

Catherine E. Newman

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EDUCATION

2017 Ph.D., Biology. Louisiana State University. Baton Rouge, LA
2009 M.S., Biology. The University of Alabama. Tuscaloosa, AL
2005 B.S.Ed., Elementary Education. The University of Alabama. Tuscaloosa, AL

PROFESSIONAL APPOINTMENTS

2017-present **Assistant Professor**
Biology Program, University of Louisiana Monroe
2009-2011 **Junior Research Specialist**
Department of Evolution and Ecology, University of California – Davis

TEACHING

2017-present **University of Louisiana Monroe.** Instructor of record. Semesters taught noted in parentheses. Noted courses redesigned by me in covid era for *100% online or ^H hybrid.

Undergraduate Courses

- Principles of Biology II, majors; Lecture (Sp 18, 19, 20*, 21*, 22^H)¹
- Principles of Biology II, majors; Lab (Sp 18, 19, 20*, 21^H, 22^H)
- Plant & Animal Form & Function; Lecture/Lab (F 18, 20^H)
Laboratory Coordinator (F 18, 19, 20^H, 21)
- Principles of Ecology (F 17, 19, 21^H)
- Evolutionary Biology (F 17, 18; Sp 20*, 21*, 22^H)
- Senior Biology Seminar (Sp 18)
- Life Science & Public Policy (Sp 22)²

Graduate Courses

- Organic Evolution (Sp 18, 20*, 22^H)
- Research Methods: Computational Biology; Lecture/Lab (Sp 19, F 20*)
- Biogeography (F 19, 21^H)
- Systematic Biology (Sp 21*)
- Graduate Seminar (Sp 18)

2011-2013 **Louisiana State University.** Graduate Teaching Assistant
Introductory Biology for Majors (Lab), Herpetology (Lab), Genetics (Recitation)

2007-2009 **The University of Alabama.** Graduate Teaching Assistant
Human Anatomy & Physiology (Lab)

2006 **Arcadia Elementary School.** Teacher, Fifth Grade. Tuscaloosa, AL

2005 **Instituto Thomas Jefferson.** Elementary Teacher Intern. Tlalnepantla, Mexico
Taught subjects in English and Spanish in self-contained classroom.

¹ This course covers basic principles of evolution and ecology, as well as plant, fungus, and animal diversity.

² New course proposed, designed, and co-taught by me with a colleague in Political Science.

PROFESSIONAL DEVELOPMENT IN TEACHING

Courses & Conferences

- 2020-2021 Open Educational Resources Faculty Learning Community. ULM.
2019 Enabling the next generation of computational biologists. iEvoBio (Providence, RI).
2018 Gulf Coast Summer Institute on Scientific Teaching. Louisiana State University.

Workshops Internal to ULM

- 2020 Inclusive Conversations: Social Determinants of Health and the Intersection of Diversity
2020 Just in CAES workshops: Using Kaltura; Effective Communication; Alternative Assessment
2020 Diversity in Education: Incorporating Culturally Responsive Teaching in the Classroom
2020 FOCUS on Critical Thinking: Closing the Loop with Assessments
2019 Fostering Women's Leadership Potential in the Classroom
2019 Working with Students on Nonacademic Problems
2018 Safe Zone Training

PEDAGOGY SCHOLARSHIP & SERVICE

Ongoing Project

Assessing UnEssay Projects. ULM, collaboration with Lorelei Patrick (Fort Hays State University) and Jamie Wood (Duke University). Approved by IRB at all institutions.

Publication

- 2019 Wright AM, Schwartz RS, Oaks JR, **Newman CE**, Flanagan SP. The why, when, and how of computing in biology classrooms. *F1000Research*, 8, DOI: 10.12688/f1000research.20873.1.

Invited Symposia

- 2019 **Newman CE**. Teaching computational biology at a regional university using local installs. iEvoBio Conference. Providence, RI.
2019 Panel Participant: Active Teaching. Academic Innovation Center, ULM.

MENTORSHIP

ULM Mentorship Program

- 2021-present Shantrice Dorsey

Undergraduate Honors Option, ULM (course-based independent research)

- 2021 Hannah Jones, Lauren Polson, Elisa Castillion, David Hernandez, Grace Gunder
2020 Reem Farhat, Caitlyn Sonnier, Arabella Jennings
2018 Dylan Bordelon, Sarah Cheatham, Sangya Sharma

Undergraduate Laboratory Research, ULM

- 2021 Arabella Jennings. Citizen science data & Coastal Plain salamander seasonality. Directed Study.
2020 Arabella Jennings. Morphology & species delimitation in *Plethodon serratus*. Honors Option.
2019 Nautica Jones. Morphology & species delimitation in *Plethodon serratus*. Emerging Scholars.
2018 Benjamin Kirkikis. Population genetics of *Eurycea paludicola*. Directed Study.

Graduate Student Committees, ULM

- M.S. Thesis Committee **Chair**: Cameron Primeaux (Sp 2021 to present)
- Ed.D. Dissertation Committees: Alicia Rollins (Sp 2021 to present)
- M.S. Thesis Committees: Abraham Matlak (F 2020 to present), Ben Grizzle (graduated F 2021)
- M.S. Non-Thesis Committees: Nathan Duong (**chair**; F 2020 to present), Benjamin Kirkikis (**chair**; graduated Sp 2020), Seth Franklin (Sp 2020), Zackary Doolittle (graduated F 2019)

SERVICE TO INSTITUTION

University of Louisiana Monroe

- Faculty Advisor, academic advising for Biology majors. 2018-present
- Member, Faculty Search Committee, Biology. 2021-present
- Member, Council for Teacher Education. 2018-present
- Coordinator of student volunteers, Museum of Natural History Committee. 2018-present
- Member, School of Sciences Curriculum Committee. 2017-present
- Senator, Faculty Senate. 2019-2021
- Speaker, Northeast Louisiana College Fair. 2018-2019 (annually)
- Judge, ULM Student Research Symposium. 2018, 2019
- Speaker, Browse on the Bayou high school recruiting fair. 2018
- Volunteer, ULM BioBlitz, Columbia, LA. 2018
- Speaker, ULM Majors Fair. 2017

LSU Museum of Natural Science, Outreach Event Volunteer

- Sixth Grade Day, LSU. 2017, 2016
- Special Saturday, LSUMNS. 2017, 2016
- Louisiana Master Naturalists Workshop, LSUMNS. 2016 [2], 2015
- Family STEM Night, Westdale Middle School, Baton Rouge, LA. 2016
- Conference, LATM and LSTA, Baton Rouge, LA. 2016, 2015
- Fall Fest, LSU. 2016, 2015
- LSU Lab School Tiger Challenge Camp, LSU. 2016
- Step Outside Day, La. Dpt. of Wildlife & Fisheries, Krotz Springs, LA. 2016, 2015
- Greenwings Conservation Event, Ducks Unlimited, Covington, LA. 2016
- Geaux Science Welcome Event, LSU. 2015
- Earth Day, Baton Rouge, LA. 2015

The University of Alabama, Outreach Event Volunteer

CAARE: Conservation of Alabama Amphibians & Reptiles through Education. 2007-2009

SERVICE TO COMMUNITY

- Judge, Region 3 Science Fair. ULM, Monroe, LA. 2019
- Community Service Volunteer, Baton Rouge flood relief. Baton Rouge, LA. Aug.-Nov. 2016
Worked with Together Baton Rouge and NECHAMA Jewish Response to Disaster
- Participant, NASA Social. Stennis Space Center, Hancock Co., MS. Feb 2015, Aug 2015, Feb 2016

SERVICE TO PROFESSION

Journal Services – Peer Reviewer

Animal Conservation (2018), Axios (2016 [2]), Biological Journal of the Linnean Society (2020, 2016), Climatic Change (2019), Conservation Genetics (2018 [2]), Ichthyology & Herpetology/Copeia (2022, 2019), Ecological Applications (2020 [2]), Ecology & Evolution (2020, 2019), Genetics & Molecular Biology (2015), Journal of Heredity (2021, 2020), Journal of Herpetology (2019, 2015), Molecular Ecology (2016 [2], 2015 [2], 2013, 2012), Molecular Phylogenetics & Evolution (2020 [2]), PeerJ (2018), Scientific Reports (2018 [2]), Systematics & Biodiversity (2016), Wetlands (2016 [2])

Professional Societies

Association of Southeastern Biologists (2021-present)
National Science Teaching Association (2020-present)
Society of Systematic Biologists (2009-present)

GRANTS, AWARDS, HONORS

- 2020 Louisiana Board of Regents, One-Year Research Component (1 year; \$20,000)
- 2019 Jan & Gary Luffey Endowed Professorship in Life Science, Univ. Louisiana Monroe (3 years)
- 2018 Research Hub Mini-Grant, Univ. Louisiana Monroe (\$1,000)
- 2016 McDaniel Travel Award, Louisiana State University (\$500)
- 2014 Doctoral Dissertation Improvement Grant, National Science Foundation (\$19,240)
- 2009 Ralph Chermock Prize: Outstanding Graduate Student in Systematics & Ecology, Univ. Alabama
- 2008 Graduate Student Research & Travel Support Fund, The University of Alabama (x2: \$600, \$200)
- 2007 Theodore Roosevelt Memorial Fund, American Museum of Natural History (\$1,250)

SELECTED PUBLICATIONS

- 2019 **Newman CE**, Austin CC. Quantifying amphibian range fragmentation in the southeastern United States. *Frontiers of Biogeography*, 11, 1-9. DOI: 10.21425/F5FBG37772.
- 2017 **Newman CE**. Survival of salamanders in a severe flood event in Louisiana. *Southeastern Naturalist*, 16, N19-N23.
- 2017 **Newman CE**, Gregory TR, Austin CC. The dynamic evolutionary history of genome size in North American woodland salamanders. *Genome*, 60, 285-292.
- 2016 **Newman CE**, Austin CC. Sequence capture and next-generation sequencing of ultraconserved elements in a large-genome salamander. *Molecular Ecology*, 25, 6162-6174.
- 2015 **Newman CE**, Austin CC. Thriving in the cold: glacial expansion and post-glacial contraction of a temperate terrestrial salamander, *Plethodon serratus*. *PLoS ONE*, 10(7), DOI: 10.1371/journal.pone.0130131.
- 2014 Feinberg JA, **Newman CE**, et al. Cryptic diversity in Metropolis: confirmation of a new leopard frog species (Anura: Ranidae) from New York City and surrounding Atlantic Coast regions. *PLoS ONE*, 9, DOI:10.1371/journal.pone.0108213.
- 2012 **Newman CE**, Feinberg JA, Rissler LJ, Burger J, Shaffer HB. A new species of leopard frog (Anura: Ranidae) from the urban northeastern US. *Molecular Phylogenetics & Evolution*, 63, 445-455.
- 2011 **Newman CE**, Rissler LJ. Phylogeographic analyses of the southern leopard frog: the impact of geography and climate on the distribution of genetic lineages vs. subspecies. *Molecular Ecology*, 20, 5295-5312.

INVITED SEMINARS

- 2022 **Newman CE**. Coastal Plain salamanders: ecology, population genetics, and the impact of citizen science. Louisiana Tech University, Ruston, LA.
- 2021 Hersey L, Foy B, **Newman CE**. From silos to sandboxes: how to enhance cross-disciplinary partnerships. For Our Future Conference. University of Louisiana System, online.
- 2016 **Newman CE**. Phylogeography of the salamander *Plethodon serratus* across four isolated regions of the southeastern US. Emporia State University, Emporia, KS.

CONFERENCE PRESENTATIONS

- 2019 Kirkikis BG³, **Newman CE**. Population genetics of salamanders in a geographically isolated highland in northwest Louisiana. Louisiana Herpetology Conference. LUMCON, Chauvin, LA.
- 2019 **Newman CE**. Phylogenetics of Coastal Plain *Plethodon* Salamanders. Evolution. Providence, RI.
- 2017 **Newman CE**, Austin CC. Dynamic evolutionary history of genome size in North American woodland salamanders. Society of Systematic Biologists Meeting. Baton Rouge, LA.
- 2016 **Newman CE**. Phylogeography of *Plethodon serratus* (Plus: survivor salamanders). Louisiana Herpetology Conference. LUMCON, Chauvin, LA.

³ Graduate student mentee

- 2016 **Newman CE**, Austin CC. Sequence capture of UCEs for intraspecific phylogenetics and species delimitation of a large-genome salamander, *Plethodon serratus*. Joint Meeting of Ichthyologists and Herpetologists. New Orleans, LA.
- 2016 **Newman CE**, Austin CC. Sequence capture of UCEs for intraspecific phylogenetics and species delimitation of a large-genome salamander. *Evolution*. Austin, TX.
- 2014 **Newman CE**, Austin CC. Phylogeography & conservation of the salamander *Plethodon serratus* across four isolated regions of the southeastern US. *Evolution*. Raleigh, NC.
- 2013 **Newman CE**, Austin CC. Phylogeography of *Plethodon serratus* across four isolated regions of the southeastern US. Louisiana Herpetology Conference. LUMCON, Chauvin, LA.
- 2013 **Newman CE**, Austin CC. Phylogeography & conservation of the salamander *Plethodon serratus* across four isolated regions of the southeastern US. *Evolution*. Snowbird, UT.
- 2012 **Newman CE**. A new species of leopard frog (Anura: Ranidae) from the urban northeastern US. First Joint Congress on Evolutionary Biology. Ottawa, Ontario, Canada.
- 2009 **Newman CE**, Rissler LJ. Uncovering cryptic diversity: an integrative approach to reconstructing the evolutionary history of *Rana sphenocephala*. *Evolution*. Moscow, ID.
- 2009 **Newman CE**, Rissler LJ. Integrating genetics, ecological niche modeling, and morphology to reconstruct the evolutionary history of *Rana sphenocephala*. Association of Southeastern Biologists. Birmingham, AL.
- 2008 **Newman CE**, Rissler LJ. An integrative approach to resolving taxonomic controversy and reconstructing the evolutionary history of *Rana sphenocephala*. The Systematics Association: Young Systematists' Forum. London, England, UK.
- 2008 **Newman CE**, Rissler LJ. Phylogeography and systematics of the southern leopard frog (*Rana sphenocephala*). Ecological Society of America. Milwaukee, WI.
- 2008 **Newman CE**, Rissler LJ. Phylogeography and systematics of the southern leopard frog (*Rana sphenocephala*). The Herpetology Conference. University of Florida, Gainesville, FL.

ADDITIONAL EXPERIENCE & TRAINING

- 2021-2024 CITI Training for IRB, ULM. Social & Behavioral Responsible Conduct of Research, Social & Behavioral Research Investigators, Conflicts of Interest, Disaster Planning for the Research Enterprise, Revised Common Rule.
- 2014-2016 Curatorial Assistant. LSU Museum of Natural Science, Herpetology Collection.
- 2014 Workshop in Conservation Genomics. La Kretz Center for California Conservation Science, University of California-Los Angeles.
- 2009 Applied Phylogenetics Workshop. Bodega Bay Marine Lab, University of California-Davis.