

# Casey Youngflesh

Department of Biological Sciences

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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

- 2023 NSF, “Collaborative Research: Trait-based stress attributes of northern pinnipeds in a rapidly changing environment” (co-PI with PI S. Brunner and co-PIs A. Hirons, L. Horstmann, and G. O’Corry-Crowe), **\$116,312 to Clemson, \$2,926,665 total (pending)**  
NASA, “Characterizing Pacific walrus responses to a changing Arctic using an automated satellite-enabled monitoring framework” (PI), **\$299,374 to Clemson (pending)**
- 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

- 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

## PEER-REVIEWED PUBLICATIONS (PREPRINTS, IN REVIEW, AND IN PREP)

- [27] **Youngflesh, C**, C Che-Castaldo, M Schwaller, S Serbin, M Polito, HJ Lynch. Space-based assessment of penguin diet reveals link between Antarctic food web dynamics and population change. **In prep (available upon request)**  
**Media coverage (from associated conference presentation):** *Wired, Vox, Forbes, Der Spiegel, Scholastic Math Magazine*
- [26] 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**
- [25] Kaczkivsky, C, H Levy, S Preston, **C Youngflesh**, G Clucas, HJ Lynch, AL Smith, T Hart. The influence of biotic and abiotic factors on the bacterial microbiome of gentoo penguins (*Pygoscelis papua*) in their natural environment. **In review**
- [24] 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. **Preprint available on EcoEvoRxiv** DOI: <https://doi.org/10.32942/X2GG62>
- [23] 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](https://doi.org/10.22541/au.162686380.02020424/v1)

## PEER-REVIEWED PUBLICATIONS

\* authors contributed equally

- [22] **Youngflesh, C**, JF Saracco, RB Siegel, MW Tingley. Accepted. Placing the rate of phenotypic change into context. A response to Nord et al. *Nature Ecology and Evolution* [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>) [**> 75,000 downloads**]

## INVITED PRESENTATIONS

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 (AS PRESENTING AUTHOR)

- 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)

### CONTRIBUTED PRESENTATIONS (MENTEE AS PRESENTING AUTHOR)

- 2023 Ecological Society of American Annual Meeting, Portland, OR (Oral presentation)
- 2021 American Ornithological Society Annual Meeting, Virtual (Oral presentation)
- 2018 Student Conference on Conservation Science, New York, NY (Poster)  
 URECA Research Symposium, Stony Brook, NY (Poster)
- 2017 URECA Research Symposium, Stony Brook, NY (Poster)

### SOCIETY MEMBERSHIP

Ecological Society of America  
American Ornithological Society

## TEACHING

2023	Career Pathways (Spring Semester Course), <b>Instructor</b> , Michigan State University
2022	Hierarchical Bayesian Modeling with Applications for Spatial Environmental Data Science (1-day workshop), <b>Instructor and Organizer</b> , University of California, Los Angeles
2020	Seminar on Detection, Occurrence, and Abundance, <b>Guest Instructor (1 session)</b> , University of California, Los Angeles
2019	Software Carpentry (2-day workshop), <b>Instructor</b> , New York Academy of Sciences
2018	Software Carpentry and Intro to High Performance Computing (2-day workshop), <b>Instructor and Organizer</b> , POLAR 2018
2017	Statistics and Data Analysis: A Conceptual Approach (Summer Semester Course), <b>Instructor</b> , Stony Brook University
2016	Data Carpentry (2-day workshop), <b>Instructor Assistant</b> , Stony Brook University
2014	Applied Ecology and Conservation Biology Laboratory (Spring Semester Course), <b>Teaching Assistant</b> , Stony Brook University
2013	Fundamentals of Scientific Inquiry Laboratory (Fall Semester Course), <b>Teaching Assistant</b> , Stony Brook University

## STUDENTS MENTORED

2021–	Ben Tonelli (PhD), University of California, Los Angeles
2021	Sanaa Qahera Khan (Masters), National Institute for Science Education and Research
2019	Vigyaaan Ramadhin (undergraduate), University of Connecticut
2017–2018	Iftikar Ahmed (undergraduate), Stony Brook University
2015–2017	Katla Thorsen (undergraduate), Stony Brook University
2016	Lisa Jakubczyk (undergraduate), Stony Brook University

## SERVICE

2023–	American Ornithological Society Publication Awards Committee
2022–	American Ornithological Society Early Professionals Committee
2021–	Associate Editor, <i>Ornithological Applications</i> (formerly <i>The Condor</i> )
2023	Científico Latino Graduate Student Mentorship Initiative Mentor NASA Grant Review Panel Michigan State University EEB Seminar Committee Spectral Ecology Summer School Guidance Team
2022	NASA Grant Review Panel Member American Ornithological Society Student Presentation Award Judge
2020–2021	UCLA Postdoc Union (UAW 5810) Steward
2021	Científico Latino Graduate Student Mentorship Initiative Mentor NSF Division of Environmental Biology Ad Hoc Grant Reviewer NASA Grant Review Panel Member

2020	American Ornithological Society Student Presentation Award Judge NSF Division of Environmental Biology Ad Hoc Grant Reviewer NASA Grant Review Panel Member
2019	North American Ornithological Conference Student Presentation Award Judge North American Ornithological Conference Symposium Organizer UConn Postdoc Union (UAW 6950) Steward UConn EEB Committee to Study Departmental Culture Mentor, Pacific Seabird Group Meeting Student Mentoring Event Pacific Seabird Group Meeting Session Chair
2018	Sigma Xi Outstanding Undergraduate Research Award Reviewer IPCC Special Report on the Oceans and Cryosphere in a Changing Climate Expert Reviewer
2016	Sigma Xi Outstanding Undergraduate Research Award Reviewer Ecological Society of America Real Brown Travel Award Reviewer Scientific Committee on Antarctic Research Open Science Conference Session Chair
2013–2014	Stony Brook University Graduate Student Employment Union (CWA 1104) Departmental Representative
Reviewer for	<i>Science, Nature, PNAS, Nature Climate Change, Nature Communications, 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, Ornithology, Oecologia, Marine Ecology Progress Series, Bulletin of the American Meteorological Society, Ecosphere, Ecology and Evolution, Polar Biology, Antarctic Science, Peer J, US Geological Survey</i>

## OUTREACH

2023	Michigan State University Biology on Tap Desert Rivers Audubon Society Monthly Speaker Series
2017–2023	Skype a Scientist Outreach Program Presenter
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