


Caroline M. Dong

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 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

OCTOBER 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.
- Managing all aspects of the logistics required for field work in remote locations.
- Producing and analyzing large genomic and quantitative datasets with statistical software in R, Python, and Unix environments.
- Providing mentorship to graduate and undergraduate researchers.
- Processing and analyzing genomic data using a remote high performance computing cluster.

PUBLICATIONS

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.

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, Higgle 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.

- 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
- 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
- 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
- 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
- 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
- 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
- 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

PRE-PRINTS

- 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>
- Medina I, **Dong CM**, Márquez R, Perez DM, Wang IJ, Stuart-Fox D. Anti-predator defenses are linked with high levels of genetic differentiation in frogs. <https://ecoevorxiv.org/repository/view/4903/>

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 – 2019	\$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. Processes of Evolution. Tulane University. 21 March 2023.
- Departmental seminar. Early Career Scientist Seminar Award. University of Wisconsin-Madison. 16 February 2023.
- Departmental seminar. University of Louisiana at Lafayette. 17 November 2022.
- Guest lecture. Processes of Evolution. Tulane University. 24 March 2022.
- Departmental seminar. Tulane University. 19 Feb 2021.

PRESENTATIONS & POSTERS

- 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 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 *Bioscan* field surveys, Museums Victoria and Parks Victoria
 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 public outreach event. California.
 2022 Strawberry DNA extraction, Center for K-12 STEM Education at Tulane
 2022 Greater New Orleans Science and Engineering Fair Judge
 2021 *Unbe-leaf-able* program, Center for K-12 STEM Education at Tulane
 2019 National Science Week public exhibit, Melbourne Museum, AUS.
 2019 Nocturnal public outreach event, Melbourne Museum, AUS.
 2018 Interviewed for *Scope* TV program, “Reptiles and Amphibians”. AUS.
 2016 Mentor, Marian College middle school science projects. Melbourne, AUS.
 2015 *Science Alive!* public outreach event, Bernice P. Bishop Museum
 2015 *Tide Walks* event, Mililani-Mauka Elementary School
 2013 *Gene-ius Day* program, University of Hawaii Manoa

PEER REVIEW

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*.