

Natasha J. Gownaris
346 E. Railroad Street, Unit #12
Gettysburg, PA 17325
email: ngownari@gettysburg.edu
website: natashagownaris.com

**Professional
Positions**

Assistant Professor, August 2019-Present
Gettysburg College, Gettysburg, Pennsylvania
Department of Environmental Studies

Post-Doctoral Researcher, February 2016-July 2019
University of Washington, Seattle, Washington
Department of Biology; Center for Ecosystem Sentinels

Lead Spatial Analyst, May 2017-June 2019
Ocean Sanctuary Alliance, New York, New York
10x20 Initiative (SDG 14, Target 5)

Education

Stony Brook School of Marine and Atmospheric Sciences, Stony Brook, New York
Doctor of Philosophy, December 2015
Marine and Atmospheric Sciences
Best Dissertation of the Year Award

Gettysburg College, Gettysburg, Pennsylvania
Bachelor of Science, May 2009
Double Major: Environmental Studies and Biology
Summa Cum Laude; Member Phi Beta Kappa and Omicron Delta Kappa; Goldwater Scholar

Publications

Gownaris, N.J. and P.D. Boersma. In Review. Feet First: Do Magellanic Penguin Chicks Show Adaptive Growth? *Ecology and Evolution*.

Yu-Chun, K., M. Rogers, D. Bunnell, I. Cowx, S. Qian, O. Anneville, T. Beard Jr., A. Brinker, R. Britton, R. Chura-Cruz, **N.J. Gownaris**, J.R. Jackson, K. Kangur, J. Kolding, R. Chura-Cruz, A.J. Lynch, N. Mercado-Silva, R. Moncayo-Estrada, F.J. Njaya, I. Ostrovsky, L.G. Rudstam, A.L.E. Sandstrom, Y. Sato, H. Siguayro-Mamani, A. Thorpe, P.A.A. van Zwieten, P. Volta, Y. Wang, A. Weiperth, O.L.F. Wely, and J. Young. 2020. Assessing Effects of Climate and Land-Use Change on Fish Catches Across Global Lakes. *Nature Communications*. DOI: 10.1038/s41467-020-14624-2

Gownaris, N.J., P.D. Boersma, and P. García Borboroglu. 2020. Sex Ratio is Variable and Increasingly Male-Biased at Two Colonies of Magellanic Penguins. *Ecology*. DOI: 10.1002/ecy.2939.

Gownaris, N.J., E.K. Pikitch, C.M. Santora, and J. Davis. 2020. Gaps in Protection of Important Ocean Areas: A Spatial Meta-Analysis of Ten Global Mapping Initiatives. *Frontiers in Marine Science*. DOI: 10.3389/fmars.2019.00650.

Boersma, P. D., P. García Borboroglu, **N.J. Gownaris**, C.A. Bost, A. Chiaradia, S. Ellis, T. Schneider, P.J. Seddon, A. Simeone, P.N. Trathan, L.J. Waller, and B. Wienecke. 2019. Applying science to pressing conservation needs for penguins. *Conservation Biology*. DOI: 10.1111/cobi.13378.

Gownaris, N.J. and P.D. Boersma. 2019 Sex-Biased Survival Contributes to Population Decline in a Long-Lived Seabird, the Magellanic Penguin. *Ecological Applications*. DOI: 10.1002/eap.1826.

Hodobod, J., E.G.J. Stevenson, G. Akall, T. Akuja, I. Angelei, S. Avery, A.B. Elias, L. Buffavand, S. Derbyshire, J. Eulenberger, F. Mercy, **N.J. Gownaris**, B. Kamski, A. Kurewa, M. Lokuruka, D. Okenwa, C. Rodgers, and E. Tebbs. 2019 Social-Ecological Change in the Turkana Basin: A Synthesis of Current Developments. *Ambio*. DOI: 10.1007/s13280-018-1139-3.

Gownaris, N.J., K.J. Rountos, L. Kaufman, J. Kolding, K.M.M. Lwiza, and E.K. Pikitch. Water Level Fluctuations and the Ecosystem Functioning of Lakes. 2018. *Journal of Great Lakes Research*. DOI: 10.1016/j.jglr.2018.08.005.

Gownaris, N.J., E.K. Pikitch, J. Aller, L. Kaufman, J. Kolding, K. Lwiza, K. Obiero, W. Ojwang, J. Malala, and K. Rountos. 2017. Fisheries and Water Level Fluctuations in the World's Largest Desert Lake. *Ecology*. DOI: 10.1002/eco.1769.

Hundey, E.J., J.H. Olker, C. Carreira, R.M. Daigle, A.K. Elgin, M. Finiguerra, **N.J. Gownaris**, N. Hayes, L. Heffner, R. Razavi, P.D. Shirey, B.D. Tolar, E.M. Wood-Charlson. 2016. A Shifting Tide: Recommendations for Incorporating Science Communication into Graduate Training. *Limnology and Oceanography Bulletin*. DOI: 10.1002/lob.10151

Ojwang, W.O., K.O. Obiero, O.O. Donde, **N.J. Gownaris**, E.K. Pikitch, R. Omondi, and S. Agembe. 2016. Lake Turkana, the World's Largest Permanent Desert Lake. In Max Finlayson, Randy Milton and Crawford Prentice (Ed.) *The Wetland Book: Distribution, Description and Conservation*.

Toscano, B.J., **N.J. Gownaris**, S.M. Heerhartz, and C.J. Monaco. 2016. Personality, Foraging Behavior, and Specialization: Integrating Behavioral and Food Web Ecology at the Individual Level. *Oecologia*. DOI: 10.1007/s00442-016-3648-8.

Commito, J.A., **N.J. Gownaris**, D.B. Haulsee, S.E. Coleman. 2016. Separation Anxiety: Mussels Self-Organize into Similar Power-Law Clusters Regardless of Predation Threat Cues. *Marine Ecology Progress Series*. DOI: 10.3354/meps11642.

Gownaris, N.J., E.K. Pikitch, W.O. Ojwang, R. Michener, and L. Kaufman. 2015. Predicting Species' Vulnerability in a Massively Perturbed System: The Fishes of Lake Turkana, Kenya. *PLOS ONE*. DOI: 10.1371/journal.pone.0127027.

Commito, J.A., A.E. Commito, R.V. Platt, B.M. Grupe, W.E. Dow, **N.J. Gownaris**, K.A. Reeves, and A.M. Vissicelli. 2014. Recruitment Facilitation and Spatial Pattern Formation in Soft-Bottom Mussel Beds. *Ecosphere*. DOI: 10.1890/ES14-00200.1.

Pikitch, E.K., K.J. Rountos, T.E. Essington, C. Santora, D. Pauly, R. Watson, U.R. Sumaila, P.D. Boersma, I.L. Boyd, D.O. Conover, P. Cury, S.S. Heppell, E.D. Houde, M. Mangel, É Plagányi, K. Sainsbury, R.S. Steneck, T.M. Geers, **N.J. Gownaris**, and S.B. Munch. 2014. The Global Contribution of Forage Fish to Marine Fisheries and Ecosystems. *Fish and Fisheries*. DOI: 10.1111/faf.12004.

Professional Service

Associate Editor: Ecological Solutions and Evidence (October 2020 -)

Journal Reviews: Applied Mathematical Modeling, Biology Letters, Current Biology (x2), Ecological Applications, FEMS Microbiology Ecology, Frontiers in Ecology and the Environment, Knowledge and Management of Aquatic Systems, Journal of Fish Biology, Lakes and Reservoirs, PeerJ (x4), PLOS ONE (x2)

Other: External Reviewer NSF Proposal (2016), Environmental Biology Open Textbook Reviewer (2020)

Presentations

Gownaris, N.J., C.M. Santora, and E.K. Pikitch. Gaps in Protection in Important Ocean Areas: A Spatial Meta-Analysis of Ten Global Mapping Initiatives. OpenChannels. Virtual. 2020.

- Gownaris, N.J.** and P.D. Boersma. Causes and Consequences of Skewed Sex Ratios in Magellanic Penguins. The Waterbird Society. Princess Anne, MD. 2020.
- Gownaris, N.J.** Bachelor Birds: Skewed Sex Ratios and Penguin Population Decline. Invited Seminar. Stony Brook University. Stony Brook, NY. 2019.
- Gownaris, N.J.** and P.D. Boersma. Causes and Consequences of Skewed Sex Ratios in Magellanic Penguins. Fish and Wildlife Seminar (University of Washington). Seattle, WA. 2019.
- Gownaris, N.J.** and P.D. Boersma. Opportunities for Protection of Global Marine Priority Areas. Pacific Seabird Group. Lihue, Hawaii. 2019.
- Gownaris, N.J.**, E.K. Pikitch, C.M. Santora, and J. Davis. Revealing a “Global Scientific Consensus Map” on Areas for Marine Protection. International Marine Conservation Congress. Kuching, Malaysia. 2018.
- Gownaris, N.J.** and P.D. Boersma. Feet First: Adaptive Growth in Magellanic Penguin Chicks. Biology Department Postdoctoral Research Symposium (University of Washington). Seattle, WA. 2017.
- Pikitch, E.K., **N.J. Gownaris***, and C.M. Santora. Consolidating Current Knowledge on Marine Priorities: A Follow-Up to the Rome Call for Action. UN Oceans Conference. New York, NY. 2017. *Co-presented with E.K. Pikitch.
- Kao, Y.C., M.W. Rogers, D.B. Bunnell, **N.J. Gownaris** and 34 others. Effects of Climate Change and Land Use on Large Lake Fisheries around the World. Society of Freshwater Science. Raleigh, NC. 2017.
- Kao, Y.C., M.W. Rogers, D.B. Bunnell, **N.J. Gownaris** and 34 others. Not all Great Lake Fisheries are Equally Great in Response to Climate and Land Use Changes. IAGLR 60th Annual Conference on Great Lakes Research. Detroit, MI. 2017.
- Gownaris, N.J.**, K.J. Rountos, L. Kaufman, J. Kolding, K.M.M. Lwiza, and E.K. Pikitch. Lake Level Fluctuations, Ecological Attributes, and Fish Productivity in African Lakes and Reservoirs. African Great Lakes Conference. Entebbe, Uganda. 2017.
- Gownaris, N.J.** and P.D. Boersma. Bachelor Birds: Why Models Must Consider Seabird Sex. Pacific Seabird Group Meeting. Tacoma, WA. 2017.
- Gownaris, N.J.** and P.D. Boersma. Bachelor Birds: Why Models Must Consider Seabird Sex. Biology Department Postdoctoral Research Symposium (University of Washington). Seattle, WA. 2017.
- Gownaris, N.J.** and P.D. Boersma. Bachelor Birds: Why Models Must Consider Seabird Sex. Fisheries Department Quantitative Seminar (University of Washington). Seattle, WA. 2017.
- Gownaris, N.J.** and P.D. Boersma. Bachelor Birds: Female Biased Mortality Contributes to Magellanic Penguin Population Decline. Wildlife Seminar Series (University of Washington). Seattle, WA. 2017.
- Gownaris, N.J.** and P.D. Boersma. Single Males: Skewed Sex Ratio Fosters Population Decline in Magellanic Penguins. International Penguin Conference 9. Cape Town, South Africa. 2016.
- Kao, Y.C., **N.J. Gownaris**, K. Kangur, A. Sandström, D.B. Bunnell, M.W. Rogers, A.L. Sakas, A.J. Lynch, P.B. McIntye, T.D. Beard, and W.W. Taylor. Potential Effects of Climate Change and Land Use on Inland Fisheries Production. Busan, Korea. 2016.
- Gownaris, N.J.**, E.K. Pikitch, W.O. Ojwang, R. Michener, and L. Kaufman. Impacts of Upstream Dams and Irrigation on the Fish Communities of the World’s Largest Desert Lake. Global Conference on Inland Fisheries. FAO Headquarters, Rome. 2015.

- Gownaris, N.J.** Hutchinson's Hypervolume in the Age of Stable Isotope Ecology. Ecological Dissertations in the Aquatic Sciences (NSF Funded Workshop). Honolulu, Hawaii. 2014
- Gownaris, N.J.,** E.K. Pikitch, L. Kaufman, W.O. Ojwang, and R. Michener. Diet Flexibility as an Indicator of Resilience in Lake Turkana, Kenya Fish Communities. American Fisheries Society Annual Meeting. Québec City, Québec. 2014.
- Gownaris, N.J.,** E.K. Pikitch, W.O. Ojwang, R. Michener, and L. Kaufman. Impacts of Upstream Dams and Irrigation on the Fish Communities of the World's Largest Desert Lake. Global Conference on Inland Fisheries. FAO Headquarters, Rome. 2015.
- Gownaris, N.J.** Hutchinson's Hypervolume in the Age of Stable Isotope Ecology. Ecological Dissertations in the Aquatic Sciences (NSF Funded Workshop). Honolulu, Hawaii. 2014
- Gownaris, N.J.,** E.K. Pikitch, L. Kaufman, W.O. Ojwang, and R. Michener. Diet Flexibility as an Indicator of Resilience in Lake Turkana, Kenya Fish Communities. American Fisheries Society Annual Meeting. Québec City, Québec. 2014.
- Bouraad, T.* and **N.J. Gownaris.** Understanding the Different Ecological Roles of Three Tilapia Species in Lake Turkana, Kenya. Undergraduate Research and Creative Activities Symposium. Stony Brook, New York. 2014. *undergraduate mentee
- Gownaris, N.J.** The Incidence of Omnivory Among Key Fishes of Lake Turkana, Kenya. School of Marine and Atmospheric Sciences Graduate Student Symposium. Stony Brook, New York. 2014.
- Gownaris, N.J.** Understanding the Impacts of Climate Change and Dam Development on the Lake Turkana Ecosystem. Student Conference on Conservation Science. New York, New York. 2011.
- Commito, J.A., Coleman, S., **Gownaris, N.J.** and Haulsee, D. Chemical Cues, Selfish Herds, and Power-Law Spatial Structure in Maine Mussel Beds. Benthic Ecology Meetings. Mobile, Alabama. 2011.
- Gownaris, N.J.** and M.J. Brush. Nutrient Uptake Dynamics of Macroalgae and Phytoplankton in Shallow Marine Systems. Atlantic Estuarine Research Society Meeting. Fairfax, Virginia. 2008.
- Gownaris, N.J.** and J.A. Commito. Spatial Threat Response in a Marine Bivalve: Mussels Self-Organize into Fractal Aggregations. Benthic Ecology Meeting. Providence, Rhode Island. 2008.

Awards and Grants

- Selected Member of Global Young Academy (2020-2025)
 Oceanographic Observatories Initiative, Data Labs Implementation Fellow (2020)
 Working Group Grant – Gettysburg College Johnson Center for Creative Teaching and Learning (2019)
 American Institute of Fisheries Research Biologists Clark Hubbs Research Award (2015)
 Global Inland Fisheries Conference Student Travel Award (2015)
 National Science Foundation Eco-DAS XI Selected Participant (2014)
 Stony Brook University Distinguished Travel Award (2014)
 Pikitch Family Endowed Student Research Award (2014)
 J.R. Schubel Graduate Fellowship for Science Communication (2014)
 Evan R. Liblit Memorial Scholarship for Environmental Leadership (2013)
 Turkana Basin Institute Graduate Fellowship (2011-2013)
 National Geographic Society Young Explorer's Grant (2011)

Previous Research Experience

- Research Assistant, Dr. Ellen Pikitch (Graduate Advisor)**
 Stony Brook University School of Marine and Atmospheric Sciences (2009-2015) Stony Brook, NY
 Dissertation: Understanding the Impacts of Changes in Water Inflow on the Fishes of Lake Turkana, Kenya
 Other: Member, Stony Brook Forage Fish Task Force (working group of Lenfest Forage Fish Task Force)

Independent Contractor, Seafood Watch

The Seafood Watch Program at the Monterey Bay Aquarium (2014-2015) Monterey, California
Assessment: Tilapia Production in Colombia.

Research Assistant, Dr. John A. Commito (Supervisor)

Gettysburg College Environmental Studies Department (2005-2009) Gettysburg, Pennsylvania
Senior Thesis: Are Mussel Beds Selfish Herds? Mussels Self-Organize into Fractal Aggregations

Research Experience for Undergraduates Intern (NSF Funded), Dr. Mark Brush (Supervisor)

Virginia Institute for Marine Science (Summer 2008) Gloucester Point, Virginia
Project: Nutrient Uptake Dynamics of Macroalgae and Phytoplankton in Shallow Marine Systems

**Teaching
Experience**

Mentored 19 undergraduate researchers (2009-present).

Instructor: Ecology, Ecology Labs (Fall 2019, Fall 2020). Environmental Studies Department, Gettysburg College. 36 students + two lab sections of 18 students.

Instructor: Marine and Freshwater Fisheries (Spring 2020). Environmental Studies Department, Gettysburg College. 20 students.

Instructor: Oceanography (Spring 2020). Environmental Studies Department, Gettysburg College. 36 students.

Instructor: Oceanography (Fall 2014). School of Marine and Atmospheric Sciences, Stony Brook University. 75 students.

Instructor: Water Quality and Plankton Communities of Long Island (Spring 2014). Women in Science and Engineering, Stony Brook University. 6 students.

Co-Instructor: Environmental Problems and Solutions (Spring 2014). School of Marine and Atmospheric Sciences, Stony Brook University. 45 students.

Teaching assistantships and course development assistantships at Gettysburg College and Stony Brook University in Ecology (Fall 2006), Environmental Science and Society (Fall 2008), Ichthyology (Fall 2009), Oceanography (Fall 2009), Marine Conservation (Spring 2009, Fall 2010, Fall 2011)

**Service and
Outreach**

Member, Gettysburg College Honor Commission (Fall 2020)

Member, Gettysburg College Celebration Planning Committee (Fall 2020)

Co-lead, Open Science Working Group, Global Young Academy (2020)

Postdoc Representative, UW Biology Diversity & Equity Committee (2018, 2019)

Session Leader and Developer, Burke Museum Girls in Science Camp (2018)

STEM Ambassador, Edmond's District Annual STEM Expo (2017, 2018)

Volunteer, Polar Science Weekend (2016, 2017, 2018)

Volunteer, Bird Day at the Burke (2016, 2017)

Founder, Scientific Equipment Reuse Program at Stony Brook University (2014)

Vice President, School of Marine and Atmospheric Sciences Graduate Student Club (2011-2012)