

DONALD T. MCKNIGHT

Savanna Field Station, Belize

donald.mcknight@my.jcu.edu.au

EDUCATION

Doctor of Philosophy, Biology (cum laude)

James Cook University, Townsville, QLD

Graduated—December 2019

Supervisors—Kyll Zenger, Lin Schwarzkopf, Ross Alford, and Deborah Bower

Thesis title—Life finds a way: The recovery of frog populations from a chytridiomycosis outbreak

Master of Science, Biology

Missouri State University, Springfield, MO

Graduated—May 2014

GPA—4.0 (4-point scale)

Supervisor—Day Ligon

Thesis title—A herpetofaunal survey of Boehler Seeps and Sandhills Preserve with an emphasis on turtle communities and the ecology of the western chicken turtle (*Deirochelys reticularia miaria*)

Bachelor of Science, Biology

Messiah College, Grantham, PA

Graduated—December 2010

GPA—3.83 (4-point scale)

Highlights

Research output

- Peer-reviewed papers 45
- Peer-reviewed notes 8
- Book chapters 2
- R packages 1
- Invited seminars 4
- Presentations/posters 48

Awards and funding

- Research funding >\$330K
- Publication awards 1
- PhD thesis awards 1
- MSc thesis awards 1
- Presentation awards 7

Teaching

- Subjects lectured/tutored 6
- PhD students 3
- MPhil students 6
- Honours students 2
- Undergraduate mentees 10

RESEARCH INTERESTS

Ecology, conservation, microbiomes, population genetics, evolution, and herpetology

PROFESSIONAL HISTORY

August 2023–Present

Research Director —Savanna Field Station

Design, conducted, and published research, supervise post-graduate students; teach courses; manage the field station.

January 2022–April 2023

Postdoctoral Researcher — La Trobe University

Designed, conducted, and published research

January–December 2021

Postdoctoral Researcher — James Cook University

Designed, conducted, and published research; supervise post-graduate students

January 2020–present

Adjunct Graduate Faculty — Missouri State University

Supervise post-graduate students

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November 2019–May 2020	Postdoctoral Researcher — University of New England Designed, conducted, and published research; supervised post-graduate students
June 2015–December 2019	PhD Candidate — James Cook University Designed, conducted, and published research
August 2014–May 2015	Adjunct Professor — Ozarks Technical Community College Taught lecture and laboratory sections of BIO100
2012–April 2014	Research Assistant — Missouri State University Designed, conducted, and published research
2011	Park Naturalist — Anita C. Leight Estuary Center Designed and delivered public education programs
2008–2011	Research Intern — Anita C. Leight Estuary Center Designed, conducted, and published research; managed volunteers

TEACHING EXPERIENCE

Adjunct Lecturer (Ozarks Technical Community College)

2014–2015 Life Science (BIO 100; 4 credits, 5 contact hours, lecture and lab, 2 semesters, 2 sections per semester).

Tutor (James Cook University)

2020 Ecological Research Methods (BZ3230/BZ5230) — Delivered lectures and workshops, supervised research projects, and helped students with experimental design, field methods, and analyses.

2018 Herpetology (BZ3725) — Supervised research projects and helped students with experimental design, animal capture and handling, and analyses.

2018 Ecological and Conservation Genetics (BZ3450/BZ5450) — Designed and delivered pre-lab lectures, taught students how to analyze and interpret population genetics data, graded student presentations

2017 Wildlife Ecology and Management (BZ3740) — Instructed students in methods for capturing, handling, and identifying Australian fauna

2017 Australian Vertebrate Fauna (BZ2705) — Instructed students in methods for capturing, handling, and identifying Australian fauna

Guest Lecturer (James Cook University and Messiah College)

2019 Ecological and Conservation Genetics (BZ3450/BZ5450) “Population genetics of frogs following recovery from a disease outbreak”

2018 Ecological and Conservation Genetics (BZ3450/BZ5450) “Population genetics of frogs following recovery from a disease outbreak”

2017 Ecological and Conservation Genetics (BZ3450/BZ5450) “Population genetics of frogs following recovery from a disease outbreak”

2016 Herpetology (BZ3725) “Designing studies in herpetology”

2016 Herpetology (BZ3725) “Herpetology: It’s more than just catching stuff”

2016 Ecological and Conservation Genetics (BZ3450/BZ5450) “Population genetics of frogs following recovery from a disease outbreak”

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2010	Ecological Field Techniques (BIOL 271) “Basics of radio telemetry”
2009	Ecological Field Techniques (BIOL 271) “Basics of radio telemetry”

Park Naturalist (Anita C. Leight Estuary Center)

2011	Taught groups ranging in age from elementary students to adults. Teaching formats varied from informal educational hikes and lectures to formal presentations and standardized middle school and high school field trips.
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STUDENTS SUPERVISED

PhD Research Students

2021–Present	Sebastian Hoefler
2021–Present	Stephanie Todd
2020–Present	Louise Streeting

Masters Research Students

2021–Present	Dylan Wichman
2021–Present	Wesley Smith
2021–Present	Cora Dyslin
2021–Present	Anthony Grate
2019–Present	Annette Deppe
2019–2021	Abdur Razzaque

Honours Research Students

2021–Present	Rosie Kidman
2019–2020	Hugh Jones

Undergraduate Research Student Mentees (informal)*

2019–2021	Jaren Serano
2016–2019	Leah Carr
2014–2019	Ethan Hollender
2017–2018	Valdemar Jorgenson
2011–2016	Hunter Howell
2013–2014	Joshua Harmon
2012	Tyler Dean
2011	Joshua Mohr
2010	Kelly Norris
2009	Jeremiah White

*This list does not include students I trained and worked with in MEEL.

Molecular Evolution and Ecology Lab (MEEL) Mentor (James Cook University)

2017–2019	MEEL is a shared laboratory space, and mentors are experienced members who are responsible for training new members on both laboratory techniques and safety, as well as providing assistance and advice to newer members as needed.
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PROFESSIONAL AFFILIATIONS

American Society of Ichthyologists and Herpetologists, Australian Society of Herpetologists, Ecological Society of Australia, Missouri Herpetological Association, Society for the Study of Reptiles and Amphibians, Southwestern Association of Naturalists, Turtle Survival Alliance

PROFESSIONAL SERVICE

- 2020–Present Editor: *Austral Ecology*
- 2013–Present Reviewer: *Aquatic Conservation, Animal Conservation, Animal Behavior, Austral Ecology, Briefings in Bioinformatics, Chelonian Conservation and Biology, Copeia, Diseases of Aquatic Organisms, Endangered Species Research, FEMS Microbiology Ecology, Freshwater Biology, Heredity, Herpetological Conservation and Biology, Herpetology Notes, Journal of Australian Zoology, Journal of Herpetology, Journal of North American Herpetology, Journal of Wildlife Diseases, Marine Pollution Bulletin, Molecular Ecology Resources, Oecologia, PeerJ, Phyllomedusa, PLoS ONE, Revista de Biología Tropical, Southeastern Naturalist*
- 2017–2019 Molecular Evolution and Ecology Lab (MEEL) mentor — MEEL is a shared laboratory space. Mentors train new members and help maintain the lab.

AWARDS/RECOGNITION

- 2020 Best Student-Led Paper in *Heredity* (1st place) — Genetics Society
- 2020 Medal of Excellence for a Higher Degree by Research Thesis — James Cook University
- 2019 Completed PhD with honors (cum laude) — James Cook University
- 2017 Best Student Poster (runner up) — Turtle Survival Alliance
- 2017 Peter Rawlinson Prize for Best Postgraduate Talk (runner up) — Australian Society of Herpetologists
- 2016 Society for Conservation Biology Prize (best student presentation; 1st place) — Ecological Society of Australia
- 2016 Best 15-Minute Talk (1st place) — James Cook University Postgraduate Conference
- 2014 Outstanding Biology Thesis Award — Missouri State University
- 2014 Clark Hubbs Best Student Poster Award (1st place)— Southwestern Association of Naturalists
- 2013 Best Student Presentation (1st place)— Turtle Survival Alliance
- 2013 Best Graduate Student Presentation (1st place) — Oklahoma Academy of Science
- 2011 Who's Who Among Students in American Colleges and Universities

RESEARCH GRANTS (\$335,430 AUD)

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|------|-----------|---|
| 2021 | \$5,000 | Paul Webber Research Grant — Australian Society of Herpetologists |
| 2021 | \$149,650 | Research Grant — Northern Tablelands Local Land Services |
| 2020 | \$6,760 | Research Grant — Turtle Conservation Fund |
| 2020 | \$38,610 | Research Grant — Delta Foundation |
| 2020 | \$7,970 | Research Grant — PADI Foundation |
| 2020 | \$7,000 | Research Grant — Turtle Conservation Fund |
| 2019 | \$76,000 | Postdoctoral Salary — Winifred Violet Scott Charitable Trust |
| 2019 | \$3,000 | Competitive Graduate Student Funding — James Cook University |

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2018	\$7,500	Holsworth Wildlife Research Endowment — ESA (Australia)
2018	\$3,800	Student Research Grant — Wet Tropics Management Authority
2017	\$5,100	Holsworth Wildlife Research Endowment — ESA (Australia)
2017	\$3,000	Competitive Graduate Student Funding — James Cook University
2017	\$1,400	Research Grant — American Turtle Observatory
2016	\$7,000	Holsworth Wildlife Research Endowment — ESA (Australia)
2016	\$5,000	Student Research Grant — Skyrail Rainforest Foundation
2016	\$1,500	Student Research Grant — Australian Society of Herpetologists
2016	\$1,500	University Grant Award — Australian Wildlife Society
2013	\$840	Grants-in-Aid of Research — Sigma Xi
2012	\$1,400	Graduate Student Funding — Missouri State University
2009	\$8,400	Jackson Innovation Scholarship — Messiah College

TRAVEL GRANTS

2017	\$1,040	American Society of Ichthyologists and Herpetologists
2017	\$235	Turtle Survival Alliance
2017	\$100	Australian Society of Herpetologists
2016	\$350	Australian Society of Herpetologists

PEER-REVIEWED RESEARCH PAPERS

2023**	Allen-Ankins, S, DT McKnight , EJ Nordberg, S Hoefer, P Roe, DM Watson, PG McDonald, RA Fuller, L Schwarzkopf. Effectiveness of acoustic indices as indicators of vertebrate biodiversity. <i>Ecological Indicators</i> 147:109937
2023	Bertola, LV, CJ Hoskin, DB Jones, KR Zenger, DT McKnight , M Higgie. The first linkage map for Australo-Papuan Treefrogs (family: Pelodryadidae) reveals the sex-determination system of the Green-eyed Treefrog (<i>Litoria serrata</i>). <i>Heredity</i>
2023	Bower, DB, DT McKnight , K Sullivan, SL Macdonald, A Georges, S Clulow, R Mathwin, MJ Connell, HV Nelson, A Santoro, B Nordstrom, JU Van Dyke, RA Kidman, LM Streeting, ML Dillon, R-J Spencer, MB Thompson, EJ Nordberg. Opportunities for research and conservation of freshwater turtles in Australia. <i>Austral Ecology</i>
2023*	Hoefer, S, DT McKnight , S Allen-Ankins, EJ Nordberg, L Schwarzkopf. Passive acoustic monitoring in terrestrial vertebrates: a review. <i>Bioacoustics</i>
2023*	Kidman, RA, DT McKnight , L Schwarzkopf, EJ Nordberg. Too cold is better than too hot: preferred temperatures and basking behaviour in a tropical freshwater turtle. <i>Austral Ecology</i>
2023**	McKnight, DT , K Ard, RJ Auguste, G Baradiya, MF Benard, P Boban, ML Dillon, CT Downs, BA Degregorio, BM Glorioso, RM Goodman, C Hird, EC Hollender, M Kennedy, RA Kidman, A Massey, P McGovern, M Muhlenhaupt, K Ostovar, D Podgorski, C Price, BA Renike, LM Streeting, J Venezia, J Young, EJ Nordberg. Global basking in freshwater turtles: A global assessment. <i>Global Ecology and Conservation</i> 43:e024444
2023	McKnight, DT , A Georges, F Guarino, DS Bower. The ecology and morphology of Australia's desert turtle (<i>Emydura macquarii emmotti</i>). <i>Austral Ecology</i>

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- 2023** **McKnight, DT**, JC Serano, DM Thompson, DB Ligon. Flooding triggers increased surface activity in a bottom-dwelling turtle. *Ecology* 104:e3868
- 2023** **McKnight, DT**, JC Serano, DM Thompson, DB Ligon. They really do move in herds: evidence of group living in an aquatic turtle. *Animal Behaviour*
- 2023 Nordberg, EJ, **DT McKnight**. Seasonal, environmental and anthropogenic influences on nocturnal basking in turtles and crocodiles from North-Eastern Australia. *Austral Ecology*
- 2023 Parris, KM, GW Heard, **DT McKnight**. Declaration of frogs' recovery ignores key data: A response to Woinarski et al. 2023. *Biological Conservation*
- 2023* Streeting, LM, ML Dillon, J Nesbitt, B Nesbitt, L Baker, PH Spark, BC Chessman, **DT McKnight**, PG McDonald, DS Bower. A shocking result—Electric fences protect western saw-shelled turtle (*Myuchelys bellii*) nests from depredation by foxes. *Austral Ecology*
- 2023* Todd, SJ, **DT McKnight**, BC Congdon, J Pierson, M Fischer, S Abell, J Koleck. Diversity and structure of *Bettongia tropica*: using population genetics to guide reintroduction and help prevent the extinction of an endangered Australian marsupial. *Conservation Genetics*
- 2022 Hollender, EC, DB Ligon, **DT McKnight**. Learned trap avoidance in freshwater turtles. *Wildlife Research*
- 2022** **McKnight, DT**, EC Hollender, DB Ligon. Where are the turtles? Looking for western chicken turtles (*Deirochelys reticularia miaria*) in Mississippi. *Herpetology Notes* 15:609–613
- 2022 **McKnight, DT**, R Huerlimann, DS Bower, L Schwarzkopf, RA Alford, KR Zenger. The interplay of fungal and bacterial microbiomes on rainforest frogs following a disease outbreak. *Ecosphere* 13:e4037
- 2022* Sarker, MAR, **DT McKnight**, D Ryder, A Walcott, JF Ocock, JA Spencer, D Preston, S Brodie, DS Bower. The effect of inundation on frog communities and chorusing behaviour. *Ecological Indicators* 45:109640
- 2022* Streeting, LM, DS Bower, ML Dillon, P Spark, M Gough, A Skidmore, PG McDonald, H Delaney, A Burns, S Watson, DB Dissanayake, A Georges, **DT McKnight**. Optimising the hatching success of artificially incubated eggs for use in a conservation program for the western saw-shelled turtle (*Myuchelys bellii*). *Australian Journal of Zoology* 70:74–82
- 2021 **McKnight, DT**, W Wirth, L Schwarzkopf, EJ Nordberg. Leech removal is not the primary driver of basking behavior in a freshwater turtle. *Ecology and Evolution* 11:10936–10946
- 2020** Bower, DS, CK Jennings, RJ Webb, Y Amepou, L Schwarzkopf, L Berger, RA Alford, A Georges, **DT McKnight**, L Carr, S Clulow. Disease surveillance of the amphibian chytrid fungus *Batrachochytrium dendrobatidis* in Papua New Guinea. *Conservation Science and Practice* 2:e256
- 2020 Maclain, A, WT Wirth, **DT McKnight**, GW Burgess, E Ariel. Ranavirus in captive and wild Australian lizards. *FACETS* 5:758–768

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- 2020 **McKnight, DT**, DB Ligon. Estivation site selection of western chicken turtles (*Deirochelys reticularia miaria*). *Southwestern Naturalist* 64:187–194
- 2020** **McKnight, DT**, L Carr, DS Bower, L Schwarzkopf, RA Alford, KR Zenger. Infection dynamics, dispersal, and adaptation: Understanding the lack of recovery in a remnant frog population following a disease outbreak. *Heredity* 125:110–123
- 2020 Nordberg, EJ, **DT McKnight**. Nocturnal basking behaviour in a freshwater turtle. *Ecology* 101:e03048
- 2020 **McKnight, DT**, KR Zenger, RA Alford, R Huerlimann. Microbiome diversity and composition varies across body areas in a freshwater turtle. *Microbiology* 66:440–452
- 2019 **McKnight, DT**, R Huerlimann, DS Bower, L Schwarzkopf, RA Alford, KR Zenger. microDecon: A highly accurate read-subtraction tool for the post-sequencing removal of contamination in metabarcoding studies. *Environmental DNA* 1:14–25
- 2019 **McKnight, DT**, R Huerlimann, DS Bower, L Schwarzkopf, RA Alford, KR Zenger. Methods for normalizing microbiome data: an ecological perspective. *Methods in Ecology and Evolution* 10:389–400
- 2019 **McKnight, DT**, MM Lal, DS Bower, L Schwarzkopf, RA Alford, KR Zenger. The return of the frogs: The importance of habitat refugia in maintaining diversity during a disease outbreak. *Molecular Ecology* 28:2731–2745
- 2019 **McKnight, DT**, J Nordine, B Jerrett, M Murray, P Murray, R Moss, M Northey, N Simard, RA Alford, L Schwarzkopf. Do morphological adaptations for gliding influence clinging and jumping? *Journal of Zoology* 301:55–63
- 2018 Galvez, A, **DT McKnight**, JS Monros. Habitat preferences of breeding amphibians in eastern Spain. *Herpetological Conservation and Biology* 13:453–463
- 2018 **McKnight, DT**, EC Hollender, HJ Howell, JL Carr, KA Buhlmann, DB Ligon. Egg and clutch sizes of western chicken turtles (*Deirochelys reticularia miaria*). *Acta Herpetologica* 13:191–194
- 2017 **McKnight, DT**, RA Alford, CJ Hoskin, L Schwarzkopf, SE Greenspan, KR Zenger, DS Bower. Fighting an uphill battle: the recovery of frogs in Australia’s Wet Tropics. *Ecology* 98:3221–3223
- 2017 **McKnight, DT**, DB Ligon. Correcting for unequal catchability in sex ratio and population size estimates. *PLoS ONE* 12:e0184101
- 2017 **McKnight, DT**, L Schwarzkopf, RA Alford, DS Bower, KR Zenger. Effects of emerging infectious diseases on host population genetics: a review. *Conservation Genetics* 18:1235–1245
- 2017** **McKnight, DT**, HJ Howell, EC Hollender, DB Ligon. Good vibrations: A novel method for sexing turtles. *Acta Herpetologica* 12:117–121
- 2016 **McKnight, DT**, DB Ligon. Chorusing patterns of a diverse anuran community, with an emphasis on southern crawfish frogs (*Lithobates areolatus areolatus*). *Journal of North American Herpetology* 2016:1–10

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- 2016* Howell, HJ, **DT McKnight**, RA Seigel. A novel method of collecting spotted turtles (*Clemmys guttata*). *Herpetological Review* 47:202–205
- 2015** **McKnight, DT**, HJ Howell. A comparison of the flight initiation distances of male and female bullfrogs (*Lithobates catesbeianus*) and green frogs (*Lithobates clamitans*). *Herpetological Conservation and Biology* 10:137–148
- 2015** **McKnight, DT**, JR Harmon, JL McKnight, DB Ligon. The spring-summer nesting and activity patterns of the western chicken turtle (*Deirochelys reticularia miaria*). *Copeia* 103:1043–1047
- 2015** **McKnight, DT**, JR Harmon, JL McKnight, DB Ligon. Taxonomic biases of seven methods used to survey a diverse herpetofaunal community. *Herpetological Conservation and Biology* 10:666–678
- 2015 **McKnight, DT**, AC Jones, DB Ligon. The omnivorous diet of the western chicken turtle (*Deirochelys reticularia miaria*). *Copeia* 103:322–328
- 2014** **McKnight, DT**, JR Harmon, JL McKnight, DB Ligon. Notes on the diets of seven sympatric snakes in the genera *Agkistrodon*, *Nerodia*, *Sistrurus*, and *Thamnophis*. *Herpetology Notes* 7:171–177
- 2013** **McKnight, DT**, TL Dean, DB Ligon. An effective method for increasing the catch rate of pitfall traps. *Southwestern Naturalist* 58:446–449
- 2012 **McKnight, DT**, J Tucker, DB Ligon. Western chicken turtles (*Deirochelys reticularia miaria*) at Bohler Seeps and Sandhills Preserve, Oklahoma. *Proceedings of the Oklahoma Academy of Science* 92:47–50.
- 2011 **McKnight, DT**. Observed plant preferences of eastern box turtles (*Terrapene carolina carolina*) in a Maryland forest. *Herpetology Notes* 4:97–102

*First-authored by a student I mentored

**Co-authored by a student I mentored

PEER-REVIEWED NATURAL HISTORY NOTES

- 2023 **McKnight, DT**. Courtship and homosexual behavior in saw-shelled turtles (*Myuchelys latisternum*). *Austral Ecology*
- 2021 **McKnight, DT**, JL McKnight. *Chelodina canni* (Cann's snake-necked turtle) predation. *Herpetological Review* 52:627–628
- 2014 **McKnight, DT**, DB Ligon. Shell and pattern abnormalities in a population of western chicken turtles (*Deirochelys reticularia miaria*). *Herpetology Notes* 7:89–91
- 2013 **McKnight, DT**, DB Ligon. *Scaphiopus hurterii* (Hurter's spadefoot) leucism. *Herpetological Review* 44:131
- 2013 **McKnight, DT**, JL McKnight, TL Dean, DB Ligon. *Acris blanchardi* (Blanchard's cricket frog) feigning death. *Herpetological Review* 44:117
- 2012 **McKnight, DT**. *Hyla chrysoscelis* (Cope's grey treefrog) calling/mate choice. *Herpetological Review* 43:120–121

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- 2012 **McKnight, DT.** *Terrapene carolina carolina* (eastern box turtle) movement after hurricane. *Herpetological Review* 43:327
- 2011 **McKnight, DT.** *Terrapene carolina carolina* (eastern box turtle) aggression/reproduction. *Herpetological Review* 42:423

BOOK CHAPTERS

- 2022 Bower, DS, R Somaweera, N Clemann, JM Crowe-Riddell, S Clulow, MJ Greenlees, K Howard, G Kuchling, **DT McKnight**, J Melville, J Schaffer, L Schwarzkopf, D Spielman, L Streeting, E Vanderduys, CN Zdenek. Chapter 26: Reptiles. In: Smith, B, H Waudby, C Alberthsen, J Hampton (Eds) *Wildlife Research in Australia*. CSIRO Publishing: Melbourne, Australia
- 2022 Waudby, HP, PA Burns, MA Jensen, JO Hampton, D Hunter, **DT McKnight**, AJL Pestell, AJ Bengsen, D Bower, G Coulson, G Heard, A de Laive, CJ Jolly, S Hale, BA Fancourt, SR Kelleher, S Petit, L Behrendorff, LF Lumsden, M McGregor. Chapter 8: Wildlife marking methods. In: Smith, B, H Waudby, C Alberthsen, J Hampton (Eds) *Wildlife Research in Australia*. CSIRO Publishing: Melbourne, Australia

OTHER PUBLICATIONS

- 2021 Ligon, DB, **DT McKnight**, DM Thompson. Population status of the critically endangered Central American River Turtle (*Dermatemys mawii*) in Belize. Final Report: *PADI Foundation*, 22pp.
- 2021 **McKnight DT**, DM Thompson, DB Ligon. Population ecology and conservation of *Dermatemys mawii* in Belize. Final Report: *Turtle Conservation Fund/Global Wildlife Conservation Contract TCF-0759*, 23 pp.
- 2020 **McKnight, D**, D Thompson, D Ligon, J Serano, T Pop, JA Marlin, H Barrett. Population ecology and conservation of *Dermatemys mawii* in Belize. Final Report: *Belize Ministry of Natural Resources and Immigration*, 22 pp.
- 2019 Ligon, DB, **DT McKnight**, DM Thompson, EC Hollender, JA Marlin. The development of protocols and training for population estimates of the Central American river turtle (*Dermatemys mawii*) in the Spanish Creek/Belize River Watershed Key Biodiversity Area. Final Report: *Belize Ministry of Natural Resources and Immigration*.
- 2019 **McKnight, DT.** Package 'microDecon' A user's guide. *GitHub*
- 2018 Ligon, DB, **DT McKnight**, JR Harmon. Assessing the extent and density of chicken turtle populations in southeastern Oklahoma. Final Report: *Oklahoma Department of Wildlife Conservation. Final Report*
- 2016 **McKnight, D.** Do bacterial immune defenses drive the recovery of threatened frog populations? *Australian Wildlife* 4:28–29
- 2014 Ligon, DB, **DT McKnight**. A herpetological survey of Boehler Seeps and Sandhills Preserve, Atoka County, OK, with an emphasis on the ecology of western chicken turtles (*Deirochelys reticularia miaria*) and southern crawfish frogs (*Lithobates areolatus areolatus*). Final Report: *Oklahoma Department of Wildlife Conservation. Final Report*

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- 2012 **McKnight, D.** MARA and box turtle update. *The Otter's Tale* 16
- 2012 **McKnight, D.** Bluebird boxes at Leight Park. *The Otter's Tale* 16
- 2012 **McKnight, D.** New MARA program. *The Otter's Tale* 15
- 2011 **McKnight, D.** Making 'scents' of box turtle food location. *The Otter's Tale* 15
- 2009 **McKnight, D.** Advancing box turtle research. *The Otter's Tale* 13

SOFTWARE DEVELOPMENT

- 2019 microDecon (R package). Available on GitHub
<https://github.com/donaldtmcknight/microDecon>

INVITED SEMINARS

- 2018 **McKnight, DT**, M Lal, L Schwarzkopf, R Alford, D Bower, KR Zenger. Population genomics of frogs following recovery from a disease outbreak. Missouri State University
- 2014 **McKnight, DT**, DB Ligon. Chicken turtles in your backyard: the reptiles and amphibians of Boehler, Oklahoma. The Oklahoma Nature Conservancy
- 2013 **McKnight, DT**, DB Ligon. Herpetology between the Boggies: a herpetological survey of Boehler Seeps and Sandhills Preserve, with a focus on chicken turtle ecology. The Oklahoma Nature Conservancy
- 2013 **McKnight, DT**, DB Ligon. A herpetological survey of Boehler Seeps and Sandhills Preserve, with a focus on the turtle community and chicken turtle ecology. Monthly Meeting of the Missouri Master Naturalists (Springfield Plateau Chapter)

CONFERENCE PRESENTATIONS

- 2022 DS Bower, **DT McKnight**, EJ Nordberg. Australian Freshwater turtles: Where are we at? Annual meeting of the Australian Society of Herpetologists (Mylor, AU)
- 2022* Hoefer, S. S Allen-Ankins, **DT McKnight**, EJ Norberg, L Schwarzkopf. How much is enough: Comparison of multiple sampling methods to survey terrestrial reptiles. Annual meeting of the Australian Society of Herpetologists (Mylor, AU)
- 2022* Kidman, R, **DT McKnight**, L Schwarzkopf, EJ Norberg. Does thermoregulation explain nocturnal basking activity in a tropical freshwater turtle? Annual meeting of the Australian Society of Herpetologists (Mylor, AU)
- 2022 **McKnight, DT**, DS Bower, A Georges, JU Van Dyke. Age demographics in Murray River turtles: Comparing the Murray River and Cooper Creek. Annual meeting of the Australian Society of Herpetologists (Mylor, AU)
- 2022** **McKnight, DT**, J Serano, ED Ellsworth, CD Siler, DM Thompson, DB Ligon. Movements and Methods for Tracking Hicatee (*Dermatemys mawii*) in Belize. Annual meeting of the Turtle Survival Alliance (Tucson, AZ, USA)
- 2022 Nordberg, E, **DT McKnight**. Nocturnal basking in freshwater turtles: A global assessment. Annual meeting of the Australian Society of Herpetologists (Mylor, AU)

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- 2022* Streeting, LM, M Dillon, PG McDonald, **DT McKnight**, DS Bower. A radio-tracking study of hatchling Bell's turtles (*Myuchelys bellii*). Annual meeting of the Australian Society of Herpetologists (Mylor, AU)
- 2021* Streeting, L, M Dillon, S Watson, **DT McKnight**, T Soderquist, P McDonald, DB Bower. Habitat preferences, movement and survival of hatchlings of the Australian freshwater turtle, Bell's turtle (*Myuchelys belli*). Annual meeting of the Turtle Survival Alliance (virtual)
- 2021 **McKnight, DT**, JC Serano, DM Thompson, DB Ligon. They really do move in herds: Evidence of group living in an aquatic turtle. Annual meeting of the Turtle Survival Alliance (virtual)
- 2021* **McKnight, DT**, W Wirth, L Schwarzkopf, EJ Nordberg. Leech removal is not the primary driver of basking behaviour in freshwater turtles. Annual meeting of the Turtle Survival Alliance (virtual)
- 2021 **McKnight, DT**, L Carr, DS Bower, L Schwarzkopf, RA Alford, KR Zenger. Infection dynamics, dispersal, and adaptation: Understanding the lack of recovery in a remnant frog population following a disease outbreak. Annual Meeting of the Genetics Society (virtual)
- 2020** Bower, DS, C Jennings, R Webb, Y Amepou, L Schwarzkopf, L Berger, A Georges, **DT McKnight**, RA Alford, L Carr, S Clulow. World's largest tropical island may provide refuge from the amphibian chytrid fungus *Batrachochytrium dendrobatidis*. 9th World Congress of Herpetology, Dunedin, NZ
- 2020 **McKnight, DT**, EC Hollender, DM Thompson, T Pop, J Serano, JA Marlin, DB Ligon. Field surveys of Central American River Turtles (*Dermatemys mawii*) in Belize. Annual meeting of the Turtle Survival Alliance (virtual)
- 2020 **McKnight, DT**, R Huerlimann, DS Bower, L Schwarzkopf, RA Alford, KR Zenger. Associations between the fungal and bacterial microbiomes of frogs, with implications for disease management. 9th World Congress of Herpetology, Dunedin, NZ
- 2019 **McKnight, DT**, R Huerlimann, DS Bower, L Schwarzkopf, RA Alford, KR Zenger. microDecon: A highly accurate read-subtraction tool for the post-sequencing removal of contamination in metabarcoding studies. Centre for Tropical Bioinformatics and Molecular Biology Annual Conference, Townsville, QLD, AU
- 2019* Hollender, EC, **DT McKnight**, DB Ligon. Relocating traps within a wetland increases trapping success. Turtle Survival Alliance, Tucson, AZ, USA
- 2019 **McKnight, DT**, EC Hollender, DB Ligon. Where are the turtles? Looking for western chicken turtles in Mississippi. Turtle Survival Alliance, Tucson, AZ, USA
- 2019 **McKnight, DT**, DB Bower, L Schwarzkopf, RA Alford, R Huerlimann, L Carr, K Zenger. How do epizootics become enzootics? Clues from rainforest frogs. Joint Meeting of Ichthyologists and Herpetologists, Salt Lake City, UT, USA
- 2018* Hollender, EC, **DT McKnight**, DB Ligon. Relocating traps within a wetland increases trapping success. Missouri Herpetological Association 31st Annual Meeting. Kirbyville, MO, USA

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- 2018** Ligon, DB, **DT McKnight**, J Harmon. Distribution and habitat associations of western chicken turtles in southeastern Oklahoma. Turtle Survival Alliance, Fort Worth, TX, USA
- 2018** Ligon, DB, **DT McKnight**, J Harmon. Distribution and habitat associations of western chicken turtles in southeastern Oklahoma. Southwest PARC, Oklahoma City, OK, USA
- 2018** Maclaine, A, GW Burgess, **DT McKnight**, E. Ariel. Molecular detection of Ranavirus sp. in wild Eastern Water Dragons. Australian Society of Herpetologists, Brisbane, QLD, Australia
- 2018 **McKnight, DT**, R Huerlimann, L Schwarzkopf, R Alford, D Bower, K Zenger. Bacterial richness is associated with patterns of declines and recovery following a disease outbreak. Australian Society of Herpetologists, Brisbane, QLD, Australia
- 2017 **McKnight, DT**, R Huerlimann, L Schwarzkopf, R Alford, D Bower, K Zenger. The role of microbial communities in the recovery of rainforest frogs. Joint Meeting of Ichthyologists and Herpetologists. Austin, TX, USA
- 2017 **McKnight, DT**, L Schwarzkopf, RA Alford, DS Bower, KR Zenger. Back from the brink: Population genomics of rainforest frogs following recovery from a chytridiomycosis outbreak. Annual Meeting of the Australian Society of Herpetologists, Fairbridge, WA, Australia
- 2017 **McKnight, DT**, D Bower, R Alford, K Zenger, R Huerlimann. Microbiomes of the Krefft's River Turtle (*Emydura macquarii krefftii*). Annual Meeting of the Turtle Survival Alliance. Charleston, SC, USA
- 2016* Harmon, JR, **DT McKnight**, DB Ligon. Diet composition of the razor-backed musk turtle. Missouri Herpetological Association. Kirbyville, MO, USA
- 2016* Harmon, JR, **DT McKnight**, DB Ligon. Diet composition of the razor-backed musk turtle (*Sternotherus carinatus*). Southwestern Association of Naturalists. Stillwater, OK, USA
- 2016** **McKnight, DT**, RA Alford, L Schwarzkopf, DS Bower, KR Zenger. Population genomics of frogs following recovery from chytridiomycosis outbreak. Annual Amphibian Disease Meeting, Arizona, USA
- 2016 **McKnight, DT**, L Schwarzkopf, RA Alford, DS Bower, KR Zenger. Back from the brink: Population genomics of rainforest frogs following recovery from a chytridiomycosis outbreak. Annual Meeting of the Ecological Society of Australia, Freemantle, WA, Australia
- 2016 **McKnight, DT**, HJ Howell, EC Hollender, DB Ligon. Good vibrations: a novel method for sexing chelonians. Annual Meeting of the Australian Society of Herpetologists, Launceston, TAS, Australia
- 2014 **McKnight, DT**, JR Harmon, JL McKnight, DB Ligon. The spring-summer nesting and activity patterns of the western chicken turtle (*Deirochelys reticularia miaria*). Annual Meeting of the Southwestern Association of Naturalists. Stillwater, OK, USA
- 2014 **McKnight, DT**, HJ Howell, EC Hollender, DB Ligon. Good vibrations: a novel method for sexing chelonians. Annual Meeting of the Missouri Herpetological Association. Drury, MO, USA

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- 2013 **McKnight, DT**, DB Ligon. The spring-summer nesting and activity patterns of the western chicken turtle (*Deirochelys reticularia miaria*). Annual Meeting of the Turtle Survival Alliance. St. Louis, MO, USA
- 2013 **McKnight, DT**, DB Ligon. The spring-summer nesting and activity patterns of the western chicken turtle (*Deirochelys reticularia miaria*). Annual Technical Meeting of the Oklahoma Academy of Science. Lawton, OK, USA
- 2013 **McKnight, DT**, DB Ligon. The spring-summer nesting and activity patterns of the western chicken turtle (*Deirochelys reticularia miaria*). Missouri Herpetological Association. Crawford County, MO, USA
- 2013 **McKnight, DT**, T. L. Dean, and DB Ligon. An effective method for increasing the catch rate of pitfall traps. Association of Southwestern Naturalists. Lake Charles, LA, USA
- 2013 **McKnight, DT**, AC Jones, DB Ligon. The omnivorous diet of the western chicken turtle (*Deirochelys reticularia miaria*). Joint Meeting of Ichthyologists and Herpetologists. Albuquerque, NM, USA
- 2012 **McKnight, DT**, TL Dean, DB Ligon. An effective method for increasing the catch rate of pitfall traps. Missouri Herpetological Association. Jefferson City, MO, USA

*Presentations delivered by students I mentored

**Presentations delivered by one of my advisers or coauthors

CONFERENCE POSTERS

- 2018* Carr, L, DS Bower, L Schwarzkopf, **DT McKnight**. Elevation seizes the (*Litoria*) *dayi*: current status of amphibian chytrid fungus in remaining populations of the Australian Lacelid Frog. Australian Society of Herpetologists, Brisbane, QLD, Australia
- 2018 **McKnight, DT**, DS Bower, RA Alford, K Zenger, R Huerlimann. Microbiomes of the Krefft's River Turtle (*Emydura macquarii krefftii*). Australian Society of Herpetologists, Brisbane, QLD, Australia
- 2017 **McKnight, DT**, DB Ligon. Estivation site selection of the western chicken turtle (*Deirochelys reticularia miaria*). Annual Meeting of the Turtle Survival Alliance. Charleston, SC, USA
- 2016* Howell, HJ, **DT McKnight**, RA Seigel. A novel method of collecting Spotted Turtles (*Clemmys guttata*). Joint Meeting of Ichthyologists and Herpetologists, New Orleans, Louisiana, USA
- 2015* Howell, HJ, **DT McKnight**, RA Seigel. A novel method of collecting Spotted Turtles (*Clemmys guttata*). Maryland and Delaware Chapter of the Wildlife Society
- 2014 **McKnight, DT**, AC Jones, DB Ligon. The omnivorous diet of the western chicken turtle (*Deirochelys reticularia miaria*). Annual Meeting of the Southwestern Association of Naturalists. Stillwater, OK, USA
- 2013 **McKnight, DT**, TL Dean, DB Ligon. An effective method for increasing the catch rate of pitfall traps. Joint Meeting of Ichthyologists and Herpetologists. Albuquerque, NM, USA

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- 2013 **McKnight, DT**, AC Jones, DB Ligon. The omnivorous diet of the western chicken turtle (*Deirochelys reticularia miaria*). Annual Meeting of the Turtle Survival Alliance. St. Louis, MO, USA
- 2013 **McKnight, DT**, AC Jones, DB Ligon. The omnivorous diet of the western chicken turtle (*Deirochelys reticularia miaria*). Annual Technical Meeting of the Oklahoma Academy of Science. Lawton, OK, USA

*Posters delivered by students I mentored

MEDIA ENGAGEMENT

Documentary (featured in)	“Life in the Wet: A Frogumentary”
TV News (interviewed)	<i>WIN News, Open Your Eyes (Channel 5 News, BZ), Wake up Belize (KREN News, BZ)</i>
Radio (interviewed)	<i>NPR, 4BC News Talk, ABC Far North QLD (2x), ABC (QLD), ABC (VIC), ABC Western QLD, 6PR News Talk, Power 94.9FM, W Radio, Wake up Belize (KREN News, BZ)</i>
Radio (not interviewed)	<i>NPR (Science Friday), 2GB, 6PR, 4BC, ABC, ABC Ballarat, ABC Melbourne</i>
News Papers/Websites (interviewed)	<i>Washington Post (2x), National Geographic (2x), The New Scientist, ABC News (Australia), ABC News (Western QLD), Cairns Post, Live Science, Gizmodo, Motherboard Vice, Herald Sun (Melbourne), Geelong Advertiser, Sydney Morning Herald, MSU Discovery, La Trobe University (Science Blog)</i>
News Papers/Websites (not interviewed)	<i>National Geographic (Australia), The Standard, Cosmos, The Verge, Improbable Research, IFLScience (2x), Living Alongside Wildlife, Targeted News Service, Latin American Herald Tribune, Science Daily, Phys.org (3x), Eureka Alert AAAS (2x), News 4 Europe, Mirror, Elite Daily, Daily Mail, News Week, Crave, BDN Portland, Metro, NRC, NEON, Le Journal de Montreal</i>
Magazines (research featured in)	<i>TSA Magazine (3x)</i>
Blogs/Podcasts (interviewed)	<i>Molecular Ecology: Spotlight, Heredity</i>

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Blogs/Websites (reposts)

POST Online Media, Free Thought Blogs, Woles, Alpha Galileo, Citizen Side, 7th Space, The World News Monitor, The Better Parent, Best of Viral News, Bioengineer.org, The Wildlife Society, Flipboard.com, Supedium.com, Newsvoice.com, Indianews.world, Echowho.com, Newsunited.com, Abhishekgautam.com, Lotgain.com, Intotheblue.it, deutschlandfunknova.de, Whatsnew2day.com, todayuknews.com, TrueViralNews.com, Miragenews.com, swifttelecast.com, Germanic.news, My Droll, Verve Times, La Voz, Treehugger.com, Greensavers, SFGate.com, Stuff.co.nz, EINPresswire.com, Knowledia.com, Biologicaldiversity.org

REFERENCES

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