

Donald C. Dearborn, Ph.D.

Professor of Biology

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EDUCATION

Postdoctoral Associate	University of Texas, Drs. Mike Ryan & Ulrich Mueller	1999-2000
Postdoctoral Fellow	Ohio State University, Dr. Patty Parker	1998-1999
PhD Biology	University of Missouri, Dr. John Faaborg	1997
BS Biology	University of North Carolina, Dr. Haven Wiley	1990

TEACHING AND RESEARCH POSITIONS

Full Professor	Biology Department, Bates College	2010-present
Roux Sabbatical Fellow	Roux Institute of Northeastern University	2021-2022
Affiliated Scientist	Cardiff University, Wales	2016-present
Visiting Scholar	National Evolutionary Synthesis Center (NESCent)	2015
Visiting Scholar	Kenyon College	2015-2016
Herbert L. Spencer Endowed Chair	Department of Biology, Bucknell University	2008-2010
Associate Professor	Dept. Biology & Progr. Anim. Behav., Bucknell Univ.	2006-2010
Sabbatical Visiting Professor	Hebrew University of Jerusalem	2008
Sabbatical Visiting Professor	University of Auckland	2007-2008
Sabbatical Visiting Scientist	Smithsonian Institution	2007
Assistant Professor	Dept. Biology & Progr. Anim. Behav., Bucknell Univ.	2001-2005
Visiting Assistant Professor	Southwestern University	2000-2001
Research Consultant	The Nature Conservancy	1999-2001

ADMINISTRATIVE AND LEADERSHIP POSITIONS

Accreditation Chair	Bates College Accreditation with NECHE	2018-2021
Interim Director	Bowdoin Scientific Station on Kent Island	2015-2016
Department Chair	Biology Department, Bates College	2010-15, 19-21
Associate Department Chair	Biology Department, Bates College	2017-2018
Associate Editor	<i>Ornithology</i>	2008-present
Editorial Board	<i>The Open Ecology Journal</i>	2007-2011
Committee Co-Chair	Committee on Faculty Governance, Bates College	2017-2018
Curriculum Committee Chair	College of Arts and Sciences, Bucknell University	2009-2010
Department Chair	Dept. Biology, Bucknell University	2007-2008
Program Chair	Program in Animal Behavior, Bucknell University	2005-2007
Search Committee Chair	Seven tenure-track faculty searches	2004-2018

AREAS OF TEACHING

Ecology, evolution, genetics, conservation biology, host-parasite interactions, ornithology.

REFEREED PUBLICATIONS (undergraduate coauthors*)

53. Stratton JB*, Dearborn DC. 2021. Nest sanitation behavior does not increase the likelihood of parasitic egg rejection in herring gulls. **Current Zoology** in press.
52. Rand L*, Woodward C*, May R*, Ackerman RA*, Tweedie B*, Zicarelli TB*, Dearborn DC. 2019. Divergence between genes but limited allelic polymorphism in two MHC class II A genes in Leach's storm-petrels *Oceanodroma leucorhoa*. **Immunogenetics** 71:561-573.
51. Tonelli B* and Dearborn DC. 2019. An individual-based model for the dispersal of *Ixodes scapularis* by ovenbirds and wood thrushes during fall migration. **Ticks and Tick-borne Diseases** 10:1096-1104.
50. Mauck RA, Dearborn DC, and Huntington CE. 2018. Annual Global Mean Temperature explains reproductive success in a marine vertebrate from 1955-2010. **Global Change Biology** 24:1599-1613.
49. Tricola GM*, Simons MJP, Atema E, Boersma PD, Boughton RK, Brown JL, Dearborn DC, Divoky G, Eimes J, Huntington CE, Kitaysky AS, Juola FA, Lank DB, Litwa HP*, Mulder EGA, Nisbet ICT, Okanoya K, Safran RJ, Schoech SJ, Schreiber EA, Thompson PM, Verhulst S, Wheelwright NT, Winkler DW, Young R, Vleck CM, Haussmann MF. 2018. The rate of telomere loss is related to maximum lifespan in birds. **Philosophical Transactions of the Royal Society B** 373:20160445. DOI 10.1098/rstb.2016.0445
48. Dearborn DC, Page SM*, Dainson M*, Hauber ME, Hanley D. 2017. Eggshells as hosts of bacterial communities: an experimental test of the antimicrobial egg coloration hypothesis. **Ecology and Evolution** 7(22):9711-9719.
47. Dearborn DC, Gager AB, McArthur AG, Gilmour ME, Mandzhukova E*, and Mauck RA. 2016. Gene duplication and divergence produce diverse MHC genotypes without disassortative mating. **Molecular Ecology** 25:4355-4367.
46. Dearborn DC, Gager AB, Gilmour ME, McArthur AG, Hinerfeld DA, and Mauck RA. 2015. Non-neutral evolution and reciprocal monophyly of two expressed Mhc class II B genes in Leach's storm-petrel. **Immunogenetics** 67:111-123.
45. Gilmour ME, Lattin CR, Romero LM, Haussmann MF, Mauck RA, and Dearborn DC. 2015. Finding the best predictor of reproductive performance of Leach's Storm-petrels. **Auk: Ornithological Advances**. 132:191-205.
44. Ismar SMH, Daniel C, Igc B, Ballard G, Millar CD, Fidler AE, McGraw KJ, Wakamatsu K, Stephenson BM, Cassey P, Dearborn DC, Hauber ME. 2014. Sexual plumage dichromatism in a size monomorphic seabird. **Wilson Journal of Ornithology** 126:417-428, **WITH FRONTISPIECE IMAGE**.
43. Kennedy EA, Lattin CR, Romero LM, and Dearborn DC. 2013. Feather coloration in museum specimens is related to feather corticosterone. **Behavioral Ecology and Sociobiology** 67:341-348. DOI: 10.1007/s00265-012-1454-9 **FEATURED ON www.antibodyresource.com**
42. Dearborn DC, Hanley D, Ballantine K*, Cullum J*, Reeder D. 2012. Eggshell colour is more strongly affected by maternal identity than by dietary antioxidants in a captive poultry system. **Functional Ecology** 26:912-920.
41. Gilmour ME, Schreiber EA, and Dearborn DC. 2012. Satellite telemetry of great frigatebirds rearing chicks on Tern Island, North Central Pacific Ocean. **Marine Ornithology** 40:17-23.
40. Juola FA, Dearborn DC. 2012. Sequence-based evidence for major histocompatibility complex-disassortative mating in a colonial seabird. **Proceedings of the Royal Society B: Biological Sciences** 279:153-162. **FEATURED ON WEBSITE OF Science**.
39. Levin II, Valkiūnas G, Santiago-Alarcon D, Cruz LL, Iezhova TA, O'Brien SL, Hailer F, Dearborn DC, Schreiber EA, Fleischer RC, Ricklefs RE, Parker PG. 2011. Hippoboscid-transmitted *Haemoproteus* infecting Galapagos Pelecaniform birds: Evidence from mitochondrial DNA and morphological description of blood stages of *H. iwa*. **International Journal for Parasitology** 41:1019-1027, **WITH COVER PHOTO**.

38. Dearborn DC. 2010. Yellow-breasted chat (*Icteria virens*). In: Steele MA, Brittingham MC, Maret TJ, Merritt JF, eds. **Terrestrial Vertebrates of Pennsylvania: A Complete Guide to Species of Conservation Concern**. Johns Hopkins University Press.
37. Igc B, Hauber ME, Galbraith JA, Grim T, Dearborn DC, Brennan PLR, Moskat C, Choudhary PK, Cassey P. 2010. Comparison of micrometer- and scanning electron microscope-based measurements of avian eggshell thickness. **Journal of Field Ornithology** 81:402-410.
36. Hanley D, Doucet SM, Dearborn DC. 2010. A blackmail hypothesis for the evolution of conspicuous egg coloration in birds. **The Auk** 127:453-459.
35. Dearborn DC, Kark S. 2010. Motivations for conserving urban biodiversity. **Conservation Biology** 24:432-440. **FEATURED ON EUROPEAN COMMISSION'S SCIENCE FOR ENVIRONMENT POLICY WEBSITE.**
34. Dearborn DC, Gager AB. 2009. Food-dunking behavior by a Eurasian jay *Garrulus glandarius*. **Sandgrouse (Journal of the Ornithological Society of the Middle East)**. 31:40-41.
33. Wright SG*, Dearborn DC. 2009. Male ornament variation in a sexually dimorphic seabird with variable male mating success. **Evolutionary Ecology Research** 11:759-770, **WITH COVER PHOTO.**
32. Dearborn DC, MacDade LS*, Robinson S, Fink ADD, Fink ML. 2009. Offspring development mode and the evolution of brood parasitism. **Behavioral Ecology** 20:517-524.
31. Hanley D, Heiber G*, Dearborn DC. 2008. Testing an assumption of the sexual signaling hypothesis: does blue-green egg color reflect maternal antioxidant capacity? **The Condor** 100:767-771.
30. Dearborn DC, Hailer F, Fleischer RC. 2008. Microsatellite primers for relatedness and population structure in great frigatebirds (Pelecaniformes: Fregatidae). **Molecular Ecology Resources** 8:1399-1401.
29. Dearborn DC, Anders AD, and Juola FA. 2008. Parent age differentially influences offspring size over the course of development in Laysan albatross *Phoebastria immutabilis*. **Journal of Zoology** 276:14-20, **WITH COVER PHOTO.**
28. Gager AB, Loiza JR, Dearborn DC, Bermingham E. 2008. Do mosquitoes filter the access of *Plasmodium* cytochrome *b* lineages to an avian host? **Molecular Ecology** 17:2552-2561.
27. Juola FA, McGraw K, Dearborn DC. 2008. Carotenoids and throat pouch coloration in the great frigatebird (*Fregata minor*). **Comparative Biochemistry and Physiology - Part B** 149:370-377.
26. Juola FA and Dearborn DC. 2007. Does the differential cost of sons and daughters lead to sex ratio adjustment in great frigatebirds (*Fregata minor*)? **Journal of Avian Biology** 38:94-104.
25. Hanley D, Minehart W*, and Dearborn DC. 2007. Documentation of a polygynous gray catbird. **Wilson Journal of Ornithology** 119:499-502.
24. Dearborn DC and Anders AD. 2006. Demography and reproductive ecology of great frigatebirds. **Atoll Research Bulletin** 543:159-171.
23. Juola FA, Haussmann MF, Dearborn DC, and Vleck CM. 2006. Telomere shortening in a long-lived marine bird: cross-sectional analysis and test of an aging tool. **Auk** 123:775-783.
22. Dearborn DC, Anders AD, and Williams JB. 2005. Courtship display by great frigatebirds, *Fregata minor*: an energetically costly handicap signal? **Behavioral Ecology and Sociobiology** 58:397-406.
21. Cohen LB* and Dearborn DC. 2004. Great frigatebirds (*Fregata minor*) choose mates that are genetically similar. **Animal Behaviour** 68: 1229-1236.
20. Lichtenstein G and Dearborn DC. 2004. Begging and short-term need in cowbird nestlings: how different are brood parasites? **Behavioral Ecology and Sociobiology** 56: 352-359.
19. Anders AD and Dearborn DC. 2004. Population trends of the endangered golden-cheeked warbler on Fort Hood, Texas, from 1992-2001. **Southwestern Naturalist** 49: 39-47.

18. Kostecke RM, Koloszar JA, and Dearborn DC. 2003. Effect of a reduction in cattle stocking rate on brown-headed cowbird activity. **Wildlife Society Bulletin** 31:1083-1091.
17. Dearborn DC, Anders AD, Schreiber EA, Adams RMM, and Mueller UG. 2003. Inter-island movements and population differentiation in a pelagic seabird. **Molecular Ecology** 12:2835-2843.
16. Hauber ME and Dearborn DC. 2003. Parentage without parental care: what to look for in genetic studies of obligate brood-parasitic mating systems. **Auk [Perspectives in Ornithology]** 120:1-13.
15. Dearborn DC and Lichtenstein G. 2002. Begging behaviour and host exploitation in parasitic cowbirds. pp. 361-387 *In* Wright J and Leonard M, eds. **The evolution of begging: competition, cooperation and communication.**
14. Burhans DE, Dearborn DC, Thompson FR III, and Faaborg J. 2002. Factors affecting predation at songbird nests in old fields. **Journal of Wildlife Management** 66:240-249.
13. Dearborn DC and Ryan MJ. 2002. A test of the Darwin-Fisher theory for the evolution of male secondary sexual traits in monogamous birds. **Journal of Evolutionary Biology** 15:307-313.
12. Dearborn DC and Sanchez LL. 2001. Do Golden-cheeked Warblers select nest locations on the basis of patch vegetation? **Auk** 118:1052-1057.
11. Dearborn DC, Anders AD, and Parker PG. 2001. Sexual dimorphism, extra-pair fertilizations, and operational sex ratio in great frigatebirds (*Fregata minor*). **Behavioral Ecology** 12:746-752.
10. Dearborn DC, Anders AD, and Flint EN. 2001. Trends in reproductive success of Hawaiian seabirds: is guild membership a good criterion for choosing indicator species? **Biological Conservation** 101:97-103.
9. Dearborn DC. 2001. Body condition and retaliation in parental effort decisions of incubating great frigatebirds (*Fregata minor*). **Behavioral Ecology** 12:200-206, **WITH COVER PHOTO.**
8. Dearborn DC and Anders AD. 2000. Occurrence and breeding behavior of lesser frigatebirds (*Fregata ariel*) on Tern Island, Northwestern Hawaiian Islands. **Pacific Seabirds** 27:2-5.
7. Dearborn DC. 1999. Brown-headed cowbird nestling vocalizations and the risk of nest predation. **Auk** 116:448-457.
6. Dearborn DC. 1998. Begging behavior and food acquisition by brown-headed cowbird nestlings. **Behavioral Ecology and Sociobiology** 43:259-270.
5. Dearborn DC, Anders AD, Thompson FR III, and Faaborg J. 1998. Effects of cowbird parasitism on parental provisioning and nestling food acquisition and growth. **Condor** 100:326-334.
4. Dearborn DC. 1998. Interspecific territoriality by a rufous-tailed hummingbird (*Amazilia tzacatl*): effects of intruder size and resource value. **Biotropica** 30:306-313.
3. Anders AD, Dearborn DC, Faaborg J, and Thompson FR III. 1997. Juvenile survival in a population of neotropical migrant birds. **Conservation Biology** 11:698-707.
2. Dearborn DC. 1996. Video documentation of a Brown-headed Cowbird nestling ejecting an Indigo Bunting nestling from the nest. **Condor** 98:645-649.
1. Dearborn DC and Wiley RH. 1993. Prior residence has a gradual influence on dominance in captive white-throated sparrows. **Animal Behaviour** 46:39-46.

BOOK REVIEWS, TECHNICAL REPORTS, AND OTHER WORKS

- Dearborn DC. 2017. The affluent can always buy wilderness access. What about everyone else? A roundtable essay for The Nature of Cities. <https://www.thenatureofcities.com/roundtable/>

- Dearborn DC. 2015. Book review of *The Book of Eggs*, by Mark Hauber. **Wilson Journal of Ornithology** 127:161-163. **STORRS OLSON AWARD FOR BEST BOOK REVIEW 2015 WILSON J. OF ORNITHOL.**
- Dearborn DC. 2009. Wilson Creek memoirs: messages from the River Gods. **American Whitewater** 49(3):32-33.
- Dearborn DC and Anders AD. 1998. Reproductive success of Black Noddies, Red-footed Boobies, and Red-tailed Tropicbirds on Tern Island, French Frigate Shoals in 1997. U. S. Fish and Wildlife Service, Honolulu, Hawaii.
- Dearborn DC and Anders AD. 1996. Reproductive success of Black Noddies, Red-footed Boobies, and Red-tailed Tropicbirds on Tern Island, French Frigate Shoals: implementing new statistical methods for plot-based estimates of reproductive parameters. U.S. Fish & Wildlife Service, Honolulu, Hawaii.
- Anders AD and Dearborn DC. 1996. Phenology, reproductive success, and correlates of nest fate of Masked Boobies on Tern Island, French Frigate Shoals, since colonization (1987-1995). U. S. Fish and Wildlife Service, Honolulu, Hawaii.
- Anders AD and Dearborn DC. 1996. Reproductive success of White Terns on Tern Island, French Frigate Shoals, 1994-95. U. S. Fish and Wildlife Service, Honolulu, Hawaii.
- Williams J, Douglas H, Dearborn DC, Barclay S, and Byrd V. 1990. Nesting survey for Aleutian Canada geese on Agattu I., Alaska, in 1990. U. S. Fish and Wildlife Service, Adak, Alaska.

MANUSCRIPTS IN REVIEW

- Mauck R, Adrianowycz S*, Hedd A, Pollet I, McFarlane Tranquilla L, Montevicchi WA, McMahon C, Acker H*, Taylor L*, McMahon J, Dearborn DC. In review. Female and male Leach's Storm-Petrels pursue different foraging strategies during the incubation period.

RECENT PRESENTATIONS (past 5 years)

- Dearborn DC, Liistro M*, Ackerman R*, Tweedie BR*. August 2020. Gut Parasites and Host-Parasite Evolution in Leach's Storm-petrels. North American Ornithological Congress, virtual instead of Puerto Rico.
- Dearborn DC, Warren S*, Hailer F. January 2020. Diversity and Selection at MHC Class II-A Genes: the Neglected Half of the Vertebrate Immune System's Heterodimer. Society for Integrative and Comparative Biology, Austin, TX.
- Dearborn DC. March 2019. Smithsonian Institution's Center for Conservation Genomics. Evolution of the major histocompatibility complex.
- Mauck RA, Huntington CE, Haussmann MF, Dearborn DC, Ricklefs RE. 2019. Climate, Storm-Petrels, and Chick Growth. American Ornithological Societies, Anchorage, Alaska.
- Dearborn DC. June 2018. Plenary speaker at EBBA Annual Meeting, Schoodic Institute. Genetics and ecology of diseases in wild birds.
- Dearborn DC. December 2017. Bowdoin College Library. Audubon double-elephant folio: yellowthroats and evolution.
- Dearborn DC, Gager AB, McArthur AG, Gilmour ME, Mandzhukova E, and Mauck RA. January 2017. How to get diverse MHC genotypes without disassortative mating. Society for Integrative and Comparative Biology, New Orleans.
- Dearborn DC. December 2016. Bates College, Phillips Fellowship Dinner. The evolution of disease resistance: why sex matters.
- Mauck RA, Adrianowycz S, McMahon C, Acker H, Taylor L, Dearborn DC. September 2016. Sex-specific foraging behaviour during the incubation period in Leach's storm-petrels. 6th International Albatross and Petrel Conference, Barcelona.

Dearborn DC. March 2016. Cardiff University, Division of Organisms and the Environment. Mate choice and the evolution of the major histocompatibility complex.

Dearborn DC. February 2016. Cardiff University, Molecular Ecology Group. Mate choice and the major histocompatibility complex.

RECENT GRANTS (past 10 years)

2021-2022 Sabbatical Fellowship, The Roux Institute of Northeastern University, *Bioinformatics for microbiome data in wildlife disease*

2019-2021 NIH INBRE-RTF, *Parasites in nature: understanding the functional significance of genetic variation in the vertebrate immune system.*

2018-2019 NIH INBRE-RTF, *Genomic diversity of the vertebrate immune system: the neglected half of the MHC Class II heterodimer.*

2015-2016 Bates College Phillips Faculty Fellowship for full sabbatical plus research funds.

2014 National Evolutionary Synthesis Center, with co-PI Frank Hailer of Cardiff University, *Balancing Selection and Mate Choice at the Major Histocompatibility Complex.*

2012 Andrew Mellon Foundation, Colby-Bates-Bowdoin Collaborative Faculty Enhancement Grant, with collaborator Prof. Nat Wheelwright (Bowdoin College). *Creative pedagogical exchange for teaching the biology of birds.*

2012 NIH-INBRE Faculty-Student Research Grant, *Lyme borreliosis: screening for Borrelia DNA in avian reservoir hosts.*

EXAMPLES OF OTHER SERVICE TO SCIENTIFIC COMMUNITY

External PhD Examiner: Cardiff University (UK), 2021; Massey University (NZ), 2019, University of Auckland (NZ) 2011.

External Member of PhD Committee: University of Miami, 2006-2010; Universidad Nacional Autónoma de México 2005; University of Manitoba, 2004.

External Reviewer for Oberlin College Biology Department, 2012.

Proposal reviewer for the *National Science Foundation*, the *National Geographic Society*, the *European Research Council*, the *National Science Centre of Poland*, the *American Bird Conservancy*, and the *Smithsonian Institution*.

Manuscript reviewer for *American Naturalist*, *Atoll Research Bulletin*, *Animal Behaviour*, *Animal Cognition*, *the Auk*, *Behavioral Ecology*, *Behavioral Ecology & Sociobiology*, *Behaviour*, *Biological Conservation*, *Biology Letters*, *Bird Behavior*, *BMC Evolutionary Biology*, *Cells*, *the Condor*, *Conservation Biology*, *Conservation Genetics*, *Ecology & Evolution*, *Ethology*, *Evolution*, *Functional Ecology*, *Global Ecology & Conservation*, *Great Basin Naturalist*, *Hormones & Behavior*, *Ibis*, *Journal of Animal Ecology*, *Journal of Avian Biology*, *Journal of Field Ornithology*, *Journal of Experimental Biology*, *Journal of Wildlife Management*, *Journal of Zoology*, *Marine Biology*, *Marine Ornithology*, *Molecular Ecology*, *Natural Areas Journal*, *Nature: Scientific Reports*, *Northeastern Naturalist*, *Oecologia*, *Oikos*, *PLoS One*, *Proceedings of the Royal Society: Biological Sciences*, *Sandgrouse (Ornithological Society of the Middle East)*, *The Science of Nature (Naturwissenschaften)*, *Southeastern Naturalist*, *Wilson Journal of Ornithology*.