Caroline M. Dong

cdong1@tulane.edu | www.carolinedong.com

Tulane University
Dept. of Ecology and
Evolutionary Biology
New Orleans, LA 70118

EDUCATION

PHD BIOLOGY
2016 – 2020
The University of Melbourne, Melbourne, Victoria AUS
Dissertation: Speciation and secondary contact in a colourful agamid, *Ctenophorus decresii*
Advisors: Dr. Devi Stuart-Fox, Dr. Adnan Moussalli, Dr. Claire A. McLean

MSC BIOLOGY
2012 – 2015
The University of Hawaii Manoa, Honolulu, Hawaii USA
Thesis: Origins of softshell turtles in Hawaii with implications for conservation
Advisor: Dr. Robert C. Thomson

BSC BIOLOGY
2008 – 2012
Saint Louis University, St. Louis, Missouri USA
Senior thesis: Buoyancy control in cold-submerged painted turtles (*Chrysemys picta*)
Advisor: Dr. Daniel E. Warren

ACADEMIC APPOINTMENTS

POSTDOCTORAL FELLOW
2020 – PRESENT
Tulane University, Louisiana USA
- Advisor: Dr. Kathleen G. Ferris
- Contributing to the National Institutes of Health (NIH) funded research projects examining the genetic basis of phenotypic traits contributing to local adaptation in plants.

PRE-PRINTS & IN PREPARATION

Dong CM, McLean CA, Elliott A, Moussalli A, Stuart-Fox D. When polymorphism and monomorphism meet: discordant genomic and phenotypic clines across a lizard contact zone. *bioRxiv*: https://www.biorxiv.org/content/10.1101/840678v2

Dong CM, Tataru D, Aponte Rolon B, Ferris KG. Fluctuating selection in sympatric yellow monkeyflowers. *Manuscript available upon request.*

PUBLICATIONS

10. Medina I, **Dong CM**, Márquez R, Perez DM, Wang IJ, Stuart-Fox D. 2023. Anti-predator defenses are linked with high levels of genetic differentiation in frogs. *Accepted:* ***Proc. Royal Soc. B.*** doi: 10.32942/X2XW2Q
9. Franklin AM, Rankin KJ, Ospina-Rozo L, Medina I, Garcia J, Ng L, **Dong CM**, Wang L-Y, Aulsebrook A, Stuart-Fox D. 2021. Cracks in the mirror hypothesis: high specularity does not reduce detection or predation risk. ***Functional Ecology***. 36(1):239-248. doi: 10.1111/1365-2435.13963

8. Van Dyke JU, Thompson MB, Burridge CP, Castelli MA, Clulow S, Dissanayake DSB, **Dong CM**, Doody JS, Edwards DL, Ezaz T, Friesen CR, Gardner MG, Georges A, Higgie M, Hill PL, Holleley C, Hoops D, Hoskin CJ, Merry DL, Riley JL, Wapstra E, While GM, Whiteley SL, Whiting M, Zozaya SM, Whittington CM. 2021. Australian lizards are outstanding models for reproductive biology research. ***Australian Journal of Zoology***. 68:168–199. doi: 10.1071/ZO21017
7. **Dong CM**, Johnston GR, Stuart-Fox D, Moussalli A, Rankin KJ, McLean CA. 2021. Elevation of divergent color polymorphic and monomorphic lizard lineages (Squamata: Agamidae) to species level. ***Ichthyology and Herpetology*** (formerly *Copeia*). 109(1):43–54. doi: 10.1643/h2020064
6. **Dong CM**, Rankin KJ, McLean CA, Stuart-Fox D. 2021. Maternal reproductive output and F1 hybrid fitness may influence contact zone dynamics. ***Journal of Evolutionary Biology***. 34(4):680–694. doi: 10.1111/jeb.13772
5. Stuart-Fox D, Aulsebrook A, Rankin KJ, **Dong CM**, McLean CA. 2021. Convergence and divergence in lizard colour polymorphisms. ***Biological Reviews***. 96(1):289–309. doi: 10.1111/brv.12656
4. McLean CA, Bartle RA, **Dong CM**, Rankin KJ, Stuart-Fox D. 2020. Divergent male and female mate preferences do not explain incipient speciation between lizard lineages. ***Current Zoology***. 0(0):1–8. doi: 10.1093/cz/zoaa010
3. **Dong CM**, McLean CA, Moussalli A, Stuart-Fox DM. 2019. Conserved visual sensitivities across divergent lizard lineages that differ in an ultraviolet sexual signal. ***Ecology and Evolution***. 9(20):11824–11832. doi: 10.1002/ece3.5686
2. **Dong CM**, Engstrom TE, Thomson RC. 2016. Origins of softshell turtles in Hawaii with implications for conservation. ***Conservation Genetics***. 17(1):207–220. doi: 10.1007/s10592-015-0772-7
1. Cantrell EA, **Dong CM**, Hill CA, Warren DE. 2014. Buoyancy control in cold-submerged painted turtles: implications for overwintering physiology and behavior. ***Herpetologica***. 70(4): 388–394. doi: 10.1655/herpetologica-d-14-00016

GRANTS & AWARDS

(UM = University of Melbourne, UH = University of Hawaii Manoa)

2023	$500 USD	Society for the Study of Evolution Travel Award
2023	$500 USD	Tulane Postdoctoral Fellow Travel Award
2022	$500 USD	Tulane Postdoctoral Fellow Travel Award
2020	$5,000 AUD	UM Faculty of Science Postgraduate Writing-Up Award
2018	$1,700 AUD	Ecol. Soc. of Aus. Holsworth Wildlife Research Endowment
2018	$1,000 AUD	UM Animal Welfare Excellence Award
2018	$1,500 AUD	UM Science Abroad Travel Award
2018	$1,500 AUD	UM BioSciences Travel Grant
2017	$6,000 AUD	Ecol. Soc. of Aus. Holsworth Wildlife Research Endowment
2017	$886 AUD	UM Drummond Travel Award
2017	$800 USD	Am. Society of Ichthyologists & Herpetologists Travel Award
2017	$500 USD	Society for the Study of Amphibians & Reptiles Travel Award
2016 – 2020	$30,000 AUD per annum	Melbourne International Research Fellowship
2015	$324 USD	UH Graduate Student Organization Travel Award

2014	$5,035 USD	UH Hampton and Meredith Carson Fellowship
2013 – 2015	$22,257 USD per annum	UH Teaching Assistantship
2012	$22,257 USD per annum	UH Research Assistantship

INVITED TALKS

Guest lecture. EBIO 1230: Diversity of Animal Behavior. Tulane University. 7 December 2023.

Departmental seminar. Department of Biology. Grinnell College. 21 November 2023

Departmental seminar. Evolution, Ecology, and Behavior Program. Michigan State University. 19 January 2023

Guest lecture. EBIO 3080: Processes of Evolution. Tulane University. 21 March 2023.

Departmental seminar. **Early Career Scientist Seminar Award**. Department of Integrative Biology. University of Wisconsin-Madison. 16 February 2023.

Departmental seminar. Department of Biology. University of Louisiana at Lafayette. 17 November 2022.

Guest lecture. EBIO 3080: Processes of Evolution. Tulane University. 24 March 2022.

Departmental seminar. Department of Ecology and Evolutionary Biology Tulane University. 19 February 2021.

PRESENTATIONS & POSTERS

Dong CM, Ferris KG. June 2023. Effect of gene flow on the genetic architecture of ultraviolet floral coloration in monkeyflowers. ***Evolution meeting***. Oral talk. Albuquerque, NM USA.

Dong CM, Tataru D, Ferris KG. June 2023. Do spatially and temporally varying selection erode or reinforce species boundaries? A decade-long case study in sympatric Monkeyflowers. ***Evolution meeting***. Oral talk. Albuquerque, NM USA.

Dong CM, Ferris KG. June 2022. Effect of gene flow on the genetic architecture of ultraviolet floral coloration in monkeyflowers. ***Evolution meeting***. Oral talk. Cleveland, OH USA.

Murchison WA, **Dong CM**, Ferris KG. June 2022. Genetic analysis of UV pattern and red spotting using sympatric species of *Mimulus.* ***Evolution meeting***. Poster. Cleveland, OH USA.

Aponte Rolón B, **Dong CM**, Ferris KG, Van Bael S. May 2022. The Influence of host genotype and leaf trait plasticity on foliar fungal endophytes of yellow monkeyflowers in Yosemite National Park, CA. ***Yosemite Symbiosis Workshop***. CA, USA.

Dong CM, McLean CA, Elliott A, Moussalli A, Stuart-Fox D. November 2019. When polymorphism and monomorphism meet: secondary contact between divergent lizard lineages. ***Australasian Evolution Society***. Oral talk. Sydney, NSW, AUS. *Honorable mention

Dong CM, McLean CA, Moussalli A, Stuart-Fox D. December 2018. Correspondence of genomic and phenotypic lines across a contact zone of the tawny dragon, *Ctenophorus decresii*. ***Joint Meeting of ASH and SRARNZ.*** Oral talk. Kindilan, QLD AUS.

Dong CM, McLean CA, Moussalli A, Stuart-Fox D. July 2018. Genomic and phenotypic patterns across a contact zone of colorful agamids .***Joint Meeting of Ichthyologists and Herpetologists***. Oral talk. Rochester, NY USA.

Dong CM, McLean CA, Moussalli A, Stuart-Fox D. July 2017. Asymmetrical introgression of throat coloration across a contact zone of Australian agamids. ***Joint Meeting of Ichthyologists and Herpetologists***. Oral talk. Austin, TX USA. *Honorable mention

Dong CM, McLean CA, Moussalli A, Stuart-Fox D. June 2017. Colour vision and opsin expression variation in an agamid, *Ctenophorus decresii*. ***Australian Society of Herpetologists***. Oral talk. Fairbridge, WA AUS.

Dong CM, Engstrom TE, Thomson RC. July 2015. Origins of softshell turtles in Hawaii with implications for conservation. ***Society for the Study of Amphibians and Reptiles***. Oral talk. Lawrence, KS USA.

Dong CM, Engstrom TE, Thomson RC. April 2015. Origins of softshell turtles in Hawaii with implications for conservation. ***Albert Tester Memorial Symposium***. Oral talk. Honolulu, HI USA.

Dong CM, Warren DE. April 2012. The effects of depth and temperature acclimatization on buoyancy control in the painted turtle (*Chrysemys picta*). ***Saint Louis University Undergraduate Research Symposium***. Poster. St. Louis, MO USA.

RESEARCH EXPERIENCE

RESEARCH ASSISTANT

MARCH – OCTOBER 2020

The University of Melbourne, Victoria AUS

- Collected genetic, geographic, and morphological data on 176 amphibian species from published literature in order to conduct a meta-analysis to examine patterns of population connectivity.
- Advisors: Dr. Iliana Medina, Dr. Devi Stuart-Fox

DESERT TORTOISE FIELD TECHNICIAN

AUGUST – NOVEMBER 2015

The Great Basin Institute, Nevada, USA

- Performed line-distance sampling and mark-recapture protocol to survey for desert tortoises (*Gopherus agassizii*) in the Mojave Desert.

UNDERGRADUATE RESEARCH ASSISTANT

2011 – 2012

Saint Louis University, Missouri, USA

- Completed senior thesis research on overwintering physiology of painted turtles .
- Advisor: Dr. Daniel E. Warren

UNDERGRADUATE FIELD ASSISTANT

JUNE 2011

Southwestern Research Station, Arizona, USA

- Assisted in the collection of soil and vegetation data to assess impacts of cattle grazing.
- Advisor: Dr. Ginger R.H. Allington

W.S. BARNICKLE INTERNSHIP IN NATURAL SCIENCES

2010 – 2011

Saint Louis University, Missouri, USA

– Collected morphological data from freshwater fish specimens as part of the NSF Cypriniformes Tree of Life project.
– Advisor: Dr. Richard L. Mayden

TEACHING EXPERIENCE

GRADUATE TEACHING ASSISTANT, The University of Melbourne
2016 – 2020

– Delivered oral presentations and assisted with teaching undergraduate classes, which included teaching in the classroom, grading assignments and exams, leading groups on field trips, and supervising undergraduate research projects.
– Courses taught:
  - ZOOL 30007: Experimental Animal Behaviour (2 semesters)
  - ZOOL 20006: Comparative Animal Physiology (3 semesters)
  - ZOOL 20004: Australian Wildlife Biology (1 semester)
  - EVSC 20004: Introduction to Marine Environments (2 semesters)
  - ECOL 20003: Ecology (3 semesters)
  - BIOL 10005: Genetics and the Evolution of Life (4 semesters)
  - BIOL 10004: Biology of Cells and Organisms (2 semesters)
  - BIOL 10003: Genes and Environment (4 semesters)
  - BIOL 10002: Biomolecules and Cells (2 semesters)

TEACHING ASSOCIATE, Gene Technology Access Centre
2016 – 2020

– Guided high school students through laboratory exercises to teach theory and applications of cell and molecular biology, including extended off-site outreach to rural elementary schools.

GRADUATE TEACHING ASSISTANT, The University of Hawaii Manoa
2012 – 2015

– Delivered oral presentations and assisted with teaching undergraduate classes.
  - ZOOL 480: Evolution (1 semester)
  - ZOOL 430: Animal Physiology (1 semester)
  - BIOL 275: Cell and Molecular Biology (3 semesters)
  - BIOL 265: Ecology and Evolution (1 semester)

DEPARTMENTAL SERVICE

2021-2023	**Reviewer**, graduate student grants. Tulane University.
2018	**Mentor**, Society for the Study of Amphibians and Reptiles
2014	**Departmental seminar committee**, University of Hawaii Manoa
2013-2014	**Graduate student representative**, University of Hawaii Manoa

COMMUNITY OUTREACH

2022	**Yosemite Conservancy** Nature Talk: Led public on nature walk and art activity to examine functional significance of leaf shape.
2022	**Center for K-12 STEM Education at Tulane,** Strawberry DNA extraction: Extracted DNA from strawberries with students in grades 5-7.
2022	**Greater New Orleans Science and Engineering Fair** Judge: Evaluated high school science projects in the plant sciences category.

2021	Center for K-12 STEM Education at Tulane, Unbe-leaf-able program: Led discussion and activities to explore leaf shape and function.
2019	National Science Week, Melbourne Museum: Designed an interactive table talk on animal coloration for children ands families.
2019	*Nocturnal* event, Melbourne Museum: Designed an interactive table talk on the production, perception, and function of coloration for adults.
2018	Museums Victoria and Parks Victoria *Bioscan* surveys,: Collected specimen vouchers during biodiversity field surveys in Anglesea, Victoria.
2018	*Scope* TV program, "Reptiles and Amphibians": Appeared on a children's science TV show to discuss coloration as a driver of speciation in lizards.
2016	Marian College science mentor,: Assisted students (grade 8) with a science project on river water quality and turbidity.
2015	*Science Alive*! festival, Bernice P. Bishop Museum: Organized table to engage young children about the negative impacts of non-native species.
2015	Mililani-Mauka Elementary School tide walks event,: Introduced students to the diversity of unique marine life in local tide pools.
2013	*Gene-ius* Day program, University of Hawaii Manoa: Assisted students (grades 4 – 6) with DNA extractions on strawberries.

PEER REVIEWER

Ichthyology and Herpetology (formerly *Copeia*), *Biological Journal of the Linnean Society, Current Zoology, Genome Biology and Evolution, Behavioral Ecology, Animal Behaviour, BMC Ecology and Evolution.*