 2023.

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. 19 November 2021. [invited 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. 18 November 2021. [invited public lecture]

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 January 2021.

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

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

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

## Selected Contributed Presentations

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Schrimpf, M., A. Johnston, W. Hochachka, C. Wright & C. Eaton. Improving distance sampling methods for birds in flight. Pacific Seabird Group. 23 February 2024. [oral presentation]

Schrimpf, M., A. Johnston, W. Hochachka, & C. Wood. Calibrating eBird detection probability for open-ocean records. American Ornithological Society and Society of Canadian Ornithologists Joint Conference. 10 August 2023. [oral presentation]

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

Schrimpf, M. & H. Lynch. Range limits, breeding distributions, and the role of stochasticity in structuring the Antarctic Peninsula seabird metacommunity. 3<sup>rd</sup> 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 August 2021. [oral presentation]

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

Schrimpf, M. & H. Lynch. Interactions among Antarctic breeding seabirds. 27<sup>th</sup> International Ornithological Congress. Vancouver, British Columbia. 22 August 2018. [poster presentation]

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

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

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

Schrimpf, M.B., J.K. Parrish, N.A. Zorich, P.L. Madson, & M.R. Jonas. 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. 24 March 2011. [oral presentation]

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

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

Schrimpf, M.B. & J.K. Parrish. 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, 37<sup>th</sup> Annual Meeting, Long Beach, CA. 18 February 2010. [oral presentation, awarded best student paper]

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

Schrimpf, M.B., B.T. De Stasio & T. Reed. 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. 5 February 2007. [oral presentation]

Schrimpf, M., W. Daniels, T. Haas, & B.T. De Stasio. 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. 3 November 2005. [oral presentation]

## Other Research/Laboratory Work

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In addition to my graduate studies and postdoctoral appointments, I have worked in the following research settings:

<i>Oceanography and marine education</i> Sea Education Association	2011-2013
<i>Pacific Northwest seabird colony monitoring</i> Washington Dept. of Fish and Wildlife, Dr. Scott Pearson	2010-2011
<i>Freshwater plankton ecology</i> Lawrence University, Dr. Bart De Stasio	2006-2007
<i>Assistant Chemistry Stockroom Manager</i> Lawrence University, Dr. Jerrold Lokensgard	2006-2007

## Reviewer

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I have reviewed manuscripts for the following publications:

Antarctic Science  
Bioacoustics  
Ecology and Evolution  
eLife  
Evolution: Education and Outreach  
Global Change Biology  
Journal of Avian Biology  
Marine Ecology Progress Series  
PeerJ  
PLOS ONE  
Polar Biology  
The Quarterly Review of Biology



## Academic/Department Service

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### 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

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Active membership in the following societies:

American Ornithological Society

Pacific Seabird Group

Ecological Society of America

## Other Public Outreach, Service, and Volunteer Roles

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Friends of the Ashley Schiff Park Preserve

[www.ashleyschiff.org](http://www.ashleyschiff.org)

Education Committee Chair: 2013-2016

President: 2016-2018

eBird – volunteer data reviewer

[www.ebird.org](http://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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