

Christopher A. Johnson

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PROFESSIONAL APPOINTMENTS

2021 –	Research Scientist, University of Washington
2019 – 2020	Associate Research Scholar, Princeton University
2015 – 2019	Postdoctoral Scholar, Swiss Federal Institute of Technology (ETH) Zürich
2013 – 2015	Postdoctoral Scholar, University of Arizona

EDUCATION

Ph.D. in Biology	University of California, Los Angeles (2013) Advisor: Priyanga Amarasekare
B.Sc.	University of Arizona (2008) Major: Ecology & Evolutionary Biology

PUBLICATIONS († denotes undergraduate coauthor)

Citations to date: 492; h-index: 10; i10-index: 10

14. [Johnson, C.](#), Dutt, P.†, Levine, J. Competition for pollinators destabilizes plant coexistence. Accepted: Nature
13. [Johnson, C.](#), Smith, G., Yule, K., Davidowitz, G., Bronstein, J., Ferrière, R. 2021. Evolutionary transitions from antagonism to mutualism explained by the Co-Opted Antagonist Hypothesis. Nature Communications 12 (1), 1-11
12. [Johnson, C.](#) 2021. How mutualisms influence the coexistence of competing species. Ecology 102 (6), e03346
11. Richman, S., Levine, J., Stefan, L. [Johnson, C.](#) 2020. Asynchronous range shifts drive alpine plant-pollinator interactions and reduce plant fitness. Global Change Biology 26.5
10. Yule, K., [Johnson, C.](#), Bronstein, J. Ferrière, R. 2020. Interactions among interactions: the dynamical consequences of antagonism between mutualists. J. Theor. Biol. 501, 110334
9. [Johnson, C.](#) & Bronstein, J. 2019. Coexistence and competitive exclusion in mutualism. Ecology 100 (6), e02708
8. Kandlikar, G., [Johnson, C.](#), Yan, X.†, Kraft, N., Levine, J. M. 2019. Winning and losing with microbes: how microbially mediated fitness differences influence plant diversity. Ecology Letters 22 (8), 1178-1191
7. Smith, G., [Johnson, C.](#), Davidowitz, G., Bronstein, J. 2018. Linkages between nectaring and oviposition preferences of *Manduca sexta* on two co-blooming *Datura* species in the Sonoran Desert. Ecological Entomology 43 (1), 85-92
6. Amarasekare, P. & [Johnson, C.](#) 2017. Evolution of thermal reaction norms in seasonally varying environments. The American Naturalist 189 (3), 31-45
5. [Johnson, C.](#), Coutinho, R., Berlin, E.†, Dolphin, K.†, Heyer, J.†, Kim, B.†, Leung, A.†, Sabellon, J.† Amarasekare, P. 2016. Effects of temperature and resource variation on insect population dynamics: the bordered plant bug as a case study. Functional Ecology 30 (7)
4. [Johnson, C.](#) & Amarasekare, P. 2015. A metric for quantifying the oscillatory tendency of consumer-resource interactions. The American Naturalist 185 (1), 87-99

3. [Johnson, C.](#) & Amarasekare, P. 2013. Competition for benefits can promote the persistence of mutualistic interactions. *Journal of Theoretical Biology* 328, 54-64
2. Beardmore, S., Orr, P., Manzocchi, T., Furrer, H., & [Johnson, C.](#) 2012. Death, decay and disarticulation: Modeling the skeletal taphonomy of marine reptiles demonstrated using *Serpianosaurus*. *Palaeogeography, Palaeoclimatology, Palaeoecology* 337, 1-13
1. Tierney, J., Mayes, M., Meyer, N., [Johnson, C.](#), Swarzenski, P., Cohen, A., Russell, J. 2010. Late-20th-century warming in Lake Tanganyika unprecedented since 500 AD. *Nature Geosciences* 3, 422-25

MAJOR GRANTS AND FELLOWSHIPS

Year	Name	Institution	Amount
2015-18	ACE Postdoctoral Fellowship	ETH Zürich	>\$250,000
2015	NIMBioS Postdoctoral Fellowship	NIMBioS	Declined for ETH Zürich
2015	NIH PERT Postdoctoral Fellowship	National Institutes of Health	Declined for ETH Zürich
2013-15	Bisgrove Postdoctoral Fellowship	University of Arizona	\$200,000
2011-12	Denver Zoological Society Grant	Denver Zoo	\$12,000
2008-10	GAANN Fellowship & SIB Grant	UCLA	\$78,000
		Total:	>\$540,000

PRESENTATIONS

Selected Invited Talks

Year	Title	Conference or Institution
2021	"Plant-pollinator interaction in a changing world"	eScience Institute University of Washington
2020	"Plant-pollinator interaction in a changing world"	University of Newcastle University of Plymouth University of Aberdeen
2018	"Species' responses to environmental variability: from traits to communities"	Adaptations to a Changing Environment Final Seminar ETH Zürich
2016	"Cheating as a competitive strategy"	"Cheating in Paris" Meeting Paris, France
2016	"Eco-evolutionary responses to environmental variability"	Adaptations to a Changing Environment Seminar Monte Verita, Switzerland
2015	"Eco-evolutionary dynamics of mutualism"	École Normale Supérieure Paris, France
2014	"Eco-evolutionary approaches to modeling mutualism"	École Normale Supérieure Paris, France
2010	"Communities subject to perturbation"	University of Queensland Brisbane, Australia

Selected Conference Presentations

Year	Title	Conference
2020	"How pollinators affect plant coexistence"	American Naturalist Society
2019	"Competition for pollinators can promote or erode plant coexistence"	Ecological Society of America
2018	"A coexistence theory of mutualism"	Ecological Society of America
2017	"How climate warming affects plant phenology and reproduction in the Swiss Alps"	American Naturalist Society, British Ecological Society, Ecological Society of America
2016	"A graphical-mechanistic approach to competition and mutualism"	Ecological Society of America
2016	"The interplay between pollination and herbivory: insights from a mutualism in the Sonoran Desert"	American Naturalist Society
2014	"Competition for benefits in mutualist coexistence: an M* rule of competitive exclusion in mutualism"	Ecological Society of America
2013	"Tension between positive and negative feedback determines dynamics of trophic interactions"	Ecological Society of America
2012	"Coexistence in a host-parasitoid community: interplay of Biotic and abiotic environmental variation"	Ecological Society of America
2011	"Mutualistic interactions generate stability and persistence"	Ecological Society of America

TEACHING

Awards

2010 UCLA Schechtman Award for Outstanding Merit in Teaching

Independent Teaching Lectures (§ denotes graduate level course)

Years	Course	Institution	Description
2019	Ecology	ETH Zürich	Developed a lecture on phenology with an interactive activity
2018	§Plant Ecology	ETH Zürich	Organized and taught a two-week module on pollination ecology including discussions of current topical literature
2017-2019	§Quantitative Methods in Ecology	ETH Zürich	Co-taught month-long modules on the dynamics of structured populations and co-developed an interactive web application
2016	§Ecology Term Paper	ETH Zürich	Supervised a Masters student in a writing-intensive course
2014-2015	§Ecology	University of Arizona	Developed and presented lectures for incoming graduate students on the role of theory in ecology and evolution
2013	§Ecology	UCLA	Developed and taught a lecture on consumer-resource models
2012	Ecology	UCLA	Taught a guest lecture on metapopulation models

Teaching Assistant (§ denotes graduate level course)

Years	Course	Institution	Description
2010-2012	§Ecology	UCLA	Guided graduate students on math-intensive problem sets
2009-2011	Ecology	UCLA	Developed and taught discussion section; helped write exams
2009, 2012, 2013	Intro. Ecology & Behavior	UCLA	Led discussion sections; guided students on research papers

MENTORING

Masters Students (Thesis title)

1. Laura Stefan. ETH Zürich, 2017. (Effects of warming climates on phenology of alpine plants)
2. Martina Lüthi. ETH Zürich, 2016. (Phenological responses of alpine plants to climate change)

Undergraduate Students

University of Washington: I am collaborating with an undergraduate statistics major to analyze CMIP6 climate model data and parameterize insect population models

ETH Zürich: I mentored a visiting undergraduate from the Indian Institute of Sciences who conducted a senior project on the consequences of pollinator decline on plant reproduction

University of Arizona: I mentored four undergraduate students and two high school students as part of the KEYS Research Internship Program, which provides research internships for high school students from backgrounds that are underrepresented in science

UCLA: I mentored eight undergraduate students who each conducted senior research projects. Six are coauthors (Johnson *et al.* 2016).

ACADEMIC SERVICE & OUTREACH

Peer Review (>10 reviews)

The American Naturalist • Ecology Letters • Journal of Ecology • Theoretical Population Biology • Environmental Conservation

Conservation & Outreach

Research Associate, Denver Zoological Society (2010-12): I helped to establish a waterbird conservation program at Soysambu Conservancy in Kenya, and visited local schools to talk to the students about ecology and conservation.

PROFESSIONAL REFERENCES

Dr. Lauren Buckley. Professor, University of Washington. Current mentor
lbuckley@uw.edu • (206) 616-6108

Dr. Jonathan Levine. Professor, Princeton University & ETH Zürich. Postdoctoral mentor
levinej@princeton.edu • (609) 258-8256

Dr. Judith Bronstein. Distinguished Professor, University of Arizona. Postdoctoral mentor
judieb@email.arizona.edu • (520) 621-3534

Dr. Priyanga Amarasekare. Professor, University of California Los Angeles. Ph.D. adviser
amarasek@ucla.edu • (310) 206-1366