

ROMI L. BURKS

CURRICULUM VITA

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EDUCATION

University of Notre Dame (UND)	Ph.D. Ecology, Evolution & Environmental Biology, 2000 Dissertation title: <i>Daphnia</i> in littoral zones: costs & benefits associated with diel horizontal migration; Advisor: D. M. Lodge
Loyola University Chicago (LUC)	B.S. in Biology with honors, magna cum laude, 1995 B.A. in English with honors, magna cum laude, 1995

POSITIONS HELD

2024 (7/1) – now	Garey Endowed Chair in Biology
2024 (7/1) - now	Chairperson, Department of Biology
2013 – present	Professor, Southwestern University (SU) Department of Biology
2017 – 2020	Chairperson, Department of Biology
2009 – 2013	Associate Professor, SU Department of Biology
2003 – 2009	Assistant Professor, SU Department of Biology
08/01 – 7/03	Research and Teaching Fellow, Rhodes College (RC)
12/00 – 7/03	Postdoctoral Fellow, The Ohio State University
1995 – 1997	Teaching Assistant, Department of Biology, UND

HONORS, LEADERSHIP ROLES & AWARDS

2024	Study Abroad Faculty Co-Leader, Belize
2022	London Program Faculty
2022	Invited judge, Academy of Chocolate, UK
2022	Invited judge, Grand Jury Guest, International Chocolate Awards, Americas Competition
2021	Paideia Connections Faculty Lecture
2019	Chair, SU Sustainability Committee
2019	Integrated Learning Fellow, SU
2017	Judge, Good Food Awards, Chocolate
2017	SU Senior Faculty Award for Excellence in Scholarship and Creative Works
2016	Invited judge, World Finals, International Chocolate Awards, London
2014	Invited judge, International Chocolate Awards, New York City
2014	Texas Academy of Science, Board of Directors, Development Committee Chairperson
2013	Invited Senior Mentor, WEBS Symposium (http://advance.washington.edu/webs/)
2011 – 2013	Faculty Participant, National Science Foundation (NSF)-CCLI: Developing and Assessing Process Skills in Conservation Biology and Other Integrative Fields
2009 – 2013	Texas Academy of Sciences Past-President (12-13), President (11-12), President-Elect (10-11), Vice President (09-10), Awards Committee Chair
2009	Texas Academy of Sciences Fellow
2001	Selected Participant (44 chosen from 180) in DIALOG IV in Bermuda
2000	The Kaneb Center Graduate Student Award for Excellence in Teaching
1998	Fulbright Scholar to Denmark
1997	UND Graduate Student Union Teaching Assistant of the Year Award
1995	Presidential Medal Recipient from the College of Arts and Sciences, LUC
1995 -	<i>Phi Beta Kappa</i> , member

RESEARCH INTERESTS

- Impacts of non-native species on community structure
- Molecular ecology of apple snails
- Environmental DNA
- Predator-prey interactions (esp., invertebrate) and structural complexity within littoral zones
- Chemical communication in aquatic systems

MANUSCRIPTS ACCEPTED

- Rosas, E.,* C. Bashara*, L. D. Christie, M. A. Barnes, and R. L. Burks. 2025. Winning the shell game: Environmental DNA (eDNA) confirms local control of the invasive apple snail, *Pomacea maculata*. *Management of Biological Invasions*; Accepted February 18th.

PUBLICATIONS – PEER-REVIEWED UNLESS NOTED (* denotes undergraduate)

An * indicates an undergraduate co-author at the time at which the research occurred.

- Burks, R. L., C. Reynolds*, E. Rosas*, C. Bashara*, L. Dolopchiev*, C. Jerde and M. A. Barnes. 2024. Snail slime in real time: Challenges in predicting the relationship between environmental DNA and apple snail biomass. *Management of Biological Invasions* 15(3): 415-435. doi.org/10.3391/mbi.2024.15.3.06
- Burks, R. L. 2020. Setting Up Nonparametric Tests. Make Teaching with R in Undergraduate Biology Less Excruciating 2020, QUBES Educational Resources. doi:10.25334/PFE8-D888
- Glasheen, P. M.*, S. R. Campos*, R. L. Burks and K. A. Hayes. 2020. First evidence of introgressive hybridization of apple snails (*Pomacea* spp.) in a native range. *Journal of Molluscan Studies* 86(2): 96-103. Accepted (Click on PDF), doi:10.1093/mollus/eyz035.
- Emery, N., A. Hunt, R. Burks, M. Duffy, C. Scoffoni, and A. Swei. 2019. Students as ecologists: Strategies for successful mentorship of undergraduate researchers. *Ecology and Evolution*: <https://rdcu.be/btaia>.
- Sterling, E. J, R. L. Burks, J. Linder, T. Langen, D. S. Fernandez, D. Ruby, and N. Bynum. 2018A. Why is biodiversity important? An oral communication exercise. *Lessons in Conservation* 8:10–12. Available from <http://www.amnh.org/our-research/center-for-biodiversity-conservation/resources-and-publications/lessons-in-conservation/lessons-in-conservation-volume-viii>
- Sterling, E. J, R. L. Burks, J. Linder, T. Langen, D. S. Fernandez, D. Ruby, and N. Bynum. 2018B. Selecting areas for conservation: an oral communication exercise. *Lessons in Conservation* 8:13–16. Available from <http://www.amnh.org/our-research/center-for-biodiversity-conservation/resources-and-publications/lessons-in-conservation/lessons-in-conservation-volume-viii>
- Sterling, E. J, R. L. Burks, J. Linder, T. Langen, D. S. Fernandez, D. Ruby, N. Bynum, A. Bravo, and A.L. Porzecanski. 2018. Sharpen your oral communication skills! *Lessons in Conservation* 8:17–20. Available from <http://www.amnh.org/our-research/center-for-biodiversity-conservation/resources-and-publications/lessons-in-conservation/lessons-in-conservation-volume-viii>
- Perez, K. P., V. G. Gamboa, C. M. Schneider* and R. L. Burks. 2017. Resaca supports invasive apple snails (*Pomacea maculata*, Perry, 1810; Caenogastropoda: Ampullariidae) within the Rio Grande Valley, Texas. *CheckList* 13(3): <https://doi.org/10.15560/13.3.2134>
- Glasheen, P. M.*, C. Clavo, M. Meerhoff, K. A. Hayes and R. L. Burks. 2017. Survival, recovery, and reproduction of apple snails (*Pomacea* spp.) following exposure to drought conditions. *Freshwater Science* 36(2): 316 - 324.
- Burks, R. L., J. Bernatis, J. E. Byers, J. Carter, C. W. Martin, W. G. McDowell and J. van Dyke. 2017. Identity, reproductive potential, distribution, ecology and management of invasive *Pomacea maculata* in the southern United States. Pages 293-334. 2nd edition of *Global Advances in Ecology and Management of Golden Apple Snails*.
- Sterling, E., A. Bravo, A. Porzecanski, R. Burks, J. Linder, T. A. Langen, D. S. Fernandez, D. Ruby and N. Bynum. 2016. Think before (and after) you speak: Practice and self-reflection build student confidence and bolster performance in oral communication skills in ecology and conservation biology classes. *Journal of College Science Teaching* 45(6): 87-99.
- Burks, R. L., A. Miller* and A. Hill*. 2016. CABI Compendium project on *Pomacea maculata*. (Not traditional peer-review): <http://www.cabi.org/jisc/datasheet/116486>
- Perez, B. J.*, A. H. Segrest*, S. R. Campos*, R. L. Minton and R. L. Burks. 2016. First record of Japanese Mystery Snail *Cipangopaludina*, *CheckList* 12(5): <http://dx.doi.org/10.15560/12.5.1973>.
- Hayes, K.A, R. L. Burks, A. Castro-Vazquez, P. C. Darby, H. Heras, P. R. Martín, J.-W. Qiu, S. C. Thiengo, I. A. Vega, T. Wada, Y. Yusa, S. Burela, M. P. Cadierno, J. A. Cueto, F. A. Dellagnola, M. S. Dreon, M. V. Frassa, M. Giraud-Billoud, M. S. Godoy, S. Ituarte, E. Koch, K. Matsukura, M. Y. Pasquevich, C. Rodriguez, L. Saveanu, M. E. Seuffert, E. E. Strong, J. Sun, N. E. Tamburi, M. J. Tiecher, R. L. Turner, P. L. Valentine-Darby & R. H. Cowie. 2015. Insights from an integrated view of the biology of apple snails (Caenogastropoda: Ampullariidae). *Malacologia* 58(1-2): 245-302.

- Liebl, M.*, K. Roberts*, A. Mohammed*, M. Lowther*, E. Navaira*, A. Frankel*, S. Pukys and **R. L. Burks**. 2014. Staying SMART: Introduction and assessment of a one-on-one inquiry model to teach the scientific method to elementary school students. *Science Education and Civic Engagement: An International Journal* 6(1): 32-44. <http://dx20goomya1dw8.cloudfront.net/files/secej/winter14/smart.pdf>
- Kyle, C. H.*, A. Plantz*, T. Shelton and **R. L. Burks**. 2013. Count your eggs before they invade: Identifying and quantifying egg clutches of two invasive apple snail species (*Pomacea*). *PLoSOne* Open Access. <http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0077736>
- **Burks, R. L.** 2012. One McBug Burger Please: Eating insects in ecology class to contextualize climate change discussion. EcoEd, <http://ecoed.esa.org/index.php?P=FullRecord&ID=383>.
- Kyle, C. H.*, A. W. Kropf* and **R. L. Burks**. 2011. Prime waterfront real estate: Apple snails choose wild taro for oviposition sites. *Current Zoology* 57(5): 630-641.
- **Burks, R. L.**, S. A. Hensley* and C. H. Kyle*. 2011. Quite the appetite: juvenile island apple snails (*Pomacea insularum*) survive consuming only exotic, invasive plants. *Journal of Molluscan Studies* 77(4): 423-428.
- **Burks, R. L.**, C. H. Kyle* and M. K. Trawick*. 2010. Pink Eggs and Snails: Field oviposition patterns indicate shallow aquatic systems susceptible to invasion by *Pomacea insularum*. *Hydrobiologia*, Shallow Lakes 2009 Special Volume 646: 243-251.
- Meerhoff, M., M. Beklioglu, **R. Burks**, F. García-Rodríguez, N. Mazzeo and B. Moss. 2010. Shallow Lakes: Preface. *Hydrobiologia* DOI 10.1007/s10750-010-0247-2.
- **Burks, R. L.** and M. M. Chumchal. 2009. To Co-author or Not to Co-author: How to write, publish, and negotiate issues of authorship with undergraduate research students. *Sci. Signal.* 2 (94), tr3.
- **Burks, R. L.** 2009. A Kernel of Truth: Microwave popcorn makes it easier to teach basic statistics. *The L&O Bulletin* 18(2): 36-40.
- Kyle, C. H.,* M. K. Trawick,* J. P. McDonough* and **R. L. Burks**. 2009. Population dynamics of an established reproducing population of the invasive apple snail (*Pomacea insularum*) in suburban southeast Houston, Texas. *Texas Journal of Science* 61(4): 1-5.
- Barnes, M.A.*, R. K. Marfurt*, J. J. Hand and **R. L. Burks**. 2008. Fecundity of the exotic applesnail, *Pomacea insularum*. *The Journal of the North American Benthological Society* 28(3): 738-745.
- Youens, A. K.* and **R. L. Burks**. 2008. Comparing applesnails with oranges: the need to standardize measuring techniques when studying *Pomacea*. *Aquatic Ecology* 42(4): 679-684.
- Boland, B.*, M. Meerhoff, C. Fosalba, N. Mazzeo, M. Barnes* and **R. L. Burks**. 2008. Juvenile snails, adult appetites: Contrasting resource consumption between two species of applesnails (*Pomacea*). *Journal of Molluscan Studies* 74(1): 47-54.
- **Burks, R. L.** and L. Boles. 2007. Evolution of the Chocolate Bar: A creative approach to teaching phylogenetic relationships within evolutionary biology. *The American Biology Teacher* 69(4): 229-237.
- Burks, R. L. 2007. Math for Wiser Decisions (a review of Rockwood's *Introduction to Population Ecology*). *BioScience* 57(3): 288-289.
- **Burks, R. L.**, G. Mulderij, E. Gross, I. Jones, L. Jacobsen, E. Van Donk, and E. Jeppesen. 2006. Chapter 3 - Center stage: The Crucial Role of Macrophytes in Regulating Trophic Interactions in Shallow Lake Wetlands. Pages 37-59 in R. Bobbink, B. Beltman, J. T. A. Verhoeven, and D. F. Whigham (eds) *Wetlands: Functioning, Biodiversity Conservation, and Restoration*. Ecological Studies, Volume 191, Springer-Verlag Berlin Heidelberg.
- R. G. Howells, L. E. Burlakova, A. Y. Karatayev, R. K. Marfurt*, and **R. L. Burks**. 2006. Chapter 5 - Native and introduced Ampullariidae in North America: History, status and ecology. Pages 73-112 in R. C. Joshi (ed) *Global Advances in Ecology and Management of Golden Apple Snails*. Philippine Rice Research Institute (PhilRice), Philippines.
- Lindquister, G., **R. L. Burks**, and C. R. Jaslow. 2005. Developing information fluency in introductory biology students in the context of an investigative laboratory. *Cell Biology Education* 4: 58-96.
- Tuchman, N. C., **R. L. Burks**, C. A. Call, and J. J. Smarrelli. 2004. Flow rate and vertical position influence ingestion rates of colonial zebra mussels (*Dreissena polymorpha*). *Freshwater Biology* 49: 191-198.
- **Burks, R. L.** and D. M. Lodge. 2002. Cued in: advances and opportunities in freshwater chemical ecology. *Journal of Chemical Ecology* 28(10): 1881- 1897.
- **Burks, R. L.**, N. C. Tuchman, C. A. Call, and J. E. Marsden. 2002. Colonial aggregations: the effect of spatial position on zebra mussel responses to interstitial water quality. *Journal of the North American Benthological Society* 21(1): 64-75.
- **Burks, R. L.**, D. M. Lodge, E. Jeppesen and T. L. Lauridsen. 2002. Diel horizontal migration of zooplankton: costs and benefits of inhabiting littoral zones. *Freshwater Biology* 47: 343-366.
- **Burks, R. L.**, E. Jeppesen and D. M. Lodge. 2001. Pelagic prey and benthic predators: impact of odonate predation on *Daphnia* among complex structure. *Journal of the North American Benthological Society* 20(4): 683-696.
- **Burks, R. L.**, E. Jeppesen and D. M. Lodge. 2001. Littoral zone structures as *Daphnia* refugia against fish predation. *Limnology and Oceanography* 46(2): 230-237.
- **Burks, R. L.**, E. Jeppesen and D. M. Lodge. 2000. Macrophyte and fish chemicals suppress *Daphnia* growth and alter life history traits. *Oikos* 88(1): 139-147.
- Lauridsen, T. L., E. Jeppesen, S.F. Mitchell, D. M. Lodge and **R. L. Burks**. 1999. Horizontal distribution of zooplankton in lakes

with contrasting fish densities and nutrient levels. *Hydrobiologia* 408/409: 241-250.

LAST 10 YEARS OF FUNDING

2025	Sam Taylor Fund, United Methodist, \$1994, Applesnails in Belize
2023	Associated Colleges of the South, \$23,813; Workshop Chocolate Covered Teaching: An Innovative Approach to Using Commodity-Based Goods to Foster Cross-disciplinary Critical Thinking Skills in Undergraduates
2018	Sam Taylor Fund, United Methodist, \$1400, molecular ecology
2015	Sam Taylor Fund, United Methodist, \$1700, molecular ecology
2012	National Science Foundation, Research Opportunity Award, \$19,815 (via R. Cowie)
2011-2015	National Science Foundation, International Research Experience for Students IRES-AMPLIFIED (\$72,075 to SU; \$77,877 match to Univ. Hawaii)

LAST 5 YEARS UNIVERSITY-SUPPORTED PROFESSIONAL ACTIVITY

2025	Professional Development Award (\$2400)
2023-24:	Fall Sabbatical Research Award (~\$5,000)
2023-24:	Annual Faculty Professional Development (\$2400)
2023:	Faculty-Student Projects for 6 weeks for two students (~\$8,000)
2022:	Fall London Semester
2022:	Annual Faculty Professional Development (\$2400)
2021:	SCOPE funds for two students (~\$10,000)

PEDAGOGICAL INTERESTS

- Examining the integration between teaching and research
- Encouraging critical thinking analysis through hands-on activities with graphing and statistics
- Understanding and improving the mentoring process
- Inquiry-based teaching and learning

UNDERGRADUATE RESEARCHER MENTORING EXPERIENCE

Current: 08/2024 – now: new students with projects under development

08-2024 – current	Gage Mallo '26, Phylogenetics of apple snails in Belize
08-2024 – current	Kylie Allemeier '26 (Dec), Extraction methodology for subsequent DNA analysis
08-2024 – current	Sarah Berver '27, Developing project on chinaberry and applesnails
08-2024 – current	Katelin Pilarski '27, Degradation of eDNA from hatchlings and shells
01-2025 – current	Johun Reyes '26, Population diversity of Belizean apple snails
01-2025 - current	Jordan Emerson '27, Microplastics and eDNA, project in development

In addition:

08-2024 – current	Alanna Guerrero '25, Research assistant (paid)
06-2025	Emma Flores '28, SURF student, microplastics, project in development
06-2025	Heaven Eskander '27, SURF student, microplastics, project in development

SU Students (with at least two semesters of research or summer work):

01/2022 – 05/2024	Esme Rosas '24, (Faculty-Student Project 2023); eDNA monitoring of South Austin pond
01/2022 – 03/2024	Cassidy Reynolds, (Faculty-Student 2023); Estimating biomass vs. eDNA
03/2021 – -5/2023	Cynthia Bashara '23 (2021 SCOPE); Snail eDNA during active summer San Antonio,
03/2021 – 05/2023	Lillian Dolopchiev '23 (2021 SCOPE), Size-fractionation of apple snail eDNA
08/2021 – 05/2022	Kate Henderson and Abby White, Keep Austin Snail-free
01/2019 – 05/2021	Kaitlin Galassini '21 (2019 SCOPE), microplastics and eDNA
03/2018 – 05/2021	Lauren Muskara '21 (2018 SCOPE), field eDNA and primer development; MS in Biomedical Visualization

03/2018 – 05/2019 **Shellsea Miller '20** (2018 SCOPE), field eDNA

03/2018 – 05/2019 **Nicole Kelly**, (2018 SCOPE), mysterysnails

05/2017 – 05/2019 **Hannah Winkler '19**, Identity of Chinese and Japanese mysterysnails through 16S

01/2016 - 05/2019 **Madison Granier '19** (2016 HHMI SCOPE), senior, eDNA and apple snails

08/2016 – 08/2018 **Shannon Walsh '18**, senior, Identity of Chinese and Japanese mysterysnails via COI, Employed as medical scribe

08/2016 – 05/2017 **Hugo Cepeda '18**, learning molecular techniques

03/2015 – 06/2017 **Carissa Bishop '17**, (2015 HHMI SCOPE), Screening for *Angiostrongylus cantonensis* in native apple snails, Employed in biotech lab

11/2013 – 12/2016 **Sofia Campos '16**, (2014/2016 HHMI SCOPE summer student), Phylogenetics and phylogeography of *Pomacea* spp. in Uruguay, Employed at wellness center

08/2015 – 05/2016 **Bianca Perez '16**, Japanese mysterysnail identification, State Biologist, West Virginia

07/2014 – 05/2016 **Paul Glasheen '16**, Honors Student, Hybridization potential of *Pomacea* spp. in native range of Uruguay, Accepted 2017 into medical school at U. Colorado Denver

11/2013 – 05/2015 **Averi Segrest '16**, SU AB Major, Native apple snails and invasive bivalves, Self-employed businesswoman

11/2013 – 01/2016 **Ryan Beeman '17**, SU Math Major, Modelling and morphometrics of apple snails

03/2015 – 10/2015 **Sarah Wilting '17**, SU Biology Major (2015 HHMI), acidification and apple snails

01/2013 – 05/2015 **Carson Savrick, '15** (BS Biology) Origin of established *Pomacea* across southeastern US, Accepted 2017 into medical school at UT Medical - Houston

11/2013 – 05/2015 **Allie Watts '15**, (AB capstone; 2014 HHMI); Chemical cue responses to predators by hatchling *Pomacea maculata*, Employed environmental non-profit

03/2013 – 01/2015 **Amy Miller '16** (Jr. Yr. Work; 2013 HHMI & 13-14 UR) Genetic, anatomical and ecological work on *Felipponea*

08/2013 – 05/2014 **Rebecca Petro '14** (BA Biology & Art), Pink Eggs I Am (Science and Art Communication using apple snails)

06/2013 – 05/2014 **Amber Cochran '14** (BS Biology), Hatchling apple snail growth and survival; focus *P. megastoma*

05/2013 – 03/2014 **Alex Petrucci '16**, GIS Project with *Pomacea*, PhD student in neuroscience

03/2013 - 08/2013 **Alexandria Hill '13** (BS Biology); Turtle predation on hatchlings; Pharmacist

09/2011 – 05/2014 **Jonathan Miley '14** (BA Biology); Molecular ecology of *Pomacea*

09/2009 – 08/2013 **Allyson Plantz** (BA Biology & Art); Egg predation by riparian predators & reproduction of *P. megastoma*; TCEQ; Employed non-profit.

04/2010 – 12/2012 **Tracy Day** (BA Biology, Music minor, Paideia Scholar); Establishing trophic position of *P. maculata*; Employed, Georgetown, TX

01/2011 – 05/2012 **Katie Gibson** (BA Animal Behavior; Minor Environmental Studies; Paideia Scholar) Putting on Mussel: Apple snail interactions with *Limnoperna*; Ph.D. student U. Georgia

01/2011 – 05/2012 **Kevin Burge** (BA Biology; Minor Comp. Sci), pH impacts on hatchling apple snails

01/2009 – 05/2011 **Megan (Rice) Shelton** (BS Biology; 2011 Biology Student of the Year) Disturbing environments: post-hatching survival of apple snails; Medical Resident

04/2008 – 05/2010 **Matthew Trawick** (BA Environmental Studies; Minor Biology), Hatchling survival success versus water stress; MS in Public Policy, Texas Tech; JD University of Michigan: Lawyer, Environmental Protection Agency

08/2008 – 05/2010 **Olivia Stanzer** (BS Biology), Persistence of pink: ecological role of ovorubin protein; PhD, Physical Therapy

04/2009 – 08/2010 **Alexis Kropf '12** (BA Biology, 2012 Biology Student of the Year, BA Anthropology), Relationship of fecundity & female snail size; Physician, UT Southwestern

08/2008 – 05/2009 **Scott Manusov** (BS Biology) Natural and induced aggregation patterns in *P. insularum*. Chemistry Lab technician and Science Tutor.

04/2007 – 05/2009 **James McDonough** (BS Biology), Field oviposition in *P. insularum*; MD Resident

01/2007 – 05/2009 **Colin Kyle** (BS Biology), Honors Student, Oviposition behavior of *P. insularum* (now *P. maculata*). Ph.D. 2015 University of Chicago: Current: Game Development

08/2006 – 5/2008 **Sarah Hensley** (BS Biology), Juvenile consumption of exotic plants. Ph.D. 2014 University of

04/2006 – 05/2007	<i>Massachusetts at Amherst: AP High School Teacher.</i> Abby Youens (BA Biology), Growing at a Snail's Pace: Juvenile growth patterns. <i>Completed M.S. Public Health at UTHSC Houston; MD Resident.</i>
08/2004 – 05/2007	Brandon Boland (BS Biology, Paideia Scholar), Understanding mechanisms behind food choice in the channelled apple snails. <i>Ph.D. 2015 University of Chicago: Current Postdoctoral Researcher.</i>
05/2005 – 06/2006	Matthew Barnes (BA Biology), Honors Student , The Snail and the Egg: understanding the egg-hatchling transition in apple snails. <i>Ph.D. 2013 University of Notre Dame; Faculty, Texas Tech.</i>
08/2004 – 05/2005	Cathy Duong (BA Biology, Paideia Scholar), Temperature and chemical cues influences on diel horizontal migration of <i>Daphnia</i> . <i>Employed at corporate real estate firm working with tenants.</i>
08/2003 – 05/2005	Rebecca Marfurt (BA Environmental Studies), Life history and ecological impacts of the exotic channelled apple snail, <i>Pomacea "canaliculata (now P. insularum)."</i> <i>M.S. Aquatic Ecology at Texas State. OK DEQ and now environmental consultant</i>
08/2003 – 08/2005	Austin Hill (BS Biology). Dual effects of pesticides and chemical cues on <i>Daphnia</i> growth and reproduction. <i>Finished M.S. at Texas State.</i>

RECENT EXTERNAL GRANTS FUNDED BY UNDERGRADUATES

- **2025: Johun Reyes '26, 1st place (\$2000) Undergraduate Research Award; Texas Academy of Sciences**

EXTERNAL AWARDS EARNED BY UNDERGRADUATES

- **2025: Gage Mallo '26, Best Poster Presentation in Systematics and Taxonomy; Texas Academy of Sciences; \$25**
- **2020: Lauren Muskara (\$250), Kaitlin Galassini (\$150), and Esther Nyaberi (\$50), Best undergraduate presentations, Texas Conservation Symposium, Georgetown, TX**

COURSES TAUGHT AT SOUTHWESTERN (in approximate frequency taught)

- Study Abroad:
 - Ecologies of Belize (Spring 2024) – Study Abroad Course
 - London Semester (Fall 2022): Darwin – Then and Now; Chocolate Coated London
- General Education:
 - The Science of Chocolate (May Term 2017, 2020, 2021; Spring 2022; likely Summer 2025)
 - First Year Seminar: Dark Chocolate: Science and Culture (Fall when possible)
- Biology Research Methods:
 - Methods in Ecology and Evolution (Usually Every Spring)
 - Independent Research in Biology
- Rotational Upper Levels:
 - Biology Capstone – Stress (2021); Biodiversity (2020); Invasion (2018)
 - Conservation Biology (Bi-annual)
 - Invertebrate Ecology/Biology (Every other Spring)
 - Introduction to Animal Behavior; Animal Behavior
 - Ecology (alternate Spring; sections – see syllabus links on webpage or below)
 - Burks, R. L. 2012. Campus Ecology at Southwestern University
 - <http://ecoed.esa.org/index.php?P=FullRecord&ID=438>

Previous Courses:

- Introduction to Animal Behavior
- Paideia Seminar – The Anthropocene (team-taught once; M. Johnson)
- Biodiversity (Every Fall; 36+ sections); Now Living Systems
- Writing About Science (May Term 2012)
- Wetland Ecology and Policy (cross-listed with Environmental Studies)
- Paideia Seminar (6 semesters)
- Senior Seminar: Aquatic Invasive Species

- Environmental Science (POK)
- First Year Seminar Wet N' Wild: Wetland Science in a Changing Landscape

NATIONAL OR INTERNATIONAL CONFERENCE PRESENTATIONS

LAST 10 YEARS - Category 1: INVITED PAPERS OR SPECIAL SESSIONS (* denotes undergraduate author, oral presentation unless otherwise noted, underline represents presenting author if not R. L. Burks)

- **Burks, R. L.** 2022. "Amplifying" Research: Increasing scope of molecular tools to study native and non-native apple snails (*Pomacea* spp.). Special Symposium: Two decades (and counting) of applying DNA techniques to aquatic sciences. Joint Aquatic Sciences Meeting, Grand Rapids, MI.
- **Burks, R. L.**, Muskara, L. E.*, S. E. Miller*, K. Galassini*, E. Nyaberi*, and M.A. Barnes. December 2019. Genetic ABCs – COI to eDNA: Using barcoding IDs to develop application for species detections of nonnative apple snails from water samples. Oral presentation. Triennial (3rd) Congress of the Argentinean Malacological Society. Bahia Blanca, Argentina.
- Muskara, L. E.*, S. E. Miller*, M. A. Barnes, and **R. L. Burks**. May 2019. A snail out of water: Hitting the target on primer optimization for apple snails. Poster Presentation, Society for Freshwater Science, Salt Lake City, UT.
- **Burks, R. L.** August 2018. Wait, wait, don't leave me: How to maintain research productivity with undergraduates after they graduates. Special Session: Students as Ecologists. INSPIRE Talk, Ecological Society of America, New Orleans. LA.
- **Burks, R. L.**, S. R. Campos*, P. M. Glasheen*, C. A. Bishop*, A. H. Segrest*, C. Calvo, M. Meerhoff, F. Scarabino, A. E. Röhrdanz, C. Clavijo and K. A. Hayes. 2017. Overlapping and overlooked: *Pomacea* species distribution, diversity and hybridization in Uruguay. Ampullariidae Symposium, XCLAMA 10th meeting de la Asociación Latinoamericana de Malacología (ALM). Piriapolis, UR.
- Meerhoff, M., C. Clavo and **R. L. Burks**. 2017. Moluscos en aguas calientes: cómo el Cambio Climático puede afectar a los moluscos y qué sabemos ya. *Pomacea* species distribution, diversity and hybridization in Uruguay. Ampullariidae Symposium, XCLAMA 10th meeting de la Asociación Latinoamericana de Malacología (ALM). Piriapolis, UR.
- Clavo, C., R. L. Burks and M. Meerhoff. 2017. Desempeño de *P. canaliculata* frente a distintos escenarios ambientales: una aproximación experimental. *Pomacea* species distribution, diversity and hybridization in Uruguay. Ampullariidae Symposium, XCLAMA 10th meeting de la Asociación Latinoamericana de Malacología (ALM). Piriapolis, UR.
- **Burks, R. L.** June 2017. Putting your lab classes (and resources) to work for you: An example of a molecular ecology course research module. Special Session: Scholarship of Teaching and Learning in Freshwater Science. Society for Freshwater Science, Raleigh, NC.
- **Burks, R. L.** May 2016. Worldly Science: Developing undergraduate research and mentoring activities to train diverse global scientists – a NSF-IRES case study. Special Session: Future Freshwater Science. Sacramento, CA.

LAST 4 YEARS: Category 2: CONTRIBUTED PAPERS AT NATIONAL OR REGIONAL CONFERENCE

(* denotes undergraduate author, underline indicates presenting author if not R. L. Burks)

- **Burks, R. L.** and A. Felton. 2025. Methodical microplastics: Development of an undergraduate CURE to quantify abundance of microplastic fibers in a local stream. Science Education Oral Presentation, Texas Academy of Sciences, McClennan Community College & Baylor University, Waco, TX.
- G. Mallo*, J. Reyes*, & **R. L. Burks**. 2025. You better Belize they're different: Phylogenetic analysis and species identification of native apple snails in Belize. Systematics and Taxonomy Poster Presentation, Texas Academy of Sciences, McClennan Community College & Baylor University, Waco, TX.
- K. Allemeier*, S. Berver*, K. Pilarski*, & **R. L. Burks**. 2025. Extraordinary extraction efforts: Experiments to enhance DNA extraction for tissues of apple snails of conservation interest. Conservation Ecology Poster Presentation, Texas Academy of Sciences, McClennan Community College & Baylor University, Waco, TX.
- C. Reynolds*, E. Rosas*, D. Christie, M. A. Barnes, and **R. L. Burks**. 2024. Jumping in the deep end: quantifying environmental DNA concentrations of *Pomacea maculata* at varying depths in a South Austin pond. Freshwater Science Oral Presentation, Texas Academy of Sciences, Odessa, TX.
- E. Rosas*, C. Reynolds*, D. Christie, M. A. Barnes, and **R. L. Burks**. 2024. Telling a snail's tale: assessment of eDNA analysis as a tool to monitor removal efforts of *Pomacea maculata* in South Austin. Freshwater Science Oral Presentation, Texas Academy of Sciences, San Odessa, TX.
- E. Rosas*, C. Reynolds*, D. Christie, M. A. Barnes, and **R. L. Burks**, and M. A. Barnes. 2024. Looking for "a snail in a pond": Investigating how eDNA contributes to eradication efforts of the invasive apple snail, *Pomacea maculata*. Poster Presentation, Society for Integrated and Comparative Biology, Seattle, WA.
- Bashara, C.*, L. Dolapchiev*, C. Vaughn, S. Bittner, **R. L. Burks**, and M. A. Barnes. 2023. Now you see them, now you don't? Using eDNA to confirm removal of invasive snails by local agency. Freshwater Science Oral Presentation, Texas

Academy of Sciences, San Angelo, TX.

- Reynolds, C.*, E. Barrientos-Rosas*, **R. L. Burks**, and M. A. Barnes. 2023. Large snails & small DNA: Relating *Pomacea maculata* biomass & environmental DNA concentration. Poster Presentation, Society for Integrated and Comparative Biology, Austin, TX.
- Reynolds, C.*, E. Barrientos-Rosas*, **R. L. Burks**, and M. A. Barnes. 2023. Large snails & small DNA: Relating *Pomacea maculata* biomass & environmental DNA concentration. Freshwater Science Poster Presentation, Texas Academy of Sciences, San Angelo, TX.
- Bashara, C.*, L. Dolapchiev*, C. Vaughn, S. Bittner, **R. L. Burks**, and M. A. Barnes. 2022. Snail (*Pomacea maculata*) Days of Summer: Associations between reproductive output, snail removal efforts, and environmental DNA (eDNA) concentration. Freshwater Science Oral Presentation, Texas Academy of Sciences, Clear Lake, Houston, TX.
- Dolapchiev, L.*, C. Bashara*, **R. L. Burks**, and M. A. Barnes. 2022. Filter me...if you can: using size fractionation to separate, measure, and determine the size of *Pomacea maculata* eDNA. Freshwater Science Oral Presentation, Texas Academy of Sciences, Clear Lake, Houston, TX.
- Henderson, K.*, A. White*, C. Bashara*, L. Dolapchiev* **R. L. Burks**, and M. A. Barnes. 2022. Keep Austin snail-free: ongoing removal of *Pomacea maculata* and evaluation by eDNA. Freshwater Science Poster, Texas Academy of Sciences, Clear Lake, Houston, TX.
- Bashara, C.*, L. Dolapchiev*, C. Vaughn, **R. L. Burks**, and M. A. Barnes. 2022. Stop escargo in San Antonio: developing best methodology for detecting *Pomacea maculata* using environmental DNA (eDNA). Freshwater Science Poster, Texas Academy of Sciences, Clear Lake, Houston, TX.

OTHER RECENT INVITED LECTURES AND PRESENTATIONS

- ^ **Burks, R. L.**, Confirming local eradication of apple snails at Bear Lake with eDNA; GSARP Meeting, Austin, TX, 11/19/24.
- ^ **Burks, R. L.**, Educated by Chocolate. Dallas Chocolate and Northwest Chocolate Festivals (Fall 2024).
- ^ **Burks, R. L.**, Telling Fact from Fiction in Science of Chocolate, Northwest Chocolate Festival (Fall 2024).
- ^ **Burks, R. L.**, Chocolate Covered Science: Connect what you love to eat with what you love to study, Schreiner University, September 2024.
- ^ **Burks, R. L.** How to Better Love Your Chocolate. Georgetown Women's Society. 01/10/24.
- ^ **Burks, R. L.** I Say Cocoa, You Say Cacao: An industry glossary's mission to establish a common language for fine chocolate. [Northwest Chocolate Festival](#), Seattle, WA, 10/06/23.
- ^ **Burks, R. L.** Chocolate "Definitions" - the dream of developing a common language. Dallas Chocolate Festival, 09/09/23.
- ^ **Burks, R. L.** How to Taste Chocolate like a Competition Judge. Dallas Chocolate Festival, 09/10/23.
- ^ **Burks, R. L.** Now You See Them, Now You Don't? Using eDNA to confirm removal of invasive snails by local agency; APHIS-USDA 2023 Apple Snail Workshop, 2/21/23.
- ^ **Burks, R. L.** Biology and Chemistry of Chocolate. Westwood High School, Round Rock, TX, 2/17/23.
- ^ **Burks, R. L.** How to Cultivate a Real Relationship with Chocolate. Rockport Fine Arts Council, 2/12/23.
- ^ **Burks, R. L.** Making the word chocolate mean more to everyone" at the first edition of the Latin American International Festival of Chocolate and Cocoa in Europe. Porto, Portugal, 10/21/22.
- ^ **Burks, R. L.** Chocolate Chemistry. Austin Science and Nature Center, 2/12/22.
- ^ **Burks, R. L.** The nature of knowing and the science of eDNA. Paideia Connections Lecture 10/21.
- ^ **Burks, R. L.** Cacao Biodiversity 101. Northwest Chocolate Festival. November 2019, Virtual 2020.
- ^ of Memphis.

UNIVERSITY SERVICE:

Spring 2025	Faculty Steering Committee (sabbatical replacement)
Fall 2024	Paideia Committee
2020 – 2023	First Year Seminar Committee
2021 – 2023	Faculty Steering Committee
2021 - 2022	External Member, Statistics Faculty Search
2020 – 2021	Member, Environmental Science Faculty Search
2020 – current	External Member, Computer Science Faculty Search

2017 – 2020	Biology Department Chairperson
2017 – 2020	Sustainability Committee (Chair in 2019-2020)
2015 – 2020	Institutional Animal Care and Use Committee
2010 – current	Environmental Studies Committee (2012-2017 Co-Chair)
2002 – current	<i>Phi Beta Kappa</i> Committee, 2010-2011 President

EDITORIAL RESPONSIBILITIES:

- 2012 – current, *Freshwater Biology* (Editorial Board)
- 2010 – 2017, *The American Midland Naturalist* (Associate Editor)

PROFESSIONAL MEMBERSHIPS

- 2017 – present, Freshwater Mollusk Conservation Society
- 2013 – present, American Association of University Professors (AAUP), member
- 2009 – present, *American Association for the Advancement of Science*, member
- 2005 – present, *Sigma Xi* Research Society, elected member
- 2004 – present, Texas Academy of Sciences member
 - 2012, Past-President
 - 2011, President
 - 2010, President-Elect
 - 2009, Vice President
 - 2007, Chair for Marine and Freshwater Section
 - 2006, Vice-Chairperson for Marine and Freshwater Ecology Section
- 1997 – present, Ecological Society of America (ESA) member
 - 2010-2011, RUI Section Chair
- 1992 – present, Society for Freshwater Science (formerly NABS) member:
 - Mentor for graduate students
 - 2006, Appointed Sponsorship Committee (2007-2009 Chair)
 - 2002, International Profile Committee
 - 2001, Organized Student Presentation Judging
 - 2001-present, Student Presentation Judge (orals and posters)
 - 1999, Appointed member of the NABS Long-Range Planning Committee
 - 1998 – 1999 Chairperson, NABS Graduate Resources Committee (GRC)
 - 1996 – 1997 NABS Endowment Festivities Coordinator
 - 1996 Co-founder, NABS GRC to address student concerns, 3 year member
- 2004 – 2007, National Association of Biology Teachers member
- 1997 – 2008, American Society of Limnology and Oceanography:
 - 2005-2007, Meetings Committee
 - 2001-present, Student Poster Judge
 - 1997 – 1999 ASLO Endowment Committee Member
- 2002 – 2004, American Institute of Biological Sciences member
- 2001 – 2003, Council for Undergraduate Research (CUR) member
- 2001 – 2003, Tennessee Academy of Sciences (TAS) member
- 1999 – 2003, Association of Women in Science (AWIS) member
- 1999 – 2002, American Scandinavian Foundation (ASF) member
- 1999 – 2002, Fulbright Alumni Association member

REVIEWER ACTIVITIES (JOURNALS)- *Acta Oecologia*, *Animal Behaviour*, *Annals of Applied Biology* (new), *Aquatic Botany*, *Aquaculture*, *Aquatic Invasions*, *Biological Invasions*, *Bioinvasion Records*, *Biological Bulletin*, *BioScience*, *Diversity and Distributions*, *Fresenius Environmental Bulletin*, *Archiv für Hydrobiologia*, *Canadian Journal of Fisheries and*

Aquatic Sciences, CUR Quarterly, Ecology, Ecological Research, Ethology, Freshwater Biology, Frontiers in Ecology and Evolution, Functional Ecology, Hydrobiologia, Invertebrate Reproduction and Development, Journal of Chemical Ecology, Journal of Ecology, Journal of Ethology, Journal of Herpetology, Journal of Experimental Marine Biology and Ecology, Journal of Experimental Agriculture, Journal of Limnology, Journal of the North American Benthological Society/Journal of Freshwater Science, Journal of Pest Management, Limnetica, Limnology and Oceanography, Malacologia, Management of Biological Invasions (new), Marine & Freshwater Research, PeerJ, PLOS One, Scientific Reports, Southeastern Naturalist, Studies on Neotropical Fauna and Environmental, Tropical Biology, Turkish Journal of Zoology, Wetlands

REVIEWER ACTIVITIES (GRANTS)-*International Research Experiences for Students Panel, Ecology Program, National Science Foundation, Estonia Research Foundation, and US Fish and Wildlife Service, Polish Research Service*

PEDAGOGICAL - *John Wiley & Son, Current Contents, Pearson (Campus Ecology), Sinauer Publishing (Cain's Ecology), ETS, McGraw Hill (Brooker's Biology)*

PUBLISHING COMPANIES: *University of Chicago Press*

REPRESENTATIVE MEDIA COVERAGE – General Publicity: Who's Who at Southwestern:
<http://www.southwestern.edu/whoswho-archive/0507fac.html> and 12/05

Most recent:

- Romi Burks, Chocolate Profile, The Sweet Side of Chocolate
 - <https://www.southwestern.edu/live/news/15744-the-sweet-side-of-science>
- Romi Burks. Science Stories Podcast. 2/24/23. Invasive snails and chocolate.
<https://rss.com/podcasts/fm/842900/>
- Romi Burks, FCIA Fine Chocolate Glossary Project, KahKow Podcast, <https://www.spreaker.com/episode/fcia-glossary-project-a-resource-for-everyone--56441399>
- Contribution to *Science World* - <https://scienceworld.scholastic.com/issues/2023-24/021224/chocolate.html?language=english#1040L>