Casey Youngflesh

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EDUCATION

2013–2018 **Ph.D. Ecology and Evolution**
Stony Brook University – Stony Brook, NY

2010–2011 **Master of Conservation Biology (*with distinction*)**
University of New South Wales – Sydney, Australia

2003–2007 **B.S. Ecology and Evolution**
University of California, Santa Cruz – Santa Cruz, CA

PROFESSIONAL APPOINTMENTS

2024– **Assistant Professor**
Clemson University – Clemson, SC

2022–2023 **Presidential Postdoctoral Fellow**
Michigan State University – East Lansing, MI

2020–2022 **Postdoctoral Researcher**
University of California, Los Angeles – Los Angeles, CA

2019 **Postdoctoral Researcher**
University of Connecticut – Storrs, CT

2016–2018 **NASA Graduate Fellow**
Stony Brook University – Stony Brook, NY

GRANTS AND FELLOWSHIPS

2022 Institute for Biodiversity, Ecology, Evolution, and Macrosystems, Michigan State University, "Characterizing the role of interannual environmental variability in structuring the life histories of global ecological communities" (PI with co-PIs K. Kapsar, L. Kounta, A. Uscanga, and P. Williams), **$75,000**
Presidential Postdoc Fellowship in Ecology, Evolution, and Behavior, Michigan State University, **$136,000**

2021 Institute for Digital Research and Education Postdoctoral Fellowship, University of California, Los Angeles, **$5000**

2016 NASA Earth and Space Science Fellowship (NESSF), **$120,000**

2015 Grant in Aid of Research, Sigma Xi, **$700**

2014 Legacy Society Research Grant, Explorers Club, **$4000**

AWARDS AND HONORS

2024 Elective Member, American Ornithological Society

2022 College of Life Sciences Excellence in Research Award, University of California, Los

Angeles
2017 Robert R. Sokal Award for Statistical Biology, Stony Brook University
2015 Alexander Goetz Award, Analytical Spectral Devices, Inc.
2014 Excellence in Research Award, Stony Brook University

PUBLICATION PREPRINTS, IN REVIEW, AND IN PREP

** authors contributed equally*

[32] **Youngflesh, C**, C Che-Castaldo, M Schwaller, S Serbin, M Polito, HJ Lynch. Satellites reveal link between Adelie penguin diet, environmental change, and demographic trends. **In prep**

Media coverage (from associated conference presentation): *Wired, Vox, Forbes, Der Spiegel, Scholastic Math Magazine*

[31] Tonelli, B, **C Youngflesh**, M Tingley. Demography versus dispersion: evaluating the causes and consequences of vagrancy in birds. **In Review**

[30] Amaral, B, **C Youngflesh**, D Miller, M Tingley. Shifting gears in a shifting climate: birds adjust migration speed in response to spring vegetation green-up. **In Review**

[29] Song, Y, M Barnes, D Browning, K Bybee-Finley, K Dahlin, T McDevitt-Galles, SB Munch, G Ponce-Campos, **C Youngflesh**, B Zuckerberg, K Zhu. Ecological synchrony in human-modified landscapes under a changing climate. **In review**

[28] Hart, T, F Jones, C Black, C Lintott, **C Youngflesh**, HJ Lynch, A Davies, E Maguire, A Zisserman, C Arteta, P Barham, C Southwell, L Emmerson, M Jessopp. Time-lapse imagery is cheap and timely in the fight against colonial species' decline. **Preprint available on *Authorea*** DOI: 10.22541/au.162686380.02020424/v1

PEER-REVIEWED PUBLICATIONS

[27] Belitz, M, E Larsen, A Hurlbert, G Di Cecco, N Neupane, L Ries, M Tingley, R Guralnick*, **C Youngflesh***. Potential for bird-insect phenological mismatch in a tri-trophic system. Accepted at ***Journal of Animal Ecology***

[26] **Youngflesh, C**, K Kapsar, A Uscanga, PJ Williams, JW Doser, L Kounta, PL Zarnetske. Environmental variation shapes life history of the world's birds. Accepted at ***Ecology Letters***

[25] Gould, E, and 253 others (including **C Youngflesh**). Same data, different analysts: Variation in effect sizes due to analytical decisions in ecology and evolutionary biology. Accepted at ***BMC Biology***

[24] Tonelli, BA, **C Youngflesh**, T Cox, MHC Neate-Clegg, EB Cohen, MW Tingley. 2024. Spatial nonstationarity in phenological responses of Nearctic birds to climate variability. ***Ecology Letters*** 27:e14526.

[23] Kaczvinsky, C, H Levy, S Preston, **C Youngflesh**, G Clucas, HJ Lynch, AL Smith, T Hart. 2024. The influence of biotic and abiotic factors on the bacterial microbiome of gentoo penguins (*Pygoscelis papua*) in their natural environment. ***Scientific Reports*** 14:17933.

[22] **Youngflesh, C**, JF Saracco, RB Siegel, MW Tingley. 2024. Reply to: Shrinking body size may not provide meaningful thermoregulatory benefits in a warmer world. ***Nature Ecology and Evolution*** 8:390-391. [Matters Arising]

[21] **Youngflesh, C**, GA Montgomery, JF Saracco, DAW Miller, RP Guralnick, AH Hurlbert, RB Siegel, R LaFrance, MW Tingley. 2023. Demographic consequences of phenological asynchrony for North American songbirds. ***PNAS*** 120:e2221961120.

Media coverage: *Salon, Yahoo! News, The Wildlife Society, The Hindu*

[20] Grames, EM, GA Montgomery, **C Youngflesh**, MW Tingley, CS Elphick. 2023. The influence of insect food availability on avian body condition and reproductive success. ***Ecology Letters*** 26:658-673.

[19] Neate-Clegg, MHC, BA Tonelli, **C Youngflesh**, JX Wu, GA Montgomery, ÇH Şekercioğlu, MW Tinley. 2023. Traits shaping urban tolerance in birds differ around the world. ***Current Biology*** 33:1-12.

[18] Halpern, B, and 114 others (including **C Youngflesh**). 2023. Priorities for synthesis in ecology and environmental science. ***Ecosphere*** 14.

[17] Tonelli, BA, **C Youngflesh**, MW Tingley. 2023. Geomagnetic disturbance associated with increased vagrancy in migratory landbirds. ***Scientific Reports*** 13:414.

[16] **Youngflesh, C**, JC Withey. 2022. Can birds 'keep up' with earlier springs? ***National Center for Case Study Teaching in Science*** [Teaching Case Study]

[15] **Youngflesh, C**, JF Saracco, RB Siegel, MW Tingley. 2022. Abiotic conditions shape spatial and temporal morphological variation in North American birds. ***Nature Ecology and Evolution*** 6:1860-1870.

Media coverage: *The Scientist, Nature Ecology and Evolution, USA Today, Live Science*

[14] Robinson, OJ, JB Socolar, EF Stuber, T Auer, AJ Berryman, PH Boersch-Supan, DJ Brightsmith, AH Burbidge, SHM Butchart, CL Davis, AM Dokter, AS Di Giacomo, A Farnsworth, D Fink, WM Hochachka, PE Howell, FA La Sorte, AC Lees, S Marsden, R Martin, RO Martin, JF Masello, ET Miller, Y Moodley, A Musgrove, D Noble, V Ojeda, P Quillfeldt, JA Royle, V Ruiz-Gutierrez, JL Tella, P Yorio, **C Youngflesh**, A Johnston. 2022. Extreme uncertainty and unquantifiable bias do not inform population sizes. ***PNAS*** 119:e2113862119. [Letter]

[13] de Lange, O, **C Youngflesh**, A Ibarra, RC Perez, M Kaplan. 2021. Broadening participation: 21st century opportunities for amateurs in biology research. ***Integrative and Comparative Biology*** 61:2294-2305.

[12] **Youngflesh, C**, Y Li, HJ Lynch, K Delord, C Barbraud, R Ji, S Jenouvrier. 2021. Lack of synchronized breeding success in a seabird community: Extreme events, niche separation, and environmental variability. ***Oikos*** 130:1943-1953.

[11] Schweinsberg, M, and 178 others (including **C Youngflesh**). 2021. Same data, different conclusions: Radical dispersion in empirical results when independent analysts operationalize and test the same hypothesis. ***Organizational Behavior and Human Decision Processes*** 165:228-249.

Media coverage: *The Economist, Times Higher Education*

[10] **Youngflesh, C**, J Socolar, BR Amaral, A Arab, RP Guralnick, AH Hurlbert, R LaFrance, SJ Mayor, DAW Miller, MW Tingley. 2021. Migratory strategy drives species-level variation in bird sensitivity to green-up. ***Nature Ecology and Evolution*** 5:987–994.

Media coverage: *Audubon Magazine*

[9] Rollinson, CR, A Finley, MR Alexander, S Banerjee, KAD Hamil, LE Koenig, DH Locke, M Peterson, M Tingley, K Wheeler, **C Youngflesh**, EF Zipkin. 2021. Working across space and time: nonstationarity in ecological research and application. ***Frontiers in Ecology and the Environment*** 19:66-72.

[8] **Youngflesh, C***, F Jones*, HJ Lynch, J Arthur, Z Macháčková, H Torsey, T Hart. 2021. Large-scale assessment of intra- and inter-annual breeding success using a remote camera network. ***Remote Sensing in Ecology and Conservation*** 7:97-108.

[7] Lynch, MA, **C Youngflesh**, NH Agha, MA Ottinger, HJ Lynch. 2019. Tourism and stress hormone measures in gentoo penguins on the Antarctic Peninsula. ***Polar Biology*** 42:1299–1306.

Media coverage: *The Economist*

[6] **Youngflesh, C**, S Jenouvrier, JT Hinke, L DuBois, J St. Leger, WZ Trivelpiece, SG Trivelpiece, HJ Lynch. 2018. Rethinking "normal": The role of stochasticity in the phenology of a synchronously breeding seabird. ***Journal of Animal Ecology*** 87:682-690.

[5] **Youngflesh, C**. 2018. MCMCvis: Tools to visualize, manipulate, and summarize MCMC output. ***Journal of Open Source Software*** 3:640.

[4] Borowicz, A, P McDowall, **C Youngflesh**, T Sayre-McCord, G Clucas, R Herman, S Forrest, M Rider, M Schwaller, T Hart, S Jenouvrier, M Polito, H Singh, HJ Lynch. 2018. Multi-modal survey of Adélie penguin mega-colonies reveals the Danger Islands as a seabird hotspot. ***Scientific Reports*** 8.

Media coverage: *New York Times, BBC, The Guardian, National Geographic, Time, CBC, Wall Street Journal, Vice, Popular Mechanics, Quartz, Buzzfeed, Newsweek, Mongabay*

[3] **Youngflesh, C**, and HJ Lynch. 2017. Black-swan events: Population crashes or temporary emigration? ***PNAS*** 114:E8953–E8954. [Letter]

Media coverage: *BioScience*

[2] Che-Castaldo, C, S Jenouvrier, **C Youngflesh**, K Shoemaker, G Humphries, P McDowall, L Landrum, M Holland, Y Li, R Ji, HJ Lynch. 2017. Spatial aggregation reveals robust dynamics despite stochastic noise in pan-Antarctic analysis of Adélie penguin abundance. ***Nature Communications*** 8:832.

[1] **Youngflesh, C**, S Jenouvrier, Y Li, R Ji, DG Ainley, G Ballard, C Barbraud, K Delord, KM Dugger, LM Emmerson, WR Fraser, JT Hinke, POB Lyver, S Olmastroni, CJ Southwell, SG Trivelpiece, WZ Trivelpiece, HJ Lynch. 2017. Circumpolar analysis of the Adélie penguin reveals the importance of environmental variability in phenological mismatch. ***Ecology*** 98:940-951. [Featured cover story]

OTHER PUBLICATIONS

[3] Rogers, C, R Abrol, A Johnson, L Lima, K McKenna, **C Youngflesh**. 2019. Perturbation Research Teams Using Reintegrated Biology (PeRTURB). ***NSF Reintegrating Biology: Vision Papers*** [White paper]

[2] **Youngflesh, C.** 2019. Assessing impacts of the changing Arctic on walrus dynamics using satellite-based monitoring. ***NASA Biological Diversity and Ecological Forecasting Programs: White Papers on Important Questions*** [White paper]

[1] **Youngflesh, C**. 2018. Precipitation could spell peril for penguins. ***Frontiers in Ecology and the Environment*** 16:380–380. [EcoPics series]

SOFTWARE AUTHORED

MCMCvis — Tools to visualize, manipulate, and summarize MCMC output. R package available on CRAN (https://CRAN.R-project.org/package=MCMCvis) **[> 100,000 downloads]**

INVITED PRESENTATIONS

2024 — University of North Carolina, Institute for Marine Sciences Seminar, Morehead City, NC
Boise State University, Dept. of Biological Sciences Seminar, Boise, ID
Clemson University, Dept. of Forestry and Environmental Conservation Seminar, Clemson, SC

2023 — Ecological Society of America Annual Meeting, Portland, OR
Clemson University, Dept. of Biological Sciences Seminar, Clemson, SC
University of Wisconsin, Dept. of Forest and Wildlife Ecology Seminar, Madison, WI
University of Maryland, Dept. of Biology Seminar, College Park, MD
University of North Carolina, Dept. of Biology Seminar, Chapel Hill, NC

2022 — The Institute for Bird Populations, Webinar
Appalachian State University, Dept. of Biology Seminar, Boone, NC
University of California, Los Angeles, Institute for Digital Research and Education Seminar, Virtual
Michigan State University, Program in Ecology, Evolution, and Behavior Seminar, Virtual

2021 — StanConnect: Ecology, Virtual
Stony Brook University, Dept. of Ecology and Evolution Seminar, Virtual
Cornell Lab of Ornithology, Friday Science Seminar, Virtual

2020 — North American Ornithological Conference, Virtual

2019 — University of Connecticut, UConn Library Reproducible Research Roundtable, Storrs, CT
University of Connecticut, Dept. of Ecology and Evolutionary Biology Seminar, Storrs, CT

CONTRIBUTED PRESENTATIONS

2024 — American Ornithological Society Annual Meeting, Estes Park, CO (Oral presentation)
Ecological Society of America Annual Meeting, Long Beach, CA (Oral presentation)

2023 — Alaska Marine Science Symposium, Anchorage, AK (Poster presentation)

2022 — American Ornithological Society Annual Meeting, San Juan, Puerto Rico (Oral presentation)

2021 — American Ornithological Society Annual Meeting, Virtual (Oral presentation)
Ecological Society of America Annual Meeting, Virtual (Oral presentation)

2020 — International Statistical Ecology Conference, Virtual (Oral presentation and Speed Talk)
World Seabird Twitter Conference 6 (Twitter presentation)
Award: *Early Career Researcher Prize*

2019 — American Ornithological Society Annual Meeting, Anchorage, AK (Oral presentation)
Pacific Seabird Group Annual Meeting, Kaua'i, HI (Oral presentation)

2018 — American Geophysical Union Fall Meeting, Washington, DC (Poster)
Ecological Society of America Annual Meeting, New Orleans, LA (Oral presentation)
POLAR 2018, Davos, Switzerland (Oral presentation and Poster)
World Seabird Twitter Conference 4 (Twitter presentation)
Award: *American Ornithological Society Presentation Prize*

2017 — NASA Biodiversity and Ecological Forecasting Meeting, Washington, DC (Oral

presentation and Poster)
Stony Brook University Department of Ecology and Evolution Annual Retreat, Stony Brook, NY (Oral presentation)
2016 Scientific Committee on Antarctic Research Open Science Conference, Kuala Lumpur, Malaysia (Oral presentation)
Ecological Society of America Annual Meeting, Fort Lauderdale, FL (Poster)
2015 Ecological Society of America Annual Meeting, Baltimore, MD (Oral presentation)

TEACHING

Courses

2025 Biometry (Graduate), **Instructor**, Clemson University
2024 Environmental Science in the Age of Big Data (Undergraduate), **Instructor**, Clemson University
Ornithology (Undergraduate), **Guest Instructor (1 session)**, Clemson University
2023 Career Pathways (Graduate), **Instructor**, Michigan State University
2020 Seminar on Detection, Occurrence, and Abundance (Graduate), **Guest Instructor (1 session)**, University of California, Los Angeles
2017 Statistics and Data Analysis: A Conceptual Approach (Undergraduate), **Instructor**, Stony Brook University
2014 Applied Ecology and Conservation Biology Laboratory (Undergraduate/Graduate), **Teaching Assistant**, Stony Brook University
2013 Fundamentals of Scientific Inquiry Laboratory (Undergraduate), **Teaching Assistant**, Stony Brook University

Workshops

2025 Software Carpentry (2 days), **Instructor and Organizer**, Clemson University
2022 Hierarchical Bayesian Modeling with Applications for Spatial Environmental Data Science (1 day), **Instructor and Organizer**, University of California, Los Angeles
2019 Software Carpentry (2 days), **Instructor**, New York Academy of Sciences
2018 Software Carpentry and Intro to High Performance Computing (2 days), **Instructor and Organizer**, POLAR 2018
2016 Data Carpentry (2 days), **Instructor Assistant**, Stony Brook University

MENTEES AND STUDENT COMMITTEES

Graduate Students

2024– Nayantara Biswas (Ph.D.), Clemson University
2021– Ben Tonelli (Ph.D.), University of California, Los Angeles

Postdoctoral Researchers

2024– Dr. Viviane Zulian, Clemson University

Graduate Committees

2024– John Nettles (Ph.D.), Clemson University, Wildlife and Fisheries Biology Program

Undergraduate Mentees

2019 Vigyaan Ramadhin, University of Connecticut

2017–2018	Iftikar Ahmed, Stony Brook University
2015–2017	Katla Thorsen, Stony Brook University
2016	Lisa Jakubczyk, Stony Brook University

Científico Latino Graduate Student Mentorship Initiative

2024	Isabella Cisneros, The National Institutes of Health
2023	Felix Berrios Ortega, University of Puerto Rico, Humacao
2021	Sanaa Qahera Khan, National Institute for Science Education and Research

SERVICE

Professional Service

2023–	American Ornithological Society Publication Awards Committee
2022–	American Ornithological Society Early Professionals Committee
2024	Southeastern Population Ecology and Evolutionary Genetics Conference Co-Organizer
2024	American Ornithological Society Student Presentation Award Judge
2024	American Ornithological Society Student-Mentor Program Mentor
2024	Computer Vision for Ecology Summer School Applicant Reviewer
2023	Computer Vision for Ecology Summer School Applicant Reviewer
2023	Spectral Ecology Summer School Guidance Team
2022	American Ornithological Society Student Presentation Award Judge
2021	American Ornithological Society Student Presentation Award Judge
2020	North American Ornithological Conference Student Presentation Award Judge
	North American Ornithological Conference Symposium Organizer
2019	Pacific Seabird Group Meeting Student Mentoring Event Mentor
	Sigma Xi Outstanding Undergraduate Research Award Reviewer
2018	Sigma Xi Outstanding Undergraduate Research Award Reviewer
2016	Ecological Society of America Real Brown Travel Award Reviewer

Editorial Service and Grant/Publication Reviewing

2021–	Associate Editor, *Ornithological Applications* (formerly *The Condor*)
2024	NASA Grant Review Panel
	NSF Ad Hoc Grant Reviewer
2023	NASA Grant Review Panel
2022	NASA Grant Review Panel
2021	NASA Grant Review Panel
	NSF Ad Hoc Grant Reviewer
2020	NASA Grant Review Panel
	NSF Ad Hoc Grant Reviewer
Publications	*Science, Nature, PNAS, Nature Climate Change, Nature Communications, Ecology Letters*, *Global Change Biology, Current Biology, Ecology, Journal of Animal Ecology, Proceedings of the Royal Society B, Geophysical Research Letters, Ecological Monographs, Ecography, Ecological Applications, Global Ecology and Biogeography, Biological Conservation, Ornithological Applications, Ornithology, Journal of Avian Biology, Oecologia, Marine Ecology Progress Series, Bulletin of the American Meteorological Society, Ecosphere, Ecology and Evolution, Polar Biology, Antarctic Science, Peer J, US Geological Survey, IPCC Special Report*

University Service

2023	Michigan State University EEB Seminar Committee
2019	UConn EEB Committee to Study Departmental Culture

Other Service

2024	Científico Latino Graduate Student Mentorship Initiative Mentor
2023	Científico Latino Graduate Student Mentorship Initiative Mentor
2020–2021	UCLA Postdoc Union (UAW 5810) Steward
2021	Científico Latino Graduate Student Mentorship Initiative Mentor
2019	UConn Postdoc Union (UAW 6950) Steward
2013–2014	Stony Brook University Graduate Student Employment Union (CWA 1104) Departmental Representative

SOCIETY MEMBERSHIP

American Ornithological Society
Ecological Society of America
American Association for the Advancement of Science

OUTREACH

2017–2024	Skype a Scientist Outreach Program Presenter
2023	Michigan State University Biology on Tap
	Desert Rivers Audubon Society Monthly Speaker Series
2014–2018	Expert in Residence, Antarctic Expedition Operators (One Ocean Expeditions, Quark Expeditions, Quixote Expeditions)
2016–2017	Friends of the Ashley Schiff Park Preserve Naturalist
2017	Stony Brook University Grads for Education and Outreach
2015	Association of Polar Early Career Scientists, Reddit Ask Me Anything (AMA) Panel Member
	Ecological Society of America Annual Meeting, EcoArt Science/Art Communication Panel Member