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PROFESSIONAL APPOINTMENTS

Associate Professor; University of Connecticut (UConn) 2023 – present
Department of Molecular and Cell Biology (MCB) & Institute of Systems Genomics (ISG)
Faculty Director; Women in Math, Science, Engineering (WiMSE) Learning Community (UConn) 2022 – present

Previous

Assistant Professor; UConn; MCB & ISG 2016 – 2023
UC Davis Chancellor's Postdoctoral Fellow; University of California, Davis; Genome Center 2014 – 2016
Postdoctoral Researcher University of California, Davis; Genome Center 2013 – 2014

EDUCATION

PhD (Biological Sciences); Louisiana State University (LSU), Baton Rouge, LA, USA. 2013
MSc (Biology); University of Idaho (UI), Moscow, ID, USA. 2008
BSc (Biology); University of Idaho (UI), Moscow, ID, USA. 2005

PEER-REVIEWED PUBLICATIONS

* = Student or postdoc from the Hird Lab; † = Undergraduate researcher; ‡ = Contributed equally to the work, ** = I am corresponding author

Google Scholar Profile including citation counts: <https://scholar.google.com/citations?hl=en&user=k4sa-hQAAAAJ>

34. Herder E*, Skeen H*, Lutz H, **Hird SM****. 2023. Body size poorly predicts host-associated microbial diversity in wild birds. 2023. *Microbiology Spectrum*, in press, e03749-22.
33. Grond KS*, Louyakis AS, **Hird SM****. 2023. Functional and compositional changes in the fecal microbiome of a shorebird during migratory stopover. *mSystems*, in press, e01128-22.
32. Gil J*, **Hird SM****. 2022. Multiomics characterization of the Canada Goose fecal microbiome reveals selective efficacy of simulated metagenomes. *Microbiology Spectrum*, 10(6), e02384-22.
31. Basso B*, Poryanda E†, Grames E, Grond K*, Knutie S, **Hird SM****. 2022. Eggshell microbiota of a brood parasite reflects environment, not species. *Journal of Ornithology*, 163 (3): 757-766.
30. Bodawatta K, **Hird SM**, Grond K*, Poulsen M, Jønsson K. 2022. Avian microbiomes taking flight. *Trends in Microbiology*, 30(2) 268-280.
29. Chen J, Li H, **Hird SM**, Chen M, Xu W, Maas K, Cong X. 2021. Sex differences in gut microbial development of preterm infant twins in early life: a longitudinal analysis. *Frontiers in Cellular and Infection Microbiology*, 11: 671074. (open access)
28. Herder E*, Spence A, Tingley M, **Hird SM****. 2021. Elevation correlates with significant changes in relative abundance in hummingbird fecal microbiota, but composition changes little. *Frontiers in Ecology and Evolution*, 8:534. (open access)
27. Hamchand R, Lafountain AM, Büchel R, Maas KR, **Hird SM**, Warren M, Frank HA, Brückner C. 2021. Red fluorescence of European Hedgehog (*Erinaceus europaeus*) spines results from free-base porphyrins of potential microbial origin. *Journal of Chemical Ecology*. 47: 588-596.
26. Gil J*, Helal Z, Risatti G, **Hird SM****. 2020. *Ixodes scapularis* microbiome correlates with life stage, not the presence of human pathogens, in ticks submitted for diagnostic testing. *PeerJ*, 8:e10424. (open access)
25. Capunitan D**, Johnson O, Terrill RS, **Hird SM**‡**. 2020. Evolutionary signal in the gut microbiomes of 74 bird species from Equatorial Guinea. *Molecular Ecology*, 29(4), 829-847.
24. Grond K*, Guilani H*†, **Hird SM****. 2020. Spatial biogeography of the shorebird microbiome. *Royal Society Open Science*, 7(1), 191609. (open access)

23. Grond K*, Bell K, Demboski J, Santos M, Sullivan JM, **Hird SM****. 2020. No evidence for phylosymbiosis in western chipmunk species. *FEMS Microbiology Ecology*, 96(1):fiz182.
22. Grond KC*†, Perreau J†, Loo W†, Cavanaugh C**, **Hird SM****. 2019. Longitudinal microbiome profiling reveals impermanence of probiotic bacteria in domestic pigeons. *PLOS One*, 14(6): e0217804 (open access).
21. **Hird SM****. 2019. Invited Perspective: Microbiomes, community ecology and the comparative method. *mSystems*, 4(3): e00112-19. (open access)
20. Bik HM, Alexiev A†, Aulakh SK†, Bharadwaj L†, Flanagan L†, Haggerty JM†, **Hird SM**, Jospin G, Lang JM, Sauder LA, Neufeld JD, Shaver A†, Sethi A†, Eisen JA, Coil DA. 2019. Microbial community succession and nutrient cycling responses following perturbations of experimental saltwater aquaria. *mSphere*, 4:e00043-19. (open access)
19. **Hird SM****, Ganz HH, Eisen JA, Boyce WM. 2018. The cloacal microbiome of five wild duck species varies by species and influenza A infection status. *mSphere*, 3:e00382-18. (open access)
18. **Hird SM****. 2017. Evolutionary biology needs wild microbiomes. *Frontiers in Microbiology*, 8:725. (open access)
17. Ganz H, Firl A, Doroud L, **Hird SM**, Eisen J, Boyce W. 2017. Community-level differences in the microbiome of wild mallards associated with infection by influenza A viruses. *mSystems*, 2(1): e00188-16. (open access)
16. **Hird SM**, Sánchez C, Carstens BC, Brumfield RT. 2015. Comparative gut microbiota of 59 Neotropical bird species. *Frontiers in Microbiology*, 6: 1403. (open access)
15. NESCent Working Group on the Evolutionary Biology of the Built Environment, Martin LJ, Adams RI, Bateman A, Bik HM, Hawks J, **Hird SM**, Hughes D, Kembel SW, Kinney K, Kolokotronis S, Levy G, McClain C, Meadow JF, Medina RF, Mhuireach G, Moreau CS, Munshi-South J, Nichols LM, Palmer C, Popova L, Schal C, Taubel M, Trautwein M, Ugalde JA, Dunn RR. 2015. Evolution of the indoor biome. *Trends in Ecology and Evolution*, 30(4): 223-232.
14. **Hird SM**, Carstens BC, Cardiff SW, Dittmann DL, Brumfield RT. 2014. Sampling locality is more detectable than taxonomy or ecology in the brood-parasitic Brown-headed Cowbird (*Molothrus ater*). *PeerJ*, 2: e321. (open access)
13. Sullivan J, Demboski JR, Bell KC, **Hird SM**, Sarver B, Reid NM. 2014. Divergence-with-gene-flow within the recent chipmunk radiation (*Tamias*). *Heredity*, 113(3):185-194.
12. Reid NM, **Hird SM**, Brown JM, Pelletier TA, McVay JM, Satler JD, Carstens BC. 2013. Poor fit to the multispecies coalescent is widely detectable in empirical data. *Systematic Biology*, 63(3): 322-333.
11. **Hird SM****. 2012. lociNGS: a lightweight alternative for assessing suitability of next-generation loci for evolutionary analysis. *PLOS ONE* 7(10): e46847. (open access)
10. Zellmer AJ, Hanes MM, **Hird SM** and BC Carstens. 2012. Deep phylogeographic structure and environmental differentiation in the carnivorous plant *Sarracenia alata*. *Systematic Biology*, 61(5): 763-777.
9. McCormack JE, **Hird SM**, Zellmer AJ, Carstens BC and RT Brumfield. 2012. Applications of next-generation sequencing to phylogeography and phylogenetics. *Molecular Phylogenetics and Evolution*, 66: 526-538.
8. McCormack JE, Maley JM, **Hird SM**, Derryberry EP, Graves GR and RT Brumfield. 2011. Next-generation sequencing reveals phylogeographic structure and a species tree for recent bird divergences. *Molecular Phylogenetics and Evolution*, 62: 397-406.
7. **Hird SM****, Brumfield RT and BC Carstens. 2011. PRGmatic: an efficient pipeline for collating genome-enriched second generation sequencing data using a “provisional-reference genome”. *Molecular Ecology Resources*, 11(4):743-748.
6. **Hird S**, Kubatko L and B Carstens. 2010. Replicated subsampling enables accurate species tree estimation in empirical systems. *Molecular Phylogenetics and Evolution*, 57(2): 888-898.
5. **Hird S**, Reid N, Demboski J and J Sullivan. 2010. Introgression at differentially aged contact zones in red-tailed chipmunks (*Tamias ruficaudus*). *Genetica*, 138(8): 869-883.

4. Reid N, **Hird S**, Schulte-Hostedde A and J Sullivan. 2010. Examination of nuclear markers at a zone of mitochondrial introgression in two chipmunk species (*Tamias amoenus* and *Tamias ruficaudus*). *Journal of Mammalogy*, 91(6): 1389-1400.
3. Koopman M, Fuselier D[†], **Hird S** and B Carstens. 2010. The carnivorous pale pitcher plant harbors diverse, distinct and temporally dependent bacterial communities. *Applied and Environmental Microbiology*, 76: 1851-1860.
2. **Hird S** and J Sullivan. 2009. Assessing gene flow across a hybrid zone in red-tailed chipmunks (*Tamias ruficaudus*). *Molecular Ecology*, 18: 3097-3109.
1. Good J, **Hird S**, Reid N, Demboski J, Steppan S, Martin-Nims T and J Sullivan. 2008. Ancient hybridization and mitochondrial capture between two distantly related species of chipmunks (*Tamias*: Rodentia). *Molecular Ecology*, 17 (5): 1313-1327.

Invited Commentaries (reviewed by editor, not peer reviewed)

3. **Hird SM****. 2023. Deciphering the ecoevolutionary recipe to milk microbiomes. *Trends in Ecology and Evolution*, in press.
2. **Hird SM****. 2022. Playing by their own rules: The vertebrate archaeome. *Trends in Microbiology*, 30(2), 102-103.
1. **Hird SM****. 2020. Context is key: comparative biology illuminates the vertebrate microbiome. *mBio*, 11(2): e00153-20.

FUNDING AND FELLOWSHIPS (2014 - present)

- 2023 University of Connecticut CLAS Summer Funding (\$31,170): *A novel axis of immunological variation in the study of host-microbiota interactions.*
- 2022 National Science Foundation (PI, \$347,700, Co-PI Sarah Knutie): *Using the immune system to understand vertebrate-microbiome interactions and evolution.*
- 2021 National Science Foundation (PI, \$49,050): REP supplement for Jolene Addi (recommended for funding; submission withdrawn when Ms. Addi accepted another opportunity)
- 2020 National Science Foundation (PI, \$199,995): *EAGER: Testing the Host-Microbiome Specificity Paradigm in Birds*
- 2019 University of Connecticut ISG Seed Grant (\$11,952): *Antibiotic pollution and the mallard microbiome*
- 2018 University of Connecticut Microbiome Research Seed Grant (\$50,000, Co-PI Chris Elphick): *Range-wide variation in the microbiome of an endangered wild songbird, the Saltmarsh Sparrow*
- 2017 University of Connecticut Research Excellence Program (\$25,000): *The Avian Microbiome Atlas*
- 2016 University of Connecticut Research Start-up Package (\$500,000)
- 2014 UC Davis Chancellor's Postdoctoral Fellowship

AWARDS AND HONORS

- 2022 National Academies of Science Kavli Fellow

TEACHING

Instructor

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|---|----------------|
| <i>Host-Associated Microbiomes (MCB3620)</i> | 2021 – 2022 |
| Co-taught with Dr. Kat Milligan-McClellan. Undergraduate lecture class. | |
| <i>Sequence-based Microbial Community Analysis (MCB5631)</i> | 2017 – present |
| Graduate bioinformatics class. | |
| <i>Host-Associated Microbiomes (MCB3895/MCB5896)</i> | 2017 – 2020 |
| Co-taught with Dr. Nichole Broderick. Graduate and undergraduate class. | |
| <i>Seminar in Microbiology (MCB5699)</i> | 2018, 2022 |
| Graduate seminar. | |

MENTORING

Current Postdoctoral Researchers: Dr. Heather Skeen (2022 – current)

Current Graduate Students: Ian Barron (PhD), Ryan Duggan (PhD), Trevor Hunter (PhD)

Current Undergraduate Students: Lauren Chance (2023 – current), Mayee Mavillapalli (2023-current)

Previous Postdoctoral Researchers: Dr. Kirsten Grond (2018 – 2020)

Previous Graduate Students: Dr. Joshua Gil (PhD, 2022), Dr. Elizabeth Herder (PhD, 2022), Brent Basso (PSM, 2020), Darien Capunitan (MS, 2018)

Previous Undergraduate Students: Gretchen Stennett (REU student, 2023), Phoenix Wang (Honors Student; 2022-2023), Christopher Martins (McNair Fellow, 2022), Celeste Cuellar (McNair Fellow; Kelly Summer MCB Fellowship Recipient, 2021-2022), Jolene Addi (McNair Scholar; Fulbright Scholarship Semi-Finalist; 2020-2021), David Mathieu (2020-2021), Nehal Navali (Honors Thesis, 2018-2020), Inglis Tucker (SURF recipient, 2018 – 2020), Hannah Guilani (2018-2019), Francis Regala (2017-2018)

Previous Honors Thesis Students: Alyssa Adesso (2020), Brandon Thai (2022), Farnaz Ahmad (2023), Marissa Ciccariini (2023), Laura Gallagher (2023), Katie Hooker (2023), Athanasios Montemarano (2023)

INVITED TALKS

- 2022 Cornell University, Department of Microbiology Seminar Series. Ithaca, NY.
- 2022 University of Massachusetts Amherst, Organismic and Evolutionary Biology Seminar Series. Amherst, MA.
- 2021 Brown University, Ecology and Evolution Seminar Series, online seminar.
- 2021 Birds-Eye View of the Microbiome Symposium, American Ornithological Society, virtual seminar.
- 2021 Connecticut Agricultural Experiment Station, virtual seminar.
- 2020 Sam Houston State University, Department Seminar; virtual seminar.
- 2020 The Ohio State University's Evolution, Ecology and Organismal Biology Department Seminar. Columbus, OH.
- 2020 Keynote: Rhode Island Microbiome Symposium. South Kingstown, RI
- 2019 Deciphering the Microbiome. Alexandria, VA (NSF-sponsored workshop).
- 2019 Keynote: Pioneer Valley Microbiology Symposium. Amherst, MA.
- 2018 University of Maine's School of Biology and Ecology Department Seminar. Orono, ME.
- 2018 Stanford University Microbiome Symposium. Palo Alto, CA.
- 2018 University of Connecticut Computational Biology Core Open House. Storrs, CT.
- 2018 University of California Berkeley Integrative Biology Department Seminar Series. Berkeley, CA.
- 2018 Eighth Annual Workshop on Genomics. Český Krumlov, Czech Republic.
- 2017 The American Museum of Natural History Ruth Gilder Graduate School Comparative Biology Seminar Series. New York City, NY.
- 2017 UConn, Department of Pathobiology and Veterinary Sciences Comparative Pathology Seminar Series. Storrs, CT.
- 2017 Connecticut College, Life Sciences Seminar Series. New London, CT.
- 2015 UConn, Department of Molecular and Cell Biology. Storrs, CT.
- 2015 California State University Monterey Bay, Biology Department. Monterey Bay, CA.
- 2015 UC Davis, Center for Population Biology. Davis, CA.
- 2009 LSU, Museum of Natural Science. Baton Rouge, LA.

ACADEMIC SERVICE (2016 - present)

- 2021 – present Executive Board Member, UConn WiMSE (Women in Math, Science, Engineering) Faculty Group
- 2019 – present Associate Editor, *mSystems*.
- 2018 RISE Facilitator, addressing microaggressions on campus through a 90-minute workshop for incoming freshmen
- 2018 – present Founding faculty co-advisor for UgO:MCB (Undergraduate Organization for Molecular and Cell Biology) – an undergraduate social club centered on the MCB classes and majors at UConn
- 2017 – present Founding faculty advisor for UConn WinS – a Women in Science club for graduate students and postdocs at UConn

Manuscript Reviewing: 20+ journals, including *Science* and *The ISME Journal*

Grant Reviewing: 15+ reviewer assignments, including NSF panels and ad hoc reviews, internal UConn grants and fellowships and international reviewing (e.g., Czech Science Foundation, Netherlands Organisation for Scientific Research)