# 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

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)

[30] **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*

[29] **Youngflesh, C**, K Kapsar, A Uscanga, PJ Williams, JW Doser, L Kounta, PL Zarnetske. Environmental variation shapes life history of the world's birds. **In Review**

[28] 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**

[27] Tonelli, BA, **C Youngflesh**, T Cox, MHC Neate-Clegg, EB Cohen, MW Tingley. Spatial nonstationarity in phenological responses of North American birds to climate variability. **In Review**

[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] Kaczvinsky, 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

## PEER-REVIEWED PUBLICATIONS

** authors contributed equally*

[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*** [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) **[> 85,000 downloads]**

## INVITED PRESENTATIONS

2024 — Boise State University, Dept. of Biological Sciences Seminar, Boise, ID

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| 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)

| | |
|---|---|
| 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) |

## CONTRIBUTED PRESENTATIONS (MENTEE AS PRESENTING AUTHOR)

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|---|---|
| 2023 | Ecological Society of America 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) |

## TEACHING

*Courses*

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

*Workshops*

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|---|---|
| 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.) |
| 2021– | Ben Tonelli (Ph.D.), University of California, Los Angeles |

*Postdoctoral Researchers*

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| 2024– | Dr. Viviane Zulian |

*Doctoral Committees*

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| 2024– | John Nettles, Clemson University, Dept. Forestry and Environmental Conservation |

*Undergraduate Mentees*

| | |
|---|---|
| 2019 | Vigyaan 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 |

*Científico Latino Graduate Student Mentorship Initiative*

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| 2023 | Felix Berrios Ortega, University of Puerto Rico, Humacao |
| 2021 | Sanaa Qahera Khan, National Institute for Science Education and Research |

## SERVICE

*Scientific Society Service*

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|---|---|
| 2023– | American Ornithological Society Publication Awards Committee |
| 2022– | American Ornithological Society Early Professionals Committee |
| 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*

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| 2021– | Associate Editor, *Ornithological Applications* (formerly *The Condor*) |
| 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, 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, IPCC Special Report* |

*University Service*

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

*Other Service*

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| 2023 | Spectral Ecology Summer School Guidance Team |
| 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

Ecological Society of America
American Ornithological Society

## OUTREACH

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|---|---|
| 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 |