

# Colin Olito Ph.D. ORCID Google Scholar

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## Positions

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2023–2028 **Independently funded Principal Investigator** Dept. Biological Sciences, Lund University, Sweden. (ERC Starting Grant 2024–2028; VR Establishment Grant 2023-2026).

## Education

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2017 **Ph.D.** Evolutionary Biology, Monash University, Australia (Supervisor: Tim Connallon)  
2013 **M.Sc.** Evolutionary Ecology, University of Calgary, Canada  
2007 **B.Sc.** Marine Biology, University of Hawaii at Manoa, USA

## Postdoctoral Stays

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2022 – 2023 **Olle-Engkvist Postdoctoral Fellow**, Lund University, Sweden. Host: Dr. Bengt Hansson (90% research).  
2020 – 2022 **ERC funded Postdoctoral Fellow**, Lund University, Sweden. Host: Dr. Jessica Abbott (90% research).  
2018 – 2020 **Wenner-Gren International Postdoctoral Fellow**, Lund University, Sweden Host: Dr. Jessica Abbott (100% research).

## Grants, Awards, & Honors

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2024–2028 European Research Council Starting Grant (host: Lund University, €1.5 million) Project title: *Genomics of sex determination in the Hawaiian Wikstroemia*.  
2023–2026 Swedish Research Council Establishment Grant (host: Lund University, 4 million SEK) Project title: *1,001 ways to live, die, and reproduce as a flowering plant. The evolutionary demography of angiosperms*.  
2023–2024 Nilsson-Ehle Project Grant in Genetics Research, Kungl. Fysiografiska Sällskapet i Lund. Project Title: *Genomics of sex determination in the Hawaiian Wikstroemia* (Lund University, 130,000 SEK)

- 2021–2022 Biodiversity and Ecosystem Services in a Changing Climate (BECC) Action Group: "Genomic causes and consequences of inbreeding in natural and domesticated populations" (Strategiskt Forskningsområde; Lund University; 123, 000 SEK)
- 2020 ESEB Godfrey Hewitt Mobility Award. Project Title: "Genomics of sex determination in the Hawaiian *Wikstroemia*" (€1, 890)
- 2019–2021 Nilsson-Ehle Project Grant in Genetics Research, Kungl. Fysiografiska Sällskapet i Lund. Project Title: "Genomics of sex determination in the Hawaiian *Wikstroemia*, a radiation of flowering plants with multiple evolutionary origins of dioecy" (Lund University, 125, 000 SEK)
- 2020–21, 2018–19 Wenner-Gren International Postdoctoral Fellowship, Lund University, Sweden
- 2019–2020 ERC funded Postdoctoral Fellowship, Lund University, Sweden  
EEB Postdoctoral Fellowship (University of Toronto, *awarded but declined*).  
Carl Tryggers Postdoctoral Fellowship (Lund University, *awarded but declined*).
- 2017 Nominated: Mollie Holman Medal (Monash University) – competitive award given to the most outstanding doctoral thesis from each faculty.  
DeLill Nasser Award (Genetics Society of America) – To attend ESEB special topic network "*Linking local adaptation with the evolution of sex differences*" (Lund, Sweden, \$1, 000).  
Postgraduate Publications Award (Monash University, \$4, 500).  
SSE Student Travel Grant – Evolution 2017, Portland, OR, USA (\$500).
- 2015 Faculty of Science Dean's International Postgraduate Scholarship (Monash University, graduate tuition fees through 2018).  
Faculty of Science Dean's Postgraduate Scholarship (Monash University, \$26, 288 AUD per annum through 2018).
- 2012 Queen Elizabeth II Graduate Student Scholarship (University of Calgary, \$15, 000 CAD).  
Grahame Bell & Norma Kay Sullivan-Bell Graduate Scholarship in Biology (University of Calgary, \$7, 000 CAD).

## Supervision

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- 2024 – 2025 Nikos Renhuldt (Post-Doc) – Supervisor, Bioinformatics, genome assembly and annotation in the Hawaiian *Wikstroemia*, Lund University.
- 2023 – 2024 Mart Groenendal (M.Sc) – Co-supervisor, Project title: *The evolution of sex and multicellularity*, Lund University.
- 2022 – 2023 Julio Ayala M.Sc. (Project Assistant) – Supervisor, Project title: *From pattern to process in the evolution of dosage compensation*, Lund University.

- 2022 – 2023 Ayushi Pathak (M.Sc, BINP39) – Co-supervisor, Project title: *Genome Assembly in the Hawaiian Wikstroemia* (Lund University, 2022).
- 2017 Undergraduate Independent Research (Hon. 3990) – Co-supervisor, Project title: *Variable sex-specific selection and the maintenance of genetic polymorphism*, Monash University, Australia.

## Teaching

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- 2023 – Genetic Analyses (BIOR92) – Curriculum Development, Co-organizer, Lecturer (Lund University).  
Biology Overview & Biological Modelling (EXTG11, EXTG15; LTH Engineering School) – Guest Lecturer on Genetics. Lund University, Lund, Sweden.
- 2021 – 2022 Genetic Analyses I & II (BIOR59, BIOR60) – Lecturer, Teaching Assistant (Lund University).
- 2010–2012 Quantitative Biology I (BIOL 315) – Teaching Assistant (University of Calgary).
- 2012–2013 Marine Science (MRSC 321) – Teaching Assistant (University of Calgary).
- 2010 Intro. Anim. Phys. (BIOL 239) – Teaching Assistant (University of Calgary).
- 2008–2009 Long-Term High School Substitute Teacher (Sciences) – Anchorage School District, Anchorage, Alaska, USA.
- 2007 Marine Biology (BIOL 301) – Guest Lecturer. University of Hawaii at Manoa, Honolulu, HI, USA.

## University and Professional Service

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- Dept. Equality Grp. Coordinating member developing webpage to improve awareness for victimization and harassment, reporting (2023–pres).
- Dept. Statistics Help Service Coordinator of Biology Department Statistics Help Service (2022–pres).
- Grant Reviews Swiss National Science Foundation Project Grant, Division of Biology and Medicine, Bern, Switzerland. (2018)
- Symposia Co-organizer for the Open Symposium on 'Sexual selection and the evolution of reproductive strategies'. 2019 Congress of the European Society for Evolutionary Biology (ESEB), Turku, Finland. (2019)
- Peer Review American Naturalist, Evolution, Genetics, Ecology Letters, Proc. Roy. Soc. B, J. Evol. Biol., Methods in Ecology and Evolution, Oikos, Ecography, Marine Ecology Progress Series, PLoS Genetics, BMC Evolutionary Biology, among others.

Selected Seminars	<p>Invited Speaker, Institute for Evolutionary Biology, University of Edinburgh (2024), 'Title TBD'.</p> <p>Invited Speaker, Institute for Evolution and Biodiversity, University of Münster (2023), 'Inversions, sheltering, and sex chromosomes: dissecting a deceptively intuitive hypothesis'.</p> <p>Invited Speaker, Center for Ecological and Evolutionary Synthesis, University of Oslo (2021), 'The maintenance of sexually antagonistic variation – lots of opportunities, but what are the costs? '.</p> <p>ESEB (2019, Turku, Finland), 'Antagonistic coevolution between the sex chromosomes of <i>Drosophila melanogaster</i>'.</p> <p>Evolution (2017, Portland, OR), 'Sexually antagonistic selection facilitates the evolution of separate sexes from hermaphroditism'.</p> <p>Evolution (2016, Austin, TX), 'The evolution of spawning strategies in marine broadcast spawners' (<i>session chair</i>).</p> <p>Ecological Society of America Annual Meeting (2012, Portland, OR), 'Foraging decisions, flowering phenology evolution, and the structure of pollination networks'. *Winner: <i>Volterra Award for best student talk, ESA Theoretical Ecology Section</i></p> <p>1st Joint Congress Evolutionary Biology (2012, Ottawa, ON, CAN), 'Foraging decisions, flowering phenology evolution, and the structure of pollination networks'.</p> <p>Ecological Society of America Annual Meeting (2008, Milwaukee, WI), 'Long term effects of predator arrival timing on prey community succession'.</p> <p>33rd Annual Tester's Symposium (2008, UH Mānoa), 'Long term effects of predator arrival timing on prey community succession'.</p>
Invited Participant	<p>ESEB special topics network "<i>Linking local adaptation with the evolution of sex differences</i>" (2018, Lund, Sweden; 2019, Montpellier, France; 2023, Mainz, Germany).</p> <p>Genetics Society of America Peer Review Training Program (2018 – 2019)</p>




## Professional Training & Past Experience

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2023	Challenge of Science Leadership. 3-day course, Barefoot Thinking Co. Hosted by Lund Department of Biological Sciences. Lund University, Sweden.
2021–2022	Docent Qualification Education. Department of educational sciences Division for higher education development (AHU). Lund University, Sweden.
2008–2009	Lab Manager/Research Assistant. Community ecology lab (Prof. Tad Fukami) Department of Biological Sciences, University of Hawaii at Manoa.

## Publications


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- [20] **C. Olito\*** & B. Charlesworth\*. 2023. Excluding data paints a misleading picture of sex chromosome evolution. *PLoS Biology*. In Review Biorxiv doi: [10.1371/ journal.pb.XXXX](https://doi.org/10.1371/journal.pb.XXXX). \*equal contributions.
- [19] Yazdi, H.P.\*, **C. Olito\***, T. Kawakami, P. Unneberg, M.F. Schou, S.W.P. Cloete, B. Hansson, & C. Cornwallis. 2023. The evolutionary maintenance of ancient recombining sex chromosomes in the ostrich. *PLoS Genetics*. doi: 10.1371/ journal.pgen.1010801. \*equal contributions.
- [18] Abbott, J.K., K. Lund-Hansen, **C. Olito\***. 2023. Why is measuring or predicting fitness under conflict so hard? *Current Opinion in Genetics and Development*. Under review. Invited contribution.
- [17] **Olito, C.** and J.K. Abbott. 2023. The evolution of suppressed recombination between sex chromosomes and the length of evolutionary strata. *Evolution*. doi:10.1093/evolut/qpaa023.  Faculty Opinions
- [16] **Olito, C.** & C. de Vries. 2022. The demographic consequences of sexually antagonistic selection in partially selfing populations. *American Naturalist*. doi: 10.1086/720419.
- [15] **Olito, C.**, S. Ponnikas, B. Hansson, J.K. Abbott. 2022. Consequences of partially recessive deleterious genetic variation for the evolution of inversions suppressing recombination between sex chromosomes. *Evolution* 76:1320–1330. doi: 10.1111/evo.14496.
- [14] Connallon, T., **C. Olito**. 2021. Natural selection and the distribution of chromosomal inversion lengths. *Molecular Ecology*. doi: 10.1111/mec.16091.  Faculty Opinions
- [13] Lund-Hansen, K.K.\*, **C. Olito\***, E.H. Morrow, and J.K. Abbott. 2021. Sexually antagonistic co-evolution between the sex chromosomes of *Drosophila melanogaster*. *PNAS* 118:e2003359118. doi: 10.1073/pnas.2003359118. \*equal contributions.
- [12] Ruzicka, F., L. Dutoit, P. Czappon, C.Y. Jordan, X.-Y. Li, **C. Olito**, A. Runemark, E.I. Svensson, H.P. Yazdi, and T. Connallon. 2020. The search for sexually antagonistic genes: practical insights from studies of local adaptation and statistical genomics. *Evolution Letters* 4:398–415. doi: 10.1002/evl3.192.
- [11a] **Olito, C.** and T. Connallon. 2019. Sexually antagonistic variation and the evolution of dimorphic sexual systems. *American Naturalist* 193:688–701. doi: 10.1086/702847.  Faculty Opinions
- [11b] **Olito, C.** and T. Connallon. 2019. Correction to Sexually antagonistic variation and the evolution of dimorphic sexual systems. *American Naturalist* doi: 10.1086/705014.

- [10] Connallon, T., S. Sharma, **C. Olito**. 2019. Evolutionary consequences of sex-specific selection in variable environments: four simple models reveal an array of possible evolutionary outcomes. *American Naturalist* 193:93–105. doi:10.1086/700720.
- [9] **Olito, C.** and D.J. Marshall. 2019. Releasing small ejaculates slowly increases per-gamete fertilization success in an external fertilizer: *Galeolaria caespitosa* (Polychaeta: Serpulidae). *J. Evolutionary Biology*. doi:10.1111/jeb.13403. GitHub
- [8] **Olito, C.**, J.K. Abbott, C.Y. Jordan. 2018. The interaction between sexually antagonistic selection and local adaptation in species without separate sexes. *Phil. Trans. Roy. Soc. B*. doi: 10.1098/rstb.2017.0426. GitHub. *Invited paper*.
- [7] Connallon, T.\*, **C. Olito\***, L. Dutoit, H. Papoli, F. Ruzicka, L. Yong. 2018. Local adaptation and the evolution of inversions on sex chromosomes and autosomes. *Phil. Trans. Roy. Soc. B*. doi: 10.1098/rstb.2017.0423. GitHub *Invited paper*. \*equal contributions.
- [6] **Olito, C.** 2017. Consequences of genetic linkage for the maintenance of sexually antagonistic polymorphism in hermaphrodites. *Evolution* 71: 458–464. GitHub
- [5] **Olito, C.**, D.J. Marshall, T. Connallon. 2017. The evolution of reproductive phenology in broadcast spawners, and the maintenance of sexually antagonistic polymorphism. *American Naturalist* 189: 153–169.
- [4] **Olito, C.**, C.W. White, D.J. Marshall, D.M. Barneche. 2017. Estimating monotonic biological rates using local linear regression. *J. Experimental Biology* 220: 759–764. GitHub
- [3] **Olito, C.**, M. Bode, D.J. Marshall. 2015. Evolutionary consequences of fertilization mode for reproductive phenology and asynchrony. *Marine Ecology Progress Series* 537: 23–38.
- [2] **Olito, C.** and J.W. Fox. 2015. Species traits and relative abundances predict metrics of plant-pollinator network structure, but not pairwise interactions. *Oikos* 124: 428–436.
- [1] **Olito, C.** and T. Fukami. 2009. Long-term effects of predator arrival timing on prey community succession. *American Naturalist* 173: 354–362.

Publication Summary ( Google Scholar, November 5, 2023)

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Journal Publications:	20	H-Index:	11
1 <sup>st</sup> Authorships:	14	i10-Index:	13
Citations:	433	 Faculty Opinions :	3