CURRICULUM VITAE

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PROFESSIONAL BACKGROUND

Degrees received:

1971 B.Sc. (Hons.), Biology, Carleton University, Ottawa, Canada.
1976 Ph.D., Zoology, Institute of Animal Resource Ecology, University of British Columbia, Vancouver, Canada (Supervisor: C. J. Krebs)

Positions held:

1976-77 NSERC Postdoctoral Fellow, Institute of Animal Resource Ecology, University of British Columbia, Vancouver, Canada
1977-78 Assistant Professor, Department of Zoology, University of Alberta, Edmonton, Canada
1978-80 Research Scientist and Section Head, Biochemical Systematics, Fisheries and Oceans Canada, St. John's, Newfoundland
1980-82 Assistant to the Editor, Canadian Journal of Fisheries and Aquatic Sciences, Fisheries and Oceans Canada
1982-87 Assistant Professor, Department of Biology, Concordia University, Montreal, Quebec, Canada
1987-94 Associate Professor, Department of Biology, Concordia University, Montreal, Canada
1988-89 Visiting Scientist (sabbatical leave), Department of Entomology, University of California, Davis, California
1994 -2001 Professor, Department of Biology, Concordia University, Montreal, Canada
1998-2000.1 Chair, Department of Biology, Concordia University, Montreal, Canada
2001-2016 Professor, Department of Biology, University of California, Riverside, California
2016- Professor Emerita, Department of Biology, University of California, Riverside, California

AWARDS, PRIZES AND SCHOLARSHIPS

Professional honors and awards

Concordia Council on Student Life Teaching Excellence Award (1994)
Faculty of Arts & Science nominee for a Concordia University Research Award (1997)
Fellow of the American Association for the Advancement of Science (2008)

Prizes and medals

V. A. Ewing Memorial Prize in Biology (1970)
Carleton University Medal in Science (1971)

Postdoctoral fellowship

NSERC Postdoctoral Fellowship (1976-77)

Postgraduate scholarship

1967 Science and Engineering Scholarship (1971-75)

Undergraduate scholarships (1967-71)

Ontario Scholarship
Maxwell MacOdrum Scholarship
Dr. F. W. C. Mohr Scholarship
Francis C. C. Lynch Scholarship
James A. Gibson Scholarship
Soil Conservation Society of America Scholarship

PROFESSIONAL SERVICE

Editorial positions:

- Editor-in-Chief, *Evolution*, 2010 -13
- North American Editor, *Journal of Evolutionary Biology*, 2002-06
- Associate Editor, *Evolution*, 1994-96
- Associate Editor, *Ecoscience*, 1993–99
- Assistant to the Editor (handling editor), *Canadian Journal of Fisheries and Aquatic Sciences*, 1980-82

Executive positions and Committee memberships

- President-elect, President and Past-President, Society for the Study of Evolution, 2014-2016
- Member, Dryad Consortium Board, 2011-13
- Member, Council of the Society for the Study of Evolution, 2010-16
- International Affairs Committee of the Society for the Study of Evolution, 2007-9
- Executive Committee of the Canadian Council of University Biology Chairs, 1999-2000
- Chair, External Review Committee for the Department of Biology, University of Regina, Saskatchewan, 2000
- External Review Committee, Department of Zoology, University of British Columbia, 2000
- External Review Committee, Department of Biological Sciences, Simon Fraser University, British Columbia, 1999
- Secretary, Society for the Study of Evolution, 1997-99
- Chair, Theodosius Dobzhansky Prize Committee, Society for the Study of Evolution, 1997-99
- Program Organizer, Joint meeting of the Society for the Study of Evolution, American Society of Naturalists, and Society of Systematic Biologists, Vancouver, Canada, 1998

Symposia and workshops organized:

- Integrative Studies of Evolutionary Processes: Symposium sponsored by the Journal of Evolutionary Biology and the European Society for Evolutionary Biology at the annual joint meeting of the Society for the Study of Evolution, the American Society of Naturalists and the Society for Systematic Biology, Stony Brook, NY, June 2006. 8 participants.
- Evolution of Sexual Size Dimorphism: International workshop at Monte Verità, Ascona, Switzerland. Sponsored by the Association for the Study of Animal Behaviour, the Centro Stefano Franscini, the Swiss National Fund, the Swiss Academy of Natural Sciences, the Swiss Zoological Society and the Zoological Museum of the University of Zurich. Jointly organized by W. U. Blanckenhorn, D. J. Fairbairn and T. Székely. August 2005. 44 participants.
- Sexual Selection and the Evolutionary Dynamics of Primary and Secondary Sexual Traits in Insects and Spiders. Symposium at the XXII International Congress of Entomology, Brisbane, Australia, August 2004. 19 participants.

RESEARCH AND SCHOLARSHIP

Research Interests

I am an evolutionary biologist whose interests lie at the interface of organismal biology, population ecology, population genetics and behavioral ecology. The most important unifying theme of my research has been the quest to determine the adaptive significance of morphological, behavioral and life history traits at the population level. In particular, I ask to what extent adaptation is constrained by genetic architecture (i.e. lack of appropriate genetic variation) and conversely, to what extent genetic architecture is shaped by selection. To address these questions, I study characters that show dimorphic variation, where two discrete forms or morphologies exist within a given species. Dimorphic traits provide the maximum potential for revealing genetic constraints on adaptation because two different suites of traits must be produced by essentially the same genome. I have used two types of dimorphic traits: (1) sexual dimorphisms, where males and females differ markedly in both primary and secondary sexual characteristics, and (2) dispersal dimorphisms, where a fully winged, dispersive morph coexists with a sedentary morph incapable of flight.

Studies of sexual dimorphism are my primary focus and have led to the majority of my publications. My principal study organism for empirical studies of sexual dimorphism has been *Aquarius remigis*, a common and abundant, stream-dwelling insect. However, my students and I have also worked with fruitflies (*Drosophila melanogaster*), mealworms, (*Tenebrio molitor*) and orb-web spiders (*Argiope aurantia*). My current projects focus on quantitative genetic analyses of the influence of sex chromosomes and sex-specific gene regulation on sexual dimorphism in *A. remigis* (in collaboration with Derek Roff and Matthew Wolak).

My second research focus has been the adaptive significance and evolutionary genetics of dispersal dimorphisms. The cricket, *Gryllus firmus* has been the primary study organism for the genetic aspects of this work, most of which has been done in collaboration with Derek Roff. *Aquarius remigis* and other water strider species have been my primary choice for field studies.

A current area of new research combines concepts of sexual and dispersal dimorphisms. I have been collaborating with Derek Roff to simulate the coevolution of female mating preferences and male sexual traits, and based on the results of these simulations, we have designed an experimental evolution study to test predictions of mate choice theory. We are using *Gryllus firmus* as our study animal and one interesting twist to this project is that female *G. firmus* prefer the calls of short-winged males to those of long-winged (dispersive) males. Thus, in the absence of opposing natural selection, sexual selection based on male calling song alone is predicted to result in a reduction in the proportion winged in this species. Our knowledge of the quantitative genetic architecture underlying these traits, including the extensive network of genetic correlations among morphological, life history and behavioral traits, enables us to make testable predictions about how our male

and female crickets should respond to the experimental environments across generations. Once completed this work will provide a comprehensive example of the evolution of correlated suites of traits under different sexual selection regimes, as well as testing key predictions of mate choice theory.

Publications

1) Books

Fox, C. W., Roff, D. A. and D. J. Fairbairn. 2001. (eds.) *Evolutionary Ecology. Concepts and Case Studies*. Oxford University Press, New York.

Fairbairn, D. J., Blanckenhorn, W. U. and T. Szekely. 2007 (eds.) *Sex, Size and Gender Roles. Evolutionary Studies of Sexual Size Dimorphism.* Oxford University Press.

Fairbairn, D. J. 2013. Odd Couples. Extraordinary Differences between the Sexes in the Animal Kingdom. Princeton University Press, Princeton and Oxford.

2) Journal articles

Fairbairn, D. J. 1977. The spring decline in deermice: Death or dispersal? *Canadian Journal of Zoology* 55: 84-92.

Fairbairn, D. J. 1977. Why breed early? A study of reproductive tactics in *Peromyscus maniculatus*. *Canadian Journal of Zoology* 55: 862-871.

Fairbairn, D. J. 1978. Dispersal of deermice, *Peromyscus maniculatus*: Proximal causes and effects on fitness. *Oecologia* 32: 171-193.

Fairbairn, D. J. 1978. Behaviour of dispersing deermice, *Peromyscus maniculatus*. *Behavioural Ecology and Sociobiology* 3: 265-282.

Fairbairn, D. J. and D. A. Roff, 1980. Testing genetic models of isozyme variability without breeding data: Can we depend on the χ^2? *Canadian Journal of Fisheries and Aquatic Sciences* 37: 1149-1159.

Roff, D. A. and D. J. Fairbairn, 1980. An evaluation of Gulland's method for fitting the Schaefer model. *Canadian Journal of Fisheries and Aquatic Sciences* 37: 1229-1235.

Fairbairn, D. J. 1981. Biochemical genetic analysis of population differentiation in Greenland Halibut (*Reinhardtius hippoglossoides*) from the Northwest Atlantic, Gulf of St. Lawrence, and Bering Sea. *Canadian Journal of Fisheries and Aquatic Sciences* 38: 667-669.

Fairbairn, D. J. 1981. Which witch is which? A study of the stock structure of witch flounder (*Glyptocephalus cynoglossus*) in the Newfoundland region. *Canadian Journal of Fisheries and Aquatic Sciences* 38: 782-794.

Fairbairn, D. J. 1984. Microgeographic variation in body size and development time in the waterstrider, *Limnoporus notabilis*. *Oecologia* 61: 126-133.

Fairbairn, D. J. 1985. A test of the hypothesis of compensatory upstream dispersal using a stream-dwelling waterstrider, *Gerris remigis* Say. *Oecologia* 66:147-153.

Fairbairn, D. J. 1985. Comparative ecology of *Gerris remigis* (Hemiptera, Heteroptera) in two habitats: a paradox of habitat choice. *Canadian Journal of Zoology* 63:2594-2603.

Fairbairn, D. J. 1986. Does alary dimorphism imply dispersal dimorphism in the waterstrider, *Gerris remigis*? *Ecological Entomology* 11:355-368.

Fairbairn, D. J. and L. Desranleau, 1987. Flight threshold, wing muscle histolysis and alary polymorphism: Correlated traits for dispersal tendency in the Gerridae. *Ecological Entomology* 12:13-24.

Fairbairn, D. J. and J. Brassard, 1988. Dispersion and spatial orientation of *Gerris remigis* (Hemiptera, Gerridae) in response to water current. A comparison of pre- and post-diapause adults. *Physiological Entomology* 13:153-164.

Fairbairn, D. J. 1988. Adaptive significance of wing dimorphism in the absence of dispersal: a comparison of wing morphs in the waterstrider, *Gerris remigis*. *Ecological Entomology* 13:273-281.

Fairbairn, D. J. 1988. Sexual selection for homogamy in the gerridae: an extension of Ridley's comparative approach. *Evolution* 42:1212-1222.
Fairbairn, D. J. 1990. Factors influencing sexual size dimorphism in the temperate Gerrinae. *American Naturalist* 136: 61-86.
Fairbairn, D. J. and T. Butler, 1990. Correlated traits for migration in the Gerridae (Hemiptera, Heteroptera): a field test. *Ecological Entomology* 15:131-142.
Fairbairn, D. J. and D. A. Roff, 1990. Genetic correlations among traits determining migratory tendency in the sand cricket, *Gryllus firmus. Evolution* 44: 1787-1795.
Roff, D. A. and D. J. Fairbairn, 1991. Wing dimorphisms and the evolution of migratory polymorphisms among the Insecta. *American Zoologist* 31: 243-251.
Fairbairn, D. J. 1992. The origins of allometry: size and shape polymorphism in the common waterstrider, *Gerris remigis* Say. *Biological Journal of the Linnean Society* 45: 167-186.
Preziosi, R. F. and D. J. Fairbairn, 1992. Genetic population structure and levels of gene flow in the stream-dwelling waterstrider, *Aquarius (= Gerris) remigis* (Hemiptera: Gerridae). *Evolution* 46: 430-444.
Fairbairn, D. J., 1993. The costs of loading associated with mate-carrying in the waterstrider, *Aquarius remigis*. *Behavioral Ecology* 4: 224-231.
Gallant, S. L., Preziosi, R. F. and D. J. Fairbairn, 1993. Clinal variation in eastern populations of the waterstrider, *Aquarius remigis*: Gradual intergradation or discontinuity? *Evolution* 47: 957-964.
Roff, D. A. and D. J. Fairbairn, 1993. The evolution of alternate morphologies: Fitness and wing morphology in male sand crickets. *Evolution* 47:1572-1584.
Fairbairn, D. J. and R. F. Preziosi, 1994. Sexual selection and the evolution of allometry for sexual size dimorphism in the waterstrider, *Aquarius remigis*. *American Naturalist* 144:101-118.
Weigensberg, I. and D. J. Fairbairn, 1994. Conflicts of interest between the sexes: a study of mating interactions in a semiaquatic bug. *Animal Behaviour* 48:893-901.
Fairbairn, D. J. 1994. Wing dimorphism and the migratory syndrome: correlated traits for dispersal tendency in wing dimorphic insects. *Researches in Population Ecology* 36:157-163.
Brennan, J. M. and D. J. Fairbairn, 1995. Clinal variation in morphology among eastern populations of the waterstrider, *Aquarius remigis* Say (Hemiptera: Gerridae). *Biological Journal of the Linnean Society* 54:151-171.
Blanckenhorn, W. U. and D. J. Fairbairn, 1995. Life history adaptation along a latitudinal cline in the water strider, *Aquarius remigis* (Heteroptera: Gerridae). *Journal of Evolutionary Biology* 8:21-41.
Blanckenhorn, W. U., Preziosi, R. F. and D. J. Fairbairn, 1995. Time and energy constraints and the evolution of sexual size dimorphism - to eat or to mate? *Evolutionary Ecology* 9:369-381.
Weigensberg, I. and D. J. Fairbairn, 1996. The sexual arms race and phenotypic correlates of mating success in the waterstrider, *Aquarius remigis* (Hemiptera: Gerridae). *Journal of Insect Behavior* 9:307-318.
Fairbairn, D. J. and R. F. Preziosi, 1996. Sexual selection and the evolution of sexual dimorphism in the waterstrider, *Aquarius remigis*. *Evolution* 50:1549-1559.
Preziosi, R. F. and D. J. Fairbairn, 1996. Sexual size dimorphism and selection in the wild in the waterstrider *Aquarius remigis*: Body size, components of body size and male mating success. *Journal of Evolutionary Biology* 9:317-336.
Gallant, S. L. and D. J. Fairbairn, 1996. A new species of *Aquarius* from the southeastern U. S., with electrophoretic analysis of the clade containing *Gerris, Limnoporus,* and *Aquarius. Annals of the Entomological Society of America* 89: 637-644.
Preziosi, R. F., Fairbairn, D. J., Roff, D. A. and J. M. Brennan, 1996. Body size and fecundity in the waterstrider *Aquarius remigis*: A test of Darwin's fecundity advantage hypothesis. *Oecologia* 108: 424-431.
Reeve, J. P. and D. J. Fairbairn, 1996. Sexual size dimorphism as a correlated response to selection on body size: An empirical test of the quantitative genetic model. *Evolution* 50: 1927-1938.
Fairbairn, D. J. 1997. Allometry for sexual size dimorphism: Pattern and process in the coevolution of body size in males and females. *Annual Review of Ecology and Systematics* 28: 659-687.

Abouheif, E. and D. J. Fairbairn, 1997. A comparative analysis of allometry for sexual dimorphism: Assessing Rensch's Rule. *American Naturalist* 149:540-562.

Gallant, S. L. and D. J. Fairbairn, 1997. Patterns of postmating reproductive isolation in a newly-discovered species pair, *Aquarius remigis* and *A. remigoides* (Hemiptera; Gerridae). *Heredity* 78:571-577.

Preziosi, F. P. and D. J. Fairbairn, 1997. Sexual size dimorphism and selection in the wild in the waterstrider *Aquarius remigis*: lifetime fecundity selection on female total length and its components. *Evolution* 51:467-474.

Fairbairn, D. J. and D. E. Yadlowski, 1997. Coevolution of traits determining migratory tendency: correlated response of a critical enzyme, juvenile hormone esterase, to selection on wing morphology. *Journal of Evolutionary Biology* 10: 495-513.

Roff, D. A., Stirling, G. and D. J. Fairbairn, 1997. The evolution of threshold traits: A quantitative genetic analysis of the physiological and life history correlates of wing dimorphism in the sand cricket. *Evolution* 51: 1910-1919.

Blanckenhorn, W. U., Grant, J. W. A. and D. J. Fairbairn, 1998. Monopolization in a resource queue: water striders competing for food and mates. *Behavioral Ecology and Sociobiology* 42: 63-70.

Roff, D. A., J. Tucker, G. Stirling, and D. J. Fairbairn, 1999. The evolution of threshold traits: effects of selection on fecundity and correlated response in wing dimorphism in the sand cricket. *Journal of Evolutionary Biology* 12: 535-546.

Stirling, G., D. A. Roff, and D. J. Fairbairn. 1999. Four characters in a trade-off: Dissecting their phenotypic and genetic relations. *Oecologia* 120: 492-498.

Roff, D. A. and D. J. Fairbairn. 1999. Predicting correlated responses in natural populations: changes in JHE activity in the Bermuda population of the sand cricket. *Heredity* 83: 440-450.

Fairbairn, D. J. and D. A. Roff. 1999. The endocrine genetics of wing polymorphism in *Gryllus*. A response to Zera. *Evolution* 53:977-9.

Reeve, J. P. and D. J. Fairbairn, 1999. Change in sexual size dimorphism as a correlated response to selection on fecundity. *Heredity* 83: 697-706.

Preziosi, R. F. and D. J. Fairbairn. 2000. Lifetime selection on adult body size and components of body size in a waterstrider: opposing selection and maintenance of sexual size dimorphism. *Evolution* 54: 558-566.

Ferguson, I. M. and D. J. Fairbairn. 2000. Sex-specific selection and sexual size dimorphism in the waterstrider *Aquarius remigis. Journal of Evolutionary Biology* 13: 160-170.

Ferguson, I. M. and D. J. Fairbairn. 2001. Is selection ready when opportunity knocks? *Evolutionary Ecology Research* 3: 199-207.

Stirling, G., D. J. Fairbairn, S. Jensen and D. A. Roff. 2001. Does a negative genetic correlation between wing morph and early fecundity imply a functional constraint in *Gryllus firmus*? *Evolutionary Ecology Research* 3: 157-177.

Reeve, J. P. and D. J. Fairbairn. 2001. Predicting the evolution of sexual size dimorphism. *Journal of Evolutionary Biology* 14: 244-254. doi: 10.1046/j.1420-9101.2001.00276.x

Ferguson, I. M. and D. J. Fairbairn. 2001. Estimating genetic correlations from measurements of field-caught waterstriders. *Evolution* 55: 2126-2130.

Fairbairn, D. J. and A. E. Wilby. 2001. Inequality of opportunity: measuring the potential for sexual selection. *Evolutionary Ecology Research* 3: 667-686.

Campbell, V. and D. J. Fairbairn. 2001. Prolonged copulation and the internal dynamics of sperm transfer in the water strider, *Aquarius remigis*. *Canadian Journal of Zoology* 79: 1801-1812.

Roff, D. A., Mostowy S. and D. J. Fairbairn. 2002. The evolution of trade-offs: Testing predictions on response to selection and environmental variation. *Evolution* 56: 84-95.

Vermette, R. and D. J. Fairbairn. 2002. How well do mating frequency and duration predict paternity success in the polygynandrous water strider, *Aquarius remigis*. *Evolution* 56: 1808-1820.

Fairbairn, D. J., Vermette, R., Kapoor, N. N. and N. Zahiri. 2003. Functional significance of sexually selected genitalia in the water strider, *Aquarius remigis*. *Canadian Journal of Zoology* 81: 400-413.

Roff, D. A., Crnokrak, P. and D. J. Fairbairn. 2003. The evolution of trade-offs: geographic variation in call duration in the sand cricket, *Gryllus firmus*. *Journal of Evolutionary Biology* 16: 744-753. doi:10.1046/j.1420-9101.2003.00570.x

Foellmer, M. W. and D. J. Fairbairn. 2003. Spontaneous male death during copulation in an orb-weaving spider. *Proceedings of the Royal Society London B* (Suppl.) 270:S183-S185.

Foellmer, M. W. and D. J. Fairbairn. 2004. Males under attack: Sexual cannibalism and its consequences for male morphology and behavior in an orb-weaving spider. *Evolutionary Ecology Research* 6:163-181.

Foellmer, M. W. and D. J. Fairbairn. 2005. Selection on male size, leg length and condition during mate search in a sexually highly dimorphic orb-weaving spider. *Oecologia* 142:653-662.

Foellmer, M. W. and D. J. Fairbairn. 2005. Competing dwarf males: sexual selection in an orb-weaving spider. *Journal of Evolutionary Biology* 18: 629-641.

Fairbairn, D. J. 2005. Allometry for sexual size dimorphism: Testing two hypotheses for Rensch's rule in the water strider, *Aquarius remigis. American Naturalist* 166: S69-S84. DOI: 10.1086/444600

Bertin, A. and D. J. Fairbairn. 2005. One tool, many uses: precopulatory sexual selection on genital morphology in *Aquarius remigis*. *Journal of Evolutionary Biology* 18:949-962.

Fairbairn, D. J. and D. A. Roff. 2006. The quantitative genetics of sexual dimorphism: assessing the importance of sex-linkage. *Heredity* 97: 319-328. (Selected for a *Heredity* podcast interview.)

Blanckenhorn, W. U., Dixon, A. F., Fairbairn, D. J., Foellmer, M. W., Gibert, P., van der Linde, K., Meier, R., Pitnick, S., Schoff, C., Signorelli, M., Teder, T. and C. Wiklund. 2007. Proximate causes of Rensch's rule: Does sexual size dimorphism in arthropods result from sex differences in development time? *American Naturalist* 169: 245-257.

Bertin, A. and D. J. Fairbairn. 2007. The form of sexual selection on male genitalia cannot be inferred from within-population variance and allometry. A case study in *Aquarius remigis*. *Evolution* 61: 825-837.

Roff, D. A. and D. J. Fairbairn. 2007a. The evolution and genetics of migration in insects. *Bioscience* 57:155-164.

Roff, D. A. and D. J. Fairbairn. 2007b. The evolution of trade-offs: where are we? *Journal of Evolutionary Biology* 20:433-447.

Roff, D. A. and D. J. Fairbairn. 2007c. Laboratory evolution of the migratory polymorphism in the sand cricket: combining physiology and quantitative genetics. *Physiological and Biochemical Zoology* 80: 358–369

Nespolo, R. F., Roff, D. A. and D. J. Fairbairn. 2008. Energetic trade-off between maintenance costs and flight capacity in the sand cricket (*Gryllus firmus*). *Functional Ecology* 22: 624-631. doi: 10.111/j.1365-2435.2008.01394.x

Saglam, I., Roff, D. A. and D. J. Fairbairn. 2008. The phenotypic and genetic basis of the trade-off between flight capability and reproductive investment in males of the cricket *Gryllus firmus. Journal of Evolutionary Biology* 21: 997-1004. doi: 10.111/j.1420-9101.2008.01548.x

Fairbairn, D. J. and E. King. 2009. Why do Californian striders fly? *Journal of Evolutionary Biology* 22: 36–49. doi:10.1111/j.1420-9101.2008.01619.x

Miyata, H., Noda, N., Fairbairn, D. J., Oldenbourg, R. and R. A. Cardullo. 2011. Assembly of the fluorescent acrosomal matrix and its fate in fertilization in the water strider, *Aquarius remigis*. *Journal of Cellular Physiology* 226: 999-1006. DOI: 10.1002/jcp.22413.

(Choosen as a journal highlight and cover photo.)

King, E. G., Roff, D. A. and D. J. Fairbairn. 2011. Trade-off acquisition and allocation in *Gryllus firmus*: A test of the Y-model. *Journal of Evolutionary Biology* 24: 256-264. DOI: 10.1111/j.1420-9101.2010.02160.x. (Selected by the Faculty of 1000: http//f1000/7845956)

King, E. G., Roff, D. A. and D. J. Fairbairn. 2011. The evolutionary genetics of acquisition and allocation in the wing dimorphic cricket, *Gryllus firmus*. *Evolution* 65: 2273-2285. DOI: 10.1111/j.1558-5646.2011.01296.x

Roff, D. A. and D. J. Fairbairn. 2011. Path analysis of the genetic integration of traits in the sand cricket: a novel use of BLUPS. *Journal of Evolutionary Biology* 24: 1857–1869, DOI: 10.1111/j.1420-9101.2011.02315.x

Cueva del Castillo, R. and Fairbairn, D. J. 2011. Macro evolutionary patterns of bumblebee body size: Detecting the interplay between natural and sexual selection. *Ecology and Evolution*, published online 24 November 2011. DOI: 10.1002/ece3.65

Wolak, M. E., Fairbairn, D. J. and Y. R. Paulsen. 2012. Guidelines for estimating repeatability. *Methods in Ecology and Evolution* 3: 129–137. DOI: 10.1111/j.2041-210X.2011.00125.x

Arendt, J. and Fairbairn, D. J. 2012. Reproductive allometry does not explain the temperature-size rule in water striders (*Aquarius remigis*). *Evolutionary Ecology* 26:745-757 (published online September 10, 2011) DOI 10.1007/s10682-011-9524-4

Roff, D. A. and D. J. Fairbairn, 2012. The evolution of trade-offs under directional and correlational selection. *Evolution* 66:2461-2474. DOI: 10.1111/j.1558-5646.2012.01634.x

Roff , D. A. and D. J. Fairbairn, 2012. A test of the hypothesis that correlational selection generates genetic correlations. *Evolution* 66: 2953-2969. DOI: 10.1111/j.1558-5646.2012.01656.x

King, E. G., Fairbairn, D. J. and D. A. Roff. 2012. Extracting the underlying physiological determinants of resource based trade-offs: a principal components approach. *American Naturalist* 180:394-402 Article Stable URL: http://www.jstor.org/stable/10.1086/667194

Roff, D. A. and D. J. Fairbairn. 2013. The costs of being dark: the genetic basis of melanism and its association with fitness-related traits in the sand cricket. *Journal of Evolutionary Biology* 26: 1406-16. DOI: 10.1111/jeb.12150.

Roff, D. A. and D. J. Fairbairn. 2014. The Evolution of Phenotypes and Genetic Parameters under Preferential Mating. *Ecology and Evolution*, 4:2759-76. http://onlinelibrary.wiley.com/doi/10.1002/ece3.1130/full

Wolak, M. E., Roff, D. A. and Fairbairn, D. J. 2015. Are we underestimating the genetic variances of dimorphic traits? *Ecology and Evolution* 5(3): 590-597. doi: 10.1002/ece3.1361

Roff, D. A. and D. J. Fairbairn. 2015. Bias in the heritability of preference and its potential impact on the evolution of mate choice. *Heredity* 114: 404-412 doi:10.1038/hdy.2014.117.

Fairbairn, D. J., Kiseliova, O. and Muir, S. 2016. Variation in chromosome numbers and the sex determination system in the Gerromorpha with special reference to the family Gerridae. *Aquatic Insects* published online May 16. http://dx.doi.org/10.1080/01650424.2016.1167222

Medina, R. G., Fairbairn, D. J., Bustillos, A., Montejo, E., Medina, S. and Quezada-Euán, J. J. 2016. Comparative patterns of intraspecific sexual size dimorphism and allometry in primitive and highly eusocial corbiculate bees (Hymenoptera: Apidae). *Insectes Sociaux,* published online June 2016: doi 10.1007/s00040-016-0491-1

3) Publicly archived data sets

King EG, Roff DA, Fairbairn DJ (2011) Data from: The evolutionary genetics of acquisition and allocation in the wing dimorphic cricket, *Gryllus firmus*. Evolution doi:10.5061/dryad.8727

Roff DA, Fairbairn DJ (2012) Data from: The evolution of trade-offs under directional and correlational selection. Evolution doi:10.5061/dryad.362kt4r5

Roff DA, Fairbairn DJ (2012) Data from: A test of the hypothesis that correlational selection generates genetic correlations. Evolution doi:10.5061/dryad.rc071b2v

Fairbairn, D. J. (2013) Data from: *Odd couples. Extraordinary differences between the sexes in the animal kingdom*. Princeton New Jersey: Princeton University Press. Dryad Digital Repository. http://dx.doi.org/10.5061/dryad.n48cm

Roff, D. A. and D. J. Fairbairn (2013) Data from: The costs of being dark: the genetic basis of melanism and its association with fitness-related traits in the sand cricket. Dryad Digital Repository. doi:10.5061/dryad.7j68

4) Book chapters

Roff, D. A. and D. J. Fairbairn. 2001. The genetic basis of migration and its consequences for the evolution of correlated traits. Pp. 191-202 in C. Clobert, J. Nichols, J. D. Danchin and A. Dhondt (eds.), *Causes, Consequences and Mechanisms of Dispersal at the Individual, Population and Community Level.* Oxford University Press, Oxford UK.

Fairbairn, D. J. and J. P. Reeve. 2001. Natural selection. Measuring selection in natural populations. Chpt. 2 in C. Fox, D. A. Roff and D. J. Fairbairn (eds.), *Evolutionary Ecology: Concepts and Case Studies.* Oxford University Press, NY.

Fairbairn, D. J. 2007. Introduction: The Enigma of Sexual Size Dimorphism, Chpt. 1 in Fairbairn, D. J., Blanckenhorn, W. U. and T. Szekely. 2007 (eds.) *Sex, Size and Gender Roles. Evolutionary Studies of Sexual Size Dimorphism.* Oxford University Press, UK.

Fairbairn, D. J. 2007. Sexual Dimorphism in Water Striders: A Case Study of Adaptation in Response to Sexually Antagonistic Selection, Chpt 9 in Fairbairn, D. J., Blanckenhorn, W. U. and T. Szekely. 2007 (eds.) *Sex, Size and Gender Roles. Evolutionary Studies of Sexual Size Dimorphism*. Oxford University Press, UK.

Roff, D. A. and D. J. Fairbairn. 2010. Modeling experimental evolution using individual-based variance-components models. Pp. 31 – 63 in T. Garland, Jr., and M. R. Rose (eds.) *Experimental Evolution: Concepts, Methods, and Applications of Selection Experiments,* University of California Press, Berkeley, California.

5) Encyclopedia article:

Fairbairn, D. J. 2016. Sexual Dimorphism. In: Kliman, R. M. (ed.), *Encyclopedia of Evolutionary Biology.* Vol. 4, pp. 105-113. Oxford: Academic Press.

6) Book box:

Fairbairn, D. J. 2006. Defining and measuring fitness. Box .4.1, pp. 52 -54, in Fox, C. W. and J. B. Wolf (eds.) *Evolutionary Genetics. Concepts and Case Studies*. Oxford University Press, NY.

7) Editorial

Fairbairn, D. J. 2011. The advent of mandatory data archiving. *Evolution* 65:1-2. DOI: 10.1111/j.1558-5646.2010.01182x

8) Book reviews

Fairbairn, D. J., 1987. Insect life cycles as models in evolutionary ecology. A review of Taylor, F. and Karban, R. 1986. *The Evolution of Insect Life Cycles*. Springer-Verlag, N.Y. *Ecology* 68:2068-2069.

Blanckenhorn, W. U. Craig, D. G. and D. J. Fairbairn, 1993. More than meets the eye. A review of Peters, R. H. 1991. *A Critique for Ecology*. Cambridge University Press, Cambridge, England, *Evolution* 47:1890-1892.

Fairbairn, D. J., 1995. Review of *The Sex Imperative, An Evolutionary Tale of Sexual Survival* by Kenneth Maxwell. Quarterly Review of Biology 70:64-65.

Fairbairn, D. J. 1998. Review of Futuyma, D. J., *Evolutionary Biology*, 3rd ed. (1997) *Quarterly Review of Biology* 73: 503 – 504.

Fairbairn, D. J. 2006. When opposites don't attract. A review of Ruckstuhl, K. and Neuhaus, P. 2006. *Sexual Segregation in Vertebrates*. Cambridge University Press, Cambridge, UK. *Trends in Ecology and Evolution* 21(11): 600-601.

9) Articles in the popular press

Fairbairn, Daphne: Big Females Rule in the Animal Kingdom. Huffington Post Science, April 29, 2013. http://www.huffingtonpost.com/daphne-fairbairn/animal-female-size_b_3177995.html

Fairbairn, Daphne: Opposites Attract. BBC Focus Magazine, June 2013, p. 73.

Fairbairn, Daphne: Why do male seahorses have babies? *In Does My Goldfish Know Who I Am? Big Questions from Little People.* Faber & Faber, 2013.

Fairbairn, Daphne: Diminutive Dads of the Animal Kingdom. Wall Street Journal, US Edition, June 15, 2013, page C3, and WSJ.com US Edition, June 14, 2013.

Presentations

1) Public lectures

The Evolution and Adaptive Significance of Sexual Size Dimorphism: Insights from the Water Surface. Evolutionary Biology Seminar Series, Royal Ontario Museum, Toronto, Ontario, Canada. February, 1995.

Sexual Dimorphism in the Animal Kingdom. San Bernardino County Museum, San Bernardino, California. March, 2008.

Odd Couples. Extraordinary Differences between the Sexes in the Animal Kingdom. The Skeptics Society Distinguished Science Lecture Series at Caltech. California Institute of Technology, Pasadena. May 2013.

2) Invited symposium talks and plenary lectures:

Fairbairn, D. J., 1988. Correlated traits for dispersal tendency in the Gerridae. XIII International Congress of Entomology, Vancouver, B.C.

Roff, D. A. and D. J. Fairbairn, 1988. Migratory Polymorphisms among the Insecta. Annual Meeting of the American Society of Zoologists. San Francisco, CA.

Fairbairn, D. J., 1994. Wing dimorphism and the migratory syndrome: correlated traits for dispersal tendency in wing dimorphic insects. 100th Saturday Seminar for Entomology, Okayama University, Japan.

Fairbairn, D. J. and S. L. Gallant, 1996. A newly-described, large and abundant water strider from the southeastern United States. XX International Congress of Entomology, Florence, Italy.

Fairbairn, D. J. and D. A. Roff, 1999. Predicting correlated responses in natural populations: changes in JHE activity, fecundity and calling rate in the Bermuda population of the sand cricket. VII Congress of the European Society for Evolutionary Biology. Barcelona, Spain.

Fairbairn, D. J. 2003. Genitalia as reproductive multitools: sexual selection, sexual conflict and genitalic evolution in water striders. Joint meeting of the Society for the Study of Evolution, Society for Systematic Biologists, and American Society of Naturalists, California State University, Chico.

Fairbairn, D. J. 2003. Integrating gerrid behaviour, morphology and life history. Annual meeting of the Animal Behavior Society, Boise State University.

Fairbairn, D. J. 2004. The coevolution of body size in males and females: Rensch's rule revisited. ASN Vice President's Symposium, Joint meeting of the Society for the Study of Evolution, Society for Systematic Biologists, and American Society of Naturalists, Fort Collins, CO.

Fairbairn, D. J. and A. Bertin, 2004. Sexual selection shapes genital morphology in a water strider: blurring the distinction between primary and secondary sexual traits. XXII International Congress of Entomology, Brisbane, Australia.

Fairbairn, D. J. 2005. Sexual dimorphism in water striders: A case study of adaptation in response to sexually antagonistic selection. Spring Research Symposium, University of Kentucky Center for Ecology, Evolution and Behavior, Lexington, Kentucky (*Keynote address*)

Fairbairn, D. J. 2005. Allometry in water strider genitalia. Annual meeting of the Entomological Society of America, Fort Lauderdale, FA

Fairbairn, D. J. 2005. An overview of sexual size dimorphism. International workshop on the evolution of sexual size dimorphism, Centro Stefano, Monte Verita, Switzerland.

Fairbairn, D. J. 2005. Sexual dimorphism in water striders: A case study of adaptation in response to sexually antagonistic selection. International workshop on the evolution of sexual size dimorphism, Centro Stefano, Monte Verita, Switzerland.

Roff, D. A, and D. J. Fairbairn. 2007. A quantitative genetic approach to understanding human-induced changes in fish life histories. Six decades of fishery genetics: A retrospective view and vision for the future. Symposium sponsored by NOAA's Northwest Fisheries Science Center, School of Aquatic Sciences, University of Washington. Seattle, Washington

Fairbairn, D. J. 2014. And Ever the Twain Shall Meet: An Exposé of Sexual Differences in the Animal Kingdom. Plenary Lecture, Annual meeting of the American Association for the Advancement of Science, Pacific Division, University of California, Riverside, June 17, 2014.

Fairbairn, D. J. 2015. On the Shoulders of Giants. Seven decades of the SSE and *Evolution.* Presidential address at Evolution 2015, the Annual joint meeting of the Society for the Study of Evolution, American Society of Naturalists and Society for Systematic Biology. Guarujá, Brazil, June 2015.

Fairbairn, D. J. 2015. How important are sex-linkage and non-additive genetic variation in the variance structure of sexually dimorphic traits? Biannual meeting of the European Society for Evolutionary Biology, Lausanne, Switzerland, August 2015.

3) Contributed conference talks:

Fairbairn, D. J., 1979. Testing genetic models without breeding data: the power of the χ^2. Amer. Fisheries Soc., Orono, Maine.

Fairbairn, D. J., 1984. Microgeographic variation in the population ecology of a stream-dwelling gerrid. XVII International Congress of Entomology, Hamburg, West Germany.

Fairbairn, D. J. and L. Desranleau, 1986. Flight thresholds and dispersal characteristics of four species of waterstriders (Hemiptera; Gerridae). IV International Congress of Ecology, Syracuse, N.Y.

Fairbairn, D. J., 1987. Factors influencing sexual size ratio in the Gerridae. Entomological Soc. Amer., Boston, Mass.

Fairbairn, D. J., 1988. Factors influencing sexual size dimorphism in temperate waterstriders. 2nd International Behavioral Ecology Conference. Vancouver, B.C.

Fairbairn, D. J., 1989. Reproductive tactics and sexual size dimorphism in temperate waterstriders (Heteroptera, Gerridae). XIV^{e} Congress de la Société Québécoise pour l'Etude Biologique du Comportement. Duschesnay , Québec.

Fairbairn, D. J. and D. A. Roff, 1990. Genetic correlations among traits determining migratory tendency in the sand cricket, *Gryllus firmus*. Fourth International Congress of Systematic and Evolutionary Biology. University of Maryland, College Park.

Roff, D. A. and D. J. Fairbairn, 1990. Fitness differences between macropterous and micropterous crickets: antagonistic pleiotropy or selective neutrality? Fourth International Congress of Systematic and Evolutionary Biology. University of Maryland, College Park.

Preziosi, R. F. and D. J. Fairbairn, 1990. Genetic population structure of *Gerris remigis*. Fourth International Congress of Systematic and Evolutionary Biology. U Maryland, College Park.

Fairbairn, D. J. and D. A. Roff, 1990. Genetic correlations among traits determining migratory tendency in the sand cricket, *Gryllus firmus*. XVe Congress de la Société Québecoise pour l'Etude Biologique du Comportement, University of Sherbrooke.

Fairbairn, D. J., 1991. The origins of allometry: Size and shape polymorphism in a temperate waterstrider. Joint meeting of the America Society of Naturalists and the Society for the Study of Evolution, Hilo, Hawaii.

Fairbairn, D. J., 1991. Mate-carrying and sexual size dimorphism in waterstriders (Gerridae). XVIe Congress de la Société Québecoise pour l'Etude Biologique du Comportement, Concordia University, Montreal.

Fairbairn, D. J., 1991. Mate-carrying and sexual size dimorphism in waterstriders (Gerridae). Annual Meeting of the Entomological Society of Canada, Montreal.

Gallant, S. L., Preziosi, R. F. and D. J. Fairbairn, 1992. Discovery of a restricted hybrid zone within a waterstrider species complex. Evidence of secondary intergradation? Joint meeting, American Society of Naturalists, Society of Systematic Biologists, and Society for the Study of Evolution, Berkeley, CA.

Fairbairn, D. J. and R. F. Preziosi, 1992. Sexual selection and the evolution of allometry for sexual size dimorphism: Hypothesis and test. Joint meeting of the American Society of Naturalists, The Society of Systematic Biologists, and the Society for the Study of Evolution, Berkeley, CA.

Fairbairn, D. J., 1992. Field assessments of sexual selection in a semiaquatic bug. XVIIe Congress de la Société Québecoise pour l'Etude Biologique du Comportement, Concordia University, Montreal.

Fairbairn, D. J., 1993. Speciation within the waterstrider genus *Aquarius*: Concordance between morphological and allozyme variation across a hybrid zone. Fourth Congress of the European Society for Evolutionary Biology, Montpellier, France.

Fairbairn, D. J. and D. Yadlowski, 1994. Do threshold traits evolve through shifts in the threshold or through changes in the underlying distribution: a case study of wing dimorphism in the sand cricket, *Gryllus firmus*. Joint meeting of the American Society of Naturalists, the Society for the Study of Evolution, the Society for Molecular Biology and Evolution, and the Society of Systematic Biologists, Athens, Georgia.

Fairbairn, D. J. and R. F. Preziosi, 1995. Sexual selection and the evolution of body size in a water strider: The interaction of selection and constraint. Annual meeting of the Society of Systematic Biologists, the Society for the Study of Evolution, the American Society of Naturalists, and the Numerical Taxonomy Group, McGill University, Montreal, Canada.

Preziosi, R. F. and D. J. Fairbairn, 1995. Sexual selection on body size and components of body size in male water striders. Annual meeting of the Society of Systematic Biologists, the Society for the Study of Evolution, the American Society of Naturalists, and the Numerical Taxonomy Group, McGill University, Montreal, Canada.

Abouheif, E. and D. J. Fairbairn, 1995. A comparative analysis of the allometry for sexual size dimorphism: testing Rensch's hypothesis. Annual meeting of the Society of Systematic Biologists, the Society for the Study of Evolution, the American Society of Naturalists, and the Numerical Taxonomy Group, McGill University, Montreal, Canada.

Reeve, J. and D. J. Fairbairn, 1995. Sexual size dimorphism as a correlated response to selection on body size: A test of quantitative genetic theory. Annual meeting of the Society of Systematic Biologists, the Society for the Study of Evolution, the American Society of Naturalists, and the Numerical Taxonomy Group, McGill University, Montreal, Canada.

Preziosi, R. F. and D. J. Fairbairn, 1996. Sexual size dimorphism and lifetime selection on adult body size in a natural population of the water strider, *Aquarius remigis*. Joint meeting of the Society for the Study of Evolution and the Society of Systematic Biologists, St. Louis, MO, USA.

Abouheif, E., Reeve, J. and D. J. Fairbairn, 1996. Testing assumptions in comparative biology. Joint meeting, Society for the Study of Evolution and Society of Systematic Biologists, St. Louis, MO

Fairbairn, D. J., 1996. The evolution of allometry for sexual size dimorphism: an example of constraint? Joint meeting, Society for the Study of Evolution and Society of Systematic Biologists, St. Louis, MO

Fairbairn, D. J., 1996. Field assessments of sexual selection as a determinant of male phenotype in the water strider, *Aquarius remigis.* 6th International Behavioral Ecology Congress, Canberra.

Fairbairn, D. J., Preziosi, R. F. and J. Reeve, 1997. The evolution and adaptive significance of sexual size dimorphism in the water strider, *Aquarius remigis*. Joint meeting, Society for the Study of Evolution, Society of Systematic Biologists and American Society of Naturalists, Boulder, CO

Roff, D., Stirling, G., and D. J. Fairbairn, 1997. The evolution of threshold traits: a quantitative genetic analysis of the physiological and life history correlates of wing dimorphism. Joint meeting, Society for the Study of Evolution, Society of Systematic Biologists and American Society of Naturalists, Boulder, CO.

Stirling, G., Roff, D. and D. J. Fairbairn, 1997. Partitioning a fitness trade-off: genetic and physiological components. Joint meeting, Society for the Study of Evolution, Society of Systematic Biologists, and American Society of Naturalists, Boulder, CO.

Reeve, J. P. and D. J. Fairbairn, 1998. No response despite selection and genetic variance; a natural consequence of long-term directional selection. Annual meeting, Society for the Study of Evolution, American Society of Naturalists and Society of Systematic Biologists, Vancouver, Canada

Roff, D. A. and D. J. Fairbairn, 1999. Predicting correlated responses in natural populations: changes in JHE activity in a Bermuda population of the sand cricket. Annual meeting of the Society for the Study of Evolution, the American Society of Naturalists, and the Society of Systematic Biologists, Madison WI

Fairbairn, D. J. and J. P. Reeve, 2000. Genetic architecture of sexually dimorphic traits in the waterstrider, *Aquarius remigis*. Annual meeting, Society for the Study of Evolution, American Society of Naturalists, and Society of Systematic Biologists, Bloomington, IN.

Reeve, J. P. and D. J. Fairbairn, 2000. Predicting the evolution of sexual size dimorphism. Annual meeting, Society for the Study of Evolution, American Society of Naturalists and Society of Systematic Biologists, Bloomington, IN.

Fairbairn, D. J. and A. Wilby, 2000. Predicting the opportunity for sexual selection: an experimental evaluation of the effects of OSR and density. Annual meeting, Society for the Study of Evolution, American Society of Naturalists, and Society of Systematic Biologists, Bloomington, IN.

Vermette, R. and D. J. Fairbairn, 2000. Analysis of the relationship between mating success and fertilization success in the waterstrider, *Aquarius remigis.* Annual meeting, Society for the Study of Evolution, American Society of Naturalists, and Society of Systematic Biologists, Bloomington, IN.

Foellmer, M. and D. J. Fairbairn. 2002. Sexual selection favors large size in dwarf males in an orb-weaving spider. Annual meeting, Society for the Study of Evolution and Society of Systematic Biologists, University of Illinois, Urbana-Champaign.

Fairbairn, D. J. 2002. Going along for the ride: the adaptive significance of prolonged copulation in a water strider. Annual meeting, Society for the Study of Evolution and Society of Systematic Biologists, University of Illinois, Urbana-Champaign.

Foellmer, M. and D. J. Fairbairn. 2002. Males under attack: sexual cannibalism leads to selection for extremely short copulation duration while male body size is neutral in an orb-weaving spider, *Argiope aurantia.* International Behavioral Ecology Congress, Montreal, Quebec.

Fairbairn, D. J. and A. Wilby. 2002. Estimating the potential for selection. What is the appropriate index? Annual meeting, American Society of Naturalists, Banff, Alberta.

Fairbairn, D. J. 2003. Deducing the adaptive significance of divergent genitalic and somatic sexual size dimorphism in a water strider. 9th Congress, European Society for Evolutionary Biology, Leeds, UK.

Fairbairn, D. J. 2007. Laboratory evolution of trade-offs 1: Testing predictions from quantitative genetics on the loss of dispersal capacity. Western Evolutionary Biology Meeting, UC Irvine.

Fairbairn, D. J. and D. A. Roff. 2007. Laboratory evolution of trade-offs 1: Testing predictions from quantitative genetics on the loss of dispersal capacity. 10th Congress, European Society for Evolutionary Biology, Uppsala, Sweden.

Roff, D. A. and D. J. Fairbairn. 2007. Laboratory evolution of trade-offs 2: Combining quantitative genetics with functional constraints to predict changes in dispersal ability. 10th Congress, European Society for Evolutionary Biology, Uppsala, Sweden.

Fairbairn, D. J. and A. Bertin. 2007. Sexual selection and allometry: Process does not predict pattern in a water strider. 10th Congress, European Society for Evolutionary Biology, Uppsala, Sweden.

Roff, D. A. and D. J. Fairbairn. 2008. Selection on the integrated phenotype: Responses in migratory traits of *Gryllus firmus.* XXIII International Congress of Entomology, Durban, South Africa.

Roff, D. A. and D. J. Fairbairn. 2010. The evolution of trade-offs: Testing a fundamental prediction of quantitative genetics. Annual meeting, Society for the Study of Evolution, American Society of Naturalists, and Society of Systematic Biologists, Portland, Oregon.

King, E. G., Roff, D. A. and D. J. Fairbairn. 2010. The genetics of phenotypic plasticity in resource acquisition and allocation in the wing dimorphic cricket *Gryllus firmus*. Annual meeting, Society for the Study of Evolution, American Society of Naturalists, and Society of Systematic Biologists, Portland, Oregon.

Wolak, M. E., Paulsen, Y. R. and D. J. Fairbairn. 2010. Rules of thumb for estimating repeatability. Western Evolutionary Biology meeting, University of California, Irvine.

Arendt, J. and D. J. Fairbairn. 2011. A test of the size-fecundity model for the temperature-size rule using water striders. Annual meeting, Society for the Study of Evolution, American Society of Naturalists, and Society of Systematic Biologists, Norman, Oklahoma.

Roff, D. A. and D. J. Fairbairn. 2011. Path analysis of the genetic integration of traits in a sex-specific trade-off: a novel use of BLUPS. Annual meeting, Society for the Study of Evolution, American Society of Naturalists, and Society of Systematic Biologists, Norman, Oklahoma.

Wolak, M. E. and D. J. Fairbairn. 2011. Quantifying the genetic architecture of sexually dimorphic traits from population line crosses of the water strider, *Aquarius remigis*. Annual meeting, Society for the Study of Evolution, American Society of Naturalists, and Society of Systematic Biologists, Norman, Oklahoma.

Wolak, M.E., A.J. Wilson, L.E.B. Kruuk, D.A. Roff, & D.J. Fairbairn. 2012. X-linked Additive Variance Reduces the Between-Sex Genetic Correlation. Oral Presentation, 1st Joint Congress on Evolutionary Biology, Ottawa, Canada.

Roff, D. A. and D. J. Fairbairn. 2013. High genetic correlations between preference and preferred traits cannot be generated by mate choice alone. Annual meeting, Society for the Study of Evolution, American Society of Naturalists, and Society of Systematic Biologists, Snowbird, Utah.

Roff, D. A. and D. J. Fairbairn. 2014. The effect of sampling bias on the heritability of preference and the strength of sexual selection. Annual meeting, Society for the Study of Evolution, American Society of Naturalists, and Society of Systematic Biologists, Raleigh, North Carolina.

Roff, D. A. and D. J. Fairbairn. 2015. Is Fisher's runaway selection likely to occur? Annual meeting, Society for the Study of Evolution, American Society of Naturalists, and Society of Systematic Biologists, Guaruja, Brazil, June 2015

Kiseliova, O., Fairbairn, D. J., Toderas, I. and V. Derjanschi. 2015. Holocentric chromosomes and their application for the systematics and phylogeny of Heteroptera. Xth International Congress of Geneticists and Breeders, Scientific Association of Geneticists and Breeders of the Republic of moldova, Chistinau, Republic of Moldova, June 2015.

Roff, D. A. and D. J. Fairbairn. 2015. Bias in the heritability of preference and its potential impact on the evolution of mate choice. Biannual meeting if the European Society for Evolutionary Biology, Lausanne, Switzerland, August 2015

Roff, D. A. and D. J. Fairbairn. 2015. A new method for detecting directional and stabilizing mate preference. Annual meeting, Society for the Study of Evolution, American Society of Naturalists, and Society of Systematic Biologists, Austin Texas, June 2016

4) Contributed conference posters

Gentile, G. and D. J. Fairbairn, 1998. Daily patterns of oviposition mediate sexual conflict in a polygynandrous mating system. Annual meeting, Society for the Study of Evolution, American Society of Naturalists, and Society of Systematic Biologists, Vancouver, Canada.

Tucker, J. R. and D. J. Fairbairn, 1998. Selection on early fecundity produces a correlated response in migratory ability in the sand cricket, *Gryllus firmus*. Annual meeting, Society for the Study of Evolution, American Society of Naturalists, and Society of Systematic Biologists, Vancouver, Canada.

Foellmer, M. and D. J. Fairbairn. 2004. Sexual dimorphism and sexual selection in a highly dimorphic orb-weaving spider. XXII International Congress of Entomology, Brisbane.

Fairbairn, D. J. 2005. Sex-specific patterns of adaptive trait canalization cause Rensch's rule in *Aquarius remigis*. International workshop on the evolution of sexual size dimorphism, Monte Verità, Ascona, Switzerland.

Fairbairn, D. J. and E. King. 2008. Why do striders fly? Explaining wing dimorphism in Californian *Aquarius remigis.* XXIII International Congress of Entomology, Durban, South Africa.

Wolak, M. E., Paulsen, Y. R. and D. J. Fairbairn. 2010. Is there a rule of thumb for estimating repeatability? The effect of variance structure, number of measurements per individual, and number of individuals measured. Annual meeting, Society for the Study of Evolution, American Society of Naturalists, and Society of Systematic Biologists, Portland, Oregon.

Houck, C. and D. J. Fairbairn. 2011. Annual meeting of the Pacific Branch of the Entomological Society of America. Waikoloa, Hawaii.

Wolak, M.E., A.J. Wilson, L.E.B. Kruuk, D.A. Roff, and D.J. Fairbairn. 2012. The effect of sex-linked variance on shared genetic variation and heritability. Poster, 4th International Conference on Quantitative Genetics, June 2012, Edinburgh, UK.

5) Invited research seminars:

1988 Department of Biology, McGill University, Montreal, Quebec, Canada
1989 Department of Zoology, University of British Columbia, Vancouver, Canada
1989 Department of Biological Sciences, Simon Fraser University, Burnaby, B. C., Canada
1989 Ecology and Evolution Group, University of California at Davis, CA, USA
1989 Department of Entomology, University of Maryland, College Park, MD, USA
1990 Department of Biology, Carleton University, Ottawa, Ontario, Canada
1990 Department of Biology, Queen's University, Kingston, Ontario, Canada
1992 Department of Biology, York University, Toronto, Ontario, Canada
1992 Department de Biologie, Université de Laval, Québec, Canada
1992 Department of Biology, McGill University, Montreal, Quebec, Canada
1993 Department of Ecology and Evolution, Princeton University, Princeton, NJ, USA
1993 Department of Ecology and Evolution, State University of New York, Stony Brook, USA
1994 Museum of Zoology and Institute of Zoology, University of Zurich, Switzerland
1994 Department of Population Biology, Institute of Zoology, University of Berne, Switzerland
1994 Zoology Institute, University of Basel, Switzerland
1995 Department of Zoology, University of Toronto and Royal Ontario Museum, Toronto, Canada
1995 Department of Biology, University of Missouri, Columbia, MO, USA
1997 Department of Biological Sciences, Simon Fraser University, Burnaby, B.C., Canada
1998 Department of Biology, Queens University, Kingston, Ontario, Canada
1998 Department of Biology, University of Sherbrooke, Quebec, Canada
1999 Department of Zoology, University of Toronto, Ontario, Canada
1999 Department of Biology, University of California at Riverside, Riverside, California
2000 Department of Biology, University of California at Riverside, Riverside, California
2001 Department of Ecology and Evolutionary Biology, University of Arizona, Tucson, Arizona
2003 Animal Behavior Graduate Group, University of California, Davis, California
2003 Department of Ecology and Evolutionary Biology, University of California, Irvine, California
2003 Department of Biology, University of Windsor, Ontario, Canada
2004 Department of Entomology, University of California, Riverside.
2007 Institute of Evolutionary Biology, University of Edinburgh, Scotland, UK
2007 Department of Biology, California State University at San Diego
2007 Department of Biology, University of Missouri, Columbia, MO
2008 Department of Ecology, Evolution and Marine Biology, University of California, Santa Barbara

2008 Department of Biology, La Sierra University, Riverside, California
2010 Graduate Program in Evolution, Ecology and Organismal Biology, University of California, Riverside
2011 Graduate Program in Ecology, Evolution and Behavioral Biology, Michigan State University, East Lansing, MI.
2012 Instituto de Biologia and Instituto de Ecologia, Universidad Nacional Autónoma de México, Mexico City.

Additional outreach activities

April 2012: Research presentation to the NSF Advance Grant Women Faculty group, University of California, Riverside.

May 2013: "How to Get Published" discussion leader, EEOB seminar series.

May 2013: Guest presenter for the UCR CNAS HIS-STEM Connections Program. I gave a short seminar and led a discussion about sexual differences in animals and humans.

May 2013: Guest on "Larry Meiller" for Wisconsin Public Radio (WPR). This is a noon-hour call-in talk show hosted by Larry Meiller. My 45-minute segment focused on sexual differences in humans and animals, and highlighted my book, *Odd Couples. Extraordinary Differences between the Sexes in the Animal Kingdom.*

August 2013: Guest on WORT 89.9, Wisconsin PRI and community Radio, the *Monday 8 O'Clock Buzz*, with Brian Standing.

October 2013: Evening book talk at "The Bone Room", Berkeley, California.

November 2013: Career and research presentation for grade 11 and 12 mathematics students at Valverde High School in Moreno Valley. Invited to visit the school by Ms. Gemma Nohilly and her students.

January 2014: Interviewed for an article based on my book, *Odd Couples*, in the German news magazine, Der Spiegel.

January 2014: Field excursion and interview for the CBC television show *The Nature of Things* with David Suzuki.

Research funding (extramural sources only):

NSERC Operating Grant (Canada)	1983	$12,720
NSERC Equipment Grant (Canada)	1983	$10,191
NSERC Operating Grant (Canada)	1984-87	$45,000
NSERC Operating Grant (Canada)	1987-90	$60,000
NSERC Equipment Grant (Canada) (P.I., with E. Maly, P. Widden)	1987	$20,116
NSERC Operating Grant (Canada)	1990-93	$105,000
NSERC Research Grant (Canada)	1993-97	$105,000
NSERC Equipment Grant (Canada)	1993	$19,975
FCAR Equipe Grant (Quebec) (with J. McNeil [P.I.], P. Albert, D. Roff)	1994-97	$144,000
NSERC Collaborative Projects Grant (Canada) (with D. Roff [P.I.])	1994-99	$390,000
NSERC Research Grant (Canada)	1997-2001	$138,600
FCAR Equipe Grant (Quebec) (with J. McNeil [P.I.], P. Albert, D. Roff)	1997-2000	$120,000
NSF DEB-0445140 (P.I. with D. Roff [co-PI])	2005-2010	$623,576
NSF DEB-0743166 (P.I. with D. Roff [co-PI])	2008-2012	$307,000

NSF DEB-0807657 (DDIG with E. King)	2008-2010	$11,346
NSF DEB-0751992 (REU Supplement)	2008	$6,000
NSF DEB-0445140 (REU Supplement)	2009	$7,000
NSF DEB-1110617 (DDIG with D. Roff and M. Wolak)	2011-2013	$14, 545
NSF IOS-1353463 (Co-P.I. with D. Roff [P.I.])	2014-2017	$550,000

GRADUATE AND POSTDOCTORAL SUPERVISION

Postdoctoral fellows

Dr. Wolf Blanckenhorn, 1991- 93
Dr. Grey Stirling, 1994 - 98 (co-supervised with D. A. Roff, McGill University)
Dr. Nayer Zahiri, 1998 - 99
Dr. Becky Talyn, 2002 - 03
Dr. Angeline Bertin, 2002 – 03
Dr. Tami Panhuis, Ph.D. University of California, Riverside, 2005

Ph.D. graduates

Preziosi, R., April 1997, McGill University (co-supervised with D. A. Roff)
Reeve, J. P., March 2000, Concordia University
Ferguson, I,. July 2000, Concordia University
Foellmer, M. W., April 2004, Concordia University
Gershman, S., June 2007, University of California, Riverside (co-supervised with Marlene Zuk)
King, E. G., June 2010, University of California, Riverside (Co-supervised with D. A. Roff)
Wolak, M. E.. September 2013, University of California, Riverside

Masters graduates

Butler, T., November 1987, Concordia University
Preziosi, R., July 1990, Concordia University
Brennan, J. M., September 1993, Concordia University
Yadlowski, D., May, 1994, Concordia University
Reeve, J. P., January 1995, Concordia University
Abouheif, E., August 1995, Concordia University
Gallant, S. L., February 1996, Concordia University
Gentile, G., April 1998, Concordia University
Tucker, J. R., April 1998, Concordia University
Mostowy, S., March 2000, McGill University (co-supervised with D. A. Roff)
Vermette, R., May 2001, Concordia University
Gelinas, M., July 2001, McGill University (co-supervised with D. A. Roff)
Ellis, C., June 2009, University of California at Riverside
Houck, C. December 2011, University of California at Riverside
Muns, E. August 2012, University of California at Riverside

COURSES TAUGHT

Biostatistics
Comparative Anatomy of Vertebrates
Current Advances in Ecological Research
Ecological Genetics
Evolution
Evolutionary Ecology
Freshman Advising Seminar
Introductory Evolution and Ecology
Humanity and the Biosphere
Special Topics in Ecology
Techniques in Ecology
The Biology of Human Variation
The Theory of Evolution

UNIVERSITY SERVICE[+]

Departmental

Co-ordinator of Biology Honours Program (1986-88)
Chair, Graduate Studies Committee (1997-98)
Chair, Department of Biology (1998-2000)
Chair, Personnel Committee (2000-01)
Chair, Biology Teaching Committee (2002-04)
Graduate Advisor for Continuing Students (2008-11)

Faculty or College

Chair, General Research Fund Evaluation Committee (1991-92)
Faculty Tenure Committee (1990-92)
Dean's Advisory Committee on the future of Arts and Science (1995)
Biology representative, Arts and Science Faculty Council (1998-2000)
Center for Conservation Biology Steering Committee (2005 – 2010)
Biological Sciences Committee-in-Charge (2006-2007)
Biology representative, Executive Committee of the College of Natural and Agricultural Sciences (2006-09)
Life Sciences Core Advisory Committee (2007)
Vice-Chair, Executive Committee of the College of Natural and Agricultural Sciences (2012-13)

University

Senate Academic Services Committee (1990-91)
Steering Committee of the Council of the School of Graduate Studies (1992-93)
Senate Finance Committee (1997-2001)
Senate Physical Resources Planning Committee (2004 – 06)
Natural Reserve System Advisory Committee (2002-12)

[+]*Only major or leadership positions are listed*

END