

CURRICULUM VITAE

Name: Michael Lynn Arnold
Position: Professor
Address: Department of Genetics
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ACADEMIC RECORD

Texas Tech University, B.Sc. in Botany, 1979 (Research advisors: R.C. Jackson and R.J. Baker)

Texas Tech University, M.Sc. in Zoology, 1981 (Major advisor: R.J. Baker), Thesis: *Karyotypic Megaevolution in Species of New World Leaf-Nosed Bats*.

The Australian National University, Ph.D. in Population Biology, 1986 (Major advisors: D.D. Shaw and R. Appels), Dissertation: *Patterns of Evolution of Highly Repeated DNA from *Caledia captiva**.

RESEARCH INTERESTS

Natural hybridization, speciation, web of life

RESEARCH HISTORY

- 1976 - 1977 Undergraduate Research: cytogenetic, biochemical and morphological studies of species within the plant genus *Machaeranthera*.
- 1977 - 1979 Undergraduate Research: biochemical (protein electrophoresis) and molecular (DNA analysis) studies of various bat and rodent species.
- 1979 - 1982 Graduate Research: continuation and extension of biochemical work with bat and rodent taxa.
- 1982 - 1987 Graduate and Post-doctoral Research: the population genetics of highly repetitive DNA, ribosomal DNA and speciation in the grasshopper *Caledia captiva*.
- 1988 - 1989 Post-doctoral Research: studies of natural hybridization and the evolutionary genetics of Louisiana Iris species. An analysis of the phylogenetic history of monocot taxa using ribosomal RNA sequencing.
- 1989 - Assistant Professor, Associate Professor and Professor: studies of natural hybridization and speciation in plants, fungi and animals.

PROFESSIONAL EMPLOYMENT

- 10/1985 - 12/1985 Visiting Fellow in the Research School of Biological Sciences, Australian National University.
- 1/1986 - 12/1987 Post-doctoral Fellow, Australian National University.
- 1/1988 - 6/1989 Post-doctoral Research Associate, Louisiana State University.
- 1989 - 1994 Assistant Professor, Department of Genetics, University of Georgia.
- 1994 - 1999 Associate Professor, Department of Genetics, University of Georgia.
- 1999 - Present Professor, Department of Genetics, University of Georgia

UNDERGRADUATE, DOCTORAL AND POSTDOCTORAL ADVISING

Member of 70 doctoral advisory committees

Undergraduate Research Associates:

A. Arnett, C. Buckner, C. Collins, R. Hague, G. Hill, R. Koopman, E. Morgan, M. Norman, R. Okashah, C. Patterson, R. Peeler, C. Rentz, J. Robinson, T. Voss, K. Weissinger

Honor's Thesis Advisor for:

C. Buckner (Starke) - Present Position, MD

Major Doctoral Advisor for:

- D. Geiser – (graduated 1995) Present Position, Associate Professor, Department of Plant Pathology, Pennsylvania State University, University Park, PA
- S. Carney – (graduated 1996) Present Position, Safety and Occupational Health Specialist, USDA ARS NCGRP and CRS, Fort Collins, CO
- J. Burke – (graduated 1999) Present Position, Associate Professor, Department of Plant Biology, University of Georgia, Athens, GA
- J. Williams – (graduated 2000) Present Position, Assistant Professor, Department of Botany, University of Tennessee, Knoxville, TN
- J. Johnston West – (graduated 2002; Co-advisor with L. Donovan) Present Position, Wildlife Coordinator (Volunteer Program), Salt Lake City, Utah
- A. Bouck – (graduated 2004; Co-advisor with S. Wessler) – Present position, Biology Department, Duke University, Durham, NC
- S. Cornman – (graduated 2006); Present Position, Research Entomologist, USDA-ARS Plant Sciences Institute, Bee Research Laboratory, Beltsville, MD 20705

Postdoctoral sponsor for:

- B.D. Bennett – (1989-1990) Present Position, Associate Professor, Department of Biology, Arkansas State University, State University, AK
- M.B. Cruzan – (1992-1994) Present Position, Associate Professor, Department of Biology, Portland State University
- S.A. Hodges – (1992-1994) Present Position, Associate Professor, Department of Biology, University of California, Santa Barbara

- S.K. Emms – (1994-1996) Present Position, Associate Professor and Chair, Department of Biology, University of St. Thomas, St. Paul, MN
- A.L. Hempel – (1996-1997) Present Position, Assistant Professor, Department of Biology, Texas A&M University-Kingsville, Kingsville, TX
- R.A. Wesselingh – (1998-1999) Present Position, Lecturer, Laboratoire de Biologie Cellulaire, Université Catholique de Louvain, Louvain-la-Neuve, Belgium
- N.H. Martin – (2004-2006) Present Position, Assistant Professor, Department of Biology, Texas State University-San Marcos, San Marcos, TX
- Y. Sapir – (2006-2007) Present Position, Post-doctoral Associate, Department of Biology, Ben-Gurion University of the Negev, Israel
- S. Tang – (2008) Present Position, Leader of Marker-Assisted Backcrossing (MABC) Group, Seminis, Vegetable Seeds, Monsanto Corp., Woodland, CA

HONORS/AWARDS

- Fellow of the American Association for the Advancement of Science
- Elected to a Visiting Research Fellowship, Merton College, University of Oxford
- Visiting Professorship, Dipartimento di Biologia Vegetale, Università di Roma 'La Sapienza' (Rome, Italy)
- Visiting Professorship, Universitat Autònoma de Barcelona (Barcelona, Spain)
- Visiting Professorship, Universität Konstanz (Konstanz, Germany)
- Creative Research Medal (University of Georgia)
- Distinguished Merit Award, Society for Louisiana Irises
- “Contrasting genetic structure of adults and progeny in a Louisiana Iris hybrid population” (Cornman, Burke, Wesselingh and Arnold, 2004; *Evolution* 58: 2669–2681) recommended by *Biology Reports Ltd Faculty of 1000* as a paper to read.
- “Evolution’s New Look” (Arnold and Larson; *The Wilson Quarterly*, Autumn 2004 pp. 60-72) reprinted in *Current*
- “Evolution’s New Look” (Arnold and Larson; *The Wilson Quarterly*, Autumn 2004 pp. 60-72) reported on by Daniel Engber for *The Chronicle of Higher Education* (Magazine and Journal Reader, 11/29/2004) in a story entitled “A glance at *The Wilson Quarterly*: An evolving view of evolution”
- "Pollen-mediated introgression and hybrid speciation in Louisiana Irises" (Arnold, Buckner and Robinson, 1991; *Proc. Natl. Acad. Sci., U.S.A.* 88: 1398-1402) reprinted in *A Population Biology Reader, Critical Source Papers*, eds. J. Lovett-Doust, I.M. Weis; Wm. C. Brown

EDITORSHIPS

- Genes*, Editorial Board (2009 - Present)
- Molecular Ecology*, Special Topics Editor (2008 - Present)
- Molecular Ecology*, Editorial Review Board (2000 - 2008)
- Genetica*, Associate Editor (1992 - 1994)
- Annual Review of Ecology and Systematics*, Editorial Committee (1991)

PROFESSIONAL DUTIES (National and International)

- Member of local organizing committee for the Australian Genetics Society (1987)

Member of the Board of Directors, Georgia Genetics Society (1992 - 1997)
Panel Member for the Department of Energy, Office of Health and Environmental
Research, Program for Ecosystem Research (PER) (1993)
Panel Member for the National Science Foundation, Population Biology (1993)
Panel Member for the National Science Foundation/Sloan Foundation, Postdoctoral
Research in Molecular Evolution (1994)
Panel Member for the National Science Foundation, Population Biology (1996)
Member of the United States/European Union Task Force on Biotechnology (1999)
Panel Member for the National Science Foundation, Biocomplexity Research Panel
(2000)
Participant (Invited Speaker) for the National Research Council's Standing Committee on
Agricultural Biotechnology, Health and the Environment (2002)
Panel Member for the National Science Foundation, Population and Evolutionary Processes
Cluster (2006)

PROFESSIONAL DUTIES (University and Departmental)

Numerous Search Committees, Departments of Genetics and Plant Biology (1989 -
Present)
Department of Genetics, Undergraduate Affairs Committee (1989 - 1993)
Department of Genetics, Undergraduate Affairs Committee (Coordinator 1994 - 1997)
Department of Genetics, Graduate Affairs Committee (1997-2001)
University of Georgia (Arts and Sciences), Faculty Senate (1998 - 1999)
Department of Genetics, Third Year Review Committee (1999)
Department of Genetics, Post-tenure Review Committees (1999)
University of Georgia, Robert C. Anderson Awards Selection Committee (2000)
University of Georgia (Life Sciences), Promotion and Tenure Review Committee (1999 -
2001)
University of Georgia Research Foundation, Faculty Research Grant Review Committee
(1998 - 2002)
Department of Genetics, Post-tenure Review Committee (2001 - 2002, Chair)
Department of Genetics, Undergraduate Affairs Committee (2001 - 2005)
Department of Genetics, Graduate Affairs Committee (2005 - Present)
Department of Plant Biology, Plant Growth Facility Committee (2008 - Present)

SOCIETY AFFILIATIONS

Society for the Study of Evolution
Botanical Society of America
Society for Louisiana Irises
American Association for the Advancement of Science

SCHOLARSHIPS, FELLOWSHIPS AND GRANTS

Undergraduate scholarship from Abilene, Texas Garden Club (\$500)
The Australian National University Ph.D. Scholarship (ca. \$24,000)
Walden Fellowship, Australian National University (\$3500)
Post-doctoral Fellowship, Australian National University (ca. \$44,000)
Grant from the American Iris Society Foundation (Co-PI with Mr. B.D. Bennett \$10,200)

- "A Study of Natural Selection, Breeding Structure and Natural Hybridization in Louisiana Irises" – NSF (BSR-9004242; 8/90 - 2/92; \$20,000; Co-PI's, B.D. Bennett and J.L. Hamrick)
- "A Study of Natural Selection, Breeding Structure and Natural Hybridization in Louisiana Irises" – NSF REU Supplement (6/91 - 2/92; \$5000)
- "An Analysis of Gene Flow in an Experimental Hybrid Population of *Iris*" – University of Georgia Faculty Research Grant (1/91 - 12/91; \$8195)
- "An Analysis of Hybrid Zone Dynamics in *Iris*" – NSF (BSR-9106666; 8/91 - 1/95; \$250,000; Co-PI, J.L. Hamrick)
- "Predoctoral Training in Molecular and Cellular Biology of Fungi" – NIH (1 T32 AIO7373; D. Geiser; 9/91 - 8/95; \$38,780)
- "Genetic variation and organismal divergence in *I. hexagona*" – American Iris Society Foundation (11/92 - 10/94; \$20,000)
- "An Analysis of the Population Genetic Structure of *Aspergillus nidulans*" – NSF Dissertation Research (DEB-9224224; D. Geiser; 2/93 - 1/94; \$6000)
- "Reproductive biology and natural selection and the formation and maintenance of Louisiana Iris hybrid populations" – NSF (DEB-9317654; 2/94 - 8/97; \$180,000)
- "Natural Hybridization and Evolution" – Society for Louisiana Irises (12/1/94 - 11/1/98; \$5000)
- "Ecological associations and origin of *I. nelsonii*" – American Iris Society Foundation (11/95 - 10/98; \$15,000)
- "Selective consequences of natural hybridization in Louisiana Irises" – NSF (DEB-9703853; 8/97 - 7/00; \$215,000)
- "Selective consequences of natural hybridization in Louisiana Irises" – NSF REU Supplement (6/98 - 7/00; \$5000)
- "Linkage mapping in Louisiana Irises" – University of Georgia, Between-Grants Program (7/1/99 - 6/30/00; \$10,000)
- "Physiological ecology of Louisiana Irises" – Society for Louisiana Irises (6/1/99 - 6/1/00; \$2,000)
- "QTL mapping of reproductive isolation in Louisiana Irises" – NSF (DEB-0074159; 10/00 - 9/04; \$360,000)
- "Phylogeography of the Louisiana Iris Species, *Iris fulva* and *I. brevicaulis*" – Society for Louisiana Irises (10/1/01 - 9/30/02; \$2,000)
- "Genetic architecture and introgression in Louisiana Iris hybrid zones" – NSF (DEB-0345123; 2/04 - 2/08; No-cost extension until 2/09; \$384,000)
- "Collaborative proposal: Genetic architecture of reproductive isolation and introgression in experimental and natural hybrid zones in Louisiana Irises" – NSF (Pending)

PRESENTATIONS AT CONFERENCES, SYMPOSIA, WORKSHOPS, COURSES AND INTERNATIONAL THESIS COMMITTEES

1. **Symposium (Invited Speaker)** - "Chromosomes in Division". 1985. (Tanunda, Australia).
2. **Workshop (Invited Speaker)** - "Molecular Taxonomy and Evolution of Plants". 1988. Australian National University (Canberra, Australia).

3. **Symposium (Invited Speaker)** - "Hybrid Zones and the Evolutionary Process". 1990. International Congress of Systematic and Evolutionary Biology (College Park, MD).
4. **Workshop (Invited Speaker)** - "Hybrid Zones and the Evolutionary Process". 1990. International Congress of Systematic and Evolutionary Biology (College Park, MD).
5. **Symposium (Invited Speaker)** - "Hybrid Zones". 1993. European Society for Evolutionary Biology (Montpellier, France).
6. **Symposium (Invited Speaker)** - "Molecular Markers in Hybrid Zones". 1994. Society for the Study of Evolution (Athens, GA).
7. **Symposium (Invited Speaker)** - "Molecular Markers and Plant Evolutionary Biology". 1996. Center for Plant Molecular Biology, University of Georgia (Unicoi, GA).
8. **Symposium (Invited Speaker)** - "Endless Forms: Species and Speciation". 1996. Festschrift in Honor of Guy Bush (Asilomar, CA).
9. **Symposium (Invited Speaker)** - "The Evolution of Reproductive Isolation". 1997. European Society for Evolutionary Biology (Arnhem, The Netherlands).
10. **Symposium (Invited Speaker)** - "Evolutionary Ecology at the University of Georgia: Making the Connections". 1997. University of Georgia (Athens, GA).
11. **Symposium (Invited Speaker)** - "Reproductive Biology: Mating Patterns and Hybridization". 1998. Second International Conference on the Comparative Biology of the Monocotyledons (Sydney, Australia).
12. **Symposium (Invited Speaker)** - "G.L. Stebbins and Plant Evolution in the Next Millennium". 1998. American Institute of Biological Sciences, Botanical Society of America Presidential Symposium (Baltimore, MD).
13. **Symposium (Invited Speaker)** - "Ecology of Hybrid Zones". 1998. Seventh International Congress of Ecology (Florence, Italy).
14. **Workshop (Invited Speaker)** - "Ecosystem dynamics: The contribution of molecular tools". 1999. United States/European Union Task Force on Biotechnology (Arlington, VA).
15. **Symposium (Invited Speaker)** - Keynote symposium, "Plant Speciation". 1999. International Botanical Congress (St. Louis, MO).
16. **Symposium (Invited Speaker)** - "Epistasis and the evolution of complex adaptive landscapes: consequences for the origin and maintenance of plant biodiversity" (Co-author with J.M. Burke). 1999. International Botanical Congress (St. Louis, MO).
17. **Symposium (Invited Speaker)** - "Speciation and Diversification: Insights from Studies of Geographical Variation and Hybridization". 1999. Festschrift in Honor of M.J. Littlejohn (Columbia, MO).
18. **Symposium (Invited Speaker)** - "Phylogeography, hybridisation and speciation". 2000. Festschrift in Honor of G.M. Hewitt (Aussois, France).
19. **Workshop (Invited Speaker)** - "Exploring Genetic Modification of Plants: New Approaches and Implications for Definitions, A Planning Meeting". 2002. National Research Council's Standing Committee on Agricultural Biotechnology, Health and the Environment (Washington, D.C.).
20. **Symposium (Co-Organizer [with Thure Hauser and Michael Hansen] and Speaker)** - "Natural Hybridization and Introgression: Its Role in Evolution and Conservation". 2003. European Society for Evolutionary Biology (Leeds, U.K.).

21. **Symposium (Invited Speaker)** – “Plant Speciation”. 2003. Festschrift in Honor of Verne Grant (Antigonish, Nova Scotia).
22. **Workshop and Course for PhD Candidates (Invited Lecturer – Three One Hour Sessions)** – “Natural Hybridization and Introgression: From Genomics to Ecology”. 2004. Royal Veterinary and Agricultural University, Skovskolen (Sealand, Denmark).
23. **Course (Sole Lecturer for a One Month Course – 15 Lectures)** – “Speciation and Natural Hybridization”. 2004. Universität Konstanz (Konstanz, Germany).
24. **Symposium (Invited Speaker)** – “Natural Hybridization and Speciation”. 2005. European Society for Evolutionary Biology (Krakow, Poland).
25. **Course (Sole Lecturer for Eight, One Hour Sessions for a Two Week Course)** – “Natural Hybridization and Introgression: From Genomics to Ecology”. 2005. Departament de Genètica i Microbiologia, Universitat Autònoma de Barcelona (Barcelona, Spain).
26. **Symposium (Invited Speaker)** – “Hybridization in *Iris*”. 2006. Società Italiana dell'Iris (SIDI) and Università di Roma (Florence, Italy).
27. **Workshop (Chairman)** – “Hybridization in *Iris*”. 2006. Società Italiana dell'Iris (SIDI) and Università di Roma (Florence, Italy).
28. **Symposium (Invited Keynote Speaker)** – “Hybridization in Animals – Extent, Processes and Evolutionary Impact”. 2006. Universität Frankfurt am Main (Frankfurt am Main, Germany).
29. **Symposium (Invited Speaker)** – “Hybridization and Evolution”. 2007. CIBIO - Research Center on Biodiversity and Genetics Resources, University of Porto (Porto, Portugal).
30. **Symposium (Invited Speaker)** – Balzan Conference. “Ecology and Evolution of Small Populations”. 2008. Princeton University (Princeton, New Jersey).
31. **Thesis Committee** – External Examiner for Mr. José Melo-Ferreira’s PhD Thesis Committee. 2008. Universidade do Porto (Porto, Portugal).
32. **Thesis Committee** – External Examiner for Ms. Rike Stelkens’ PhD Thesis Committee. 2009. Aquatic Ecology & Macroevolution, University of Berne (Berne, Switzerland).
33. **Symposium (Invited Speaker)** – “Darwin Year Celebrations”. 2009. University of Zurich, ETH Zurich, Life Sciences Zurich, Swiss Academies of Sciences (Zurich, Switzerland).
34. **Course (Sole Lecturer for a 5-day course – 5 X 4-hour Sessions)** – “Speciation and the Web of Life”. 2009. Universidade do Porto (Porto, Portugal).
35. **Symposium (Keynote Speaker)** – “Hybridization in Primates – Evidence, Extent, Evolutionary Impact and Problems”. 2009. University of Göttingen and the Deutsches Primatenzentrum (Göttingen, Germany).
36. **Conference (Invited Speaker)** – “The Evolution of Symbiotic Systems”. 2010. Okazaki Biology Conference, The National Institute for Basic Biology (Kagegawa, Japan).
37. **Symposium (Keynote Speaker)** – “Graduates in Earth, Life, and Social Sciences (GELSS) Symposium”. 2010. Arizona State University (Tempe, Arizona).
38. **Symposium (Plenary Speaker)** – “Plant Speciation”. 2010. La Società Botanica Italiana (Milan Italy).

39. **Course (Sole Lecturer for a 3-day course – 3 X 2-hour Sessions)** – “Speciation and Reticulate Evolution”. 2010. University of Naples Federico II (Naples, Italy).

INVITED SEMINARS AT UNIVERSITIES AND RESEARCH INSTITUTES

1. Organismic & Evolutionary Biology, Harvard University (Cambridge, Massachusetts) - 1986
2. Loyola University (New Orleans, Louisiana) - 1989
3. Department of Botany, University of Texas (Austin, Texas) - 1991
4. Rancho Santa Ana Botanic Gardens (Claremont, California) - 1992
5. Department of Biology, Wayne State University (Detroit, Michigan) - 1992
6. Department of Biology, University of Southwestern Louisiana (Lafayette, Louisiana) - 1993
7. Department of Biology, Georgia State University (Atlanta, Georgia) - 1993
8. Atlanta Botanic Gardens (Atlanta, Georgia) - 1994
9. Department of Botany, University of Texas (Austin, Texas) - 1994
10. Department of Botany, University of Toronto (Toronto, Ontario) - 1994
11. Department of Biology, Princeton University (Princeton, New Jersey) - 1995
12. State Botanic Garden (Athens, Georgia) - 1995
13. Department of Biology, New Mexico State University (Las Cruces, New Mexico) - 1995
14. Department of Biology, Indiana University (Bloomington, Indiana) - 1996
15. Department of Evolution and Ecology, University of California (Davis, California) - 1997
16. Department of Botany, University of Georgia, (Athens, Georgia) - 1997
17. Division of Biological Sciences, University of Missouri (Columbia, Missouri) - 1997
18. Research School of Biological Sciences, Australian National University (Canberra, Australia) - 1998
19. Stazione Zoologica “Anton Dohrn” di Napoli (Naples, Italy) - 1998
20. Department of Ecology and Evolutionary Biology, University of California (Irvine, California) - 1998
21. Department of Ecology and Evolutionary Biology, University of Tennessee (Knoxville, Tennessee) - 1999
22. Department of Ecology and Evolutionary Biology, University of Arizona (Tucson, Arizona) - 2001
23. Department of Biological Sciences, Texas Tech University (Lubbock, Texas) - 2002
24. Department of Ecology and Evolutionary Biology, University of Tennessee (Knoxville, Tennessee) - 2004
25. Department of Botany, University of Florida (Gainesville, Florida) - 2005
26. Departament de Genètica i Microbiologia, Universitat Autònoma de Barcelona (Barcelona, Spain) - 2005
27. Department of Plant Sciences, University of Oxford (Oxford, U.K.) - 2006
28. Department of Genetics, University of Georgia (Athens, Georgia) - 2006
29. Zoologisches Institut, Universität Bern (Bern, Switzerland) - 2007
30. Divisions of Aquatic Ecology and Macroevolution and the EAWAG Department for Fish Ecology and Evolution (Kastanienbaum, Switzerland) - 2007

31. School of Biological and Chemical Sciences, Queen Mary, University of London, (London, U.K.) - 2007
32. Molecular Systematics Section, Jodrell Laboratory, Royal Botanic Gardens, Kew (Richmond, Surrey, U.K.) - 2007
33. Merton College, University of Oxford (Oxford, U.K.) - 2007
34. Department of Plant Sciences, University of Oxford (Oxford, U.K.) - 2007
35. School of Biological Sciences, Institute of Evolutionary Biology, University of Edinburgh (Edinburgh, Scotland) - 2007
36. Department of Biology, University College London (London, U.K.) - 2007
37. Parque Nacional de Doñana (Seville, Spain) - 2007
38. Department of Ecology and Evolutionary Biology, Rice University (Houston, Texas) - 2007
39. Department of Biology, Texas State University-San Marcos (San Marcos, Texas) - 2007
40. Department of Biological Science, Florida State University (Tallahassee, Florida) - 2008
41. Department of Ecology and Evolutionary Biology, University of California-Irvine (Irvine, California) - 2008
42. Centre for Ecological Sciences, Indian Institute of Science (Bangalore, India) - 2008
43. School of Integrative Biology, University of Queensland (St. Lucia, Australia) - 2008
44. School of Environment, Griffith University (Nathan, Australia) - 2008
45. School of Botany and Zoology, Australian National University (Canberra, Australia) - 2008
46. University of Georgia Genetics Student Association, University of Georgia (Athens, GA) - 2009
47. Institute of Zoology, University of Zurich (Zurich, Switzerland) - 2009
48. Zoologisches Institut, Universität Bern (Bern, Switzerland) - 2009
49. Divisions of Aquatic Ecology and Macroevolution and the EAWAG Department for Fish Ecology and Evolution (Kastanienbaum, Switzerland) – 2009
50. NSF IGERT Students. Department of Biology, Indiana University (Bloomington, Indiana) - 2009

COVER PHOTOGRAPHS

Journal of Heredity - 1993 - Volume 84(1)

American Journal of Botany - 1993 - Volume 80(5)

BioScience - 1994 - Volume 44(3)

Trends in Ecology and Evolution - 1995 - Volume 10(2)

Evolution - 2008 - Volume 62(4)

PUBLICATIONS – Books

1. Arnold, M.L. 2008. *Reticulate Evolution and Humans – Origins and Ecology*. Oxford University Press.
2. Arnold, M.L. 2006. *Evolution Through Genetic Exchange*. Oxford University Press.

3. Arnold, M.L. 1997. *Natural Hybridization and Evolution*. Oxford Series in Ecology and Evolution, Oxford University Press.

EDITED VOLUMES

Arnold, M.L. (ed). 2010. Reticulate Evolution. *Genes*, in preparation.

PUBLICATIONS – Journal Articles, Review Articles, Book Chapters and Essays

1. Arnold, M.L. and N.H. Martin. Patterns and causes of consistent asymmetric introgressive hybridization among Louisiana Iris species. *In preparation*.
2. Tang, S., R.A. Okashah, S.J. Knapp, M.L. Arnold and N.H. Martin. 2009. Reproductive isolation in Louisiana irises: Transmission ratio distortion. *Submitted*.
3. Arnold, M.L. and N.D. Fogarty. 2009. Reticulate evolution and marine organisms: The last frontier? *International Journal of Molecular Sciences* 10:3836-3860. **(Invited Review)**
4. Arnold, M.L. and N.H. Martin. 2009. Adaptation by introgression. *Journal of Biology* 8:82.1-82.3. **(Invited Review)**
5. Tang, S., R.A. Okashah, M-M. Cordonnier-Pratt, L.H. Pratt, V.E. Johnson, C.A. Taylor, M.L. Arnold and S.J. Knapp. 2009. EST and EST-SSR marker resources for *Iris*, a basal monocot genus in the Asparagales. *BMC Plant Biology* 9:72.
6. Taylor, S.J., M.L. Arnold and N.H. Martin. 2009. The genetic architecture of reproductive isolation in Louisiana Irises: Hybrid fitness in nature. *Evolution*, 63:2581-2594.
7. Zinner, D., M.L. Arnold and C. Roos. 2009. Is the new primate genus *Rungwecebus* a baboon?. *PLoS ONE* 4(3): e4859.
8. Cornman, R.S. and M.L. Arnold. 2009. Transposon insertion polymorphism in *Iris missouriensis* (Iridaceae): Marker development and comparative analysis for two subfamilies of IRRE retrotransposon. *Genetica* 135: 25-38.
9. Arnold, M.L. 2008. Autobiographical Essay. *In Plant Biotechnology*, C.N. Stewart ed. Pp. 23-25. John Wiley & Sons, Inc. **(Invited Essay)**
10. Arnold M.L., R.S. Cornman and N.H. Martin 2008. Hybridization, hybrid fitness and the evolution of adaptations. *Plant Biosystems* 142: 166-171. **(Invited Review)**
11. Arnold, M.L., Sapir, Y. and N.H. Martin. 2008. Genetic Exchange and the Origin of Adaptations – Prokaryotes to Primates. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 363: 2813-2820. **(Invited Review)**
12. Martin, N.H., Y. Sapir and M.L. Arnold. 2008. The genetic architecture of reproductive isolation in Louisiana Irises: Pollination syndromes and pollinator preferences. *Evolution* 62: 740-752.
13. Bouck, A.C., S.R. Wessler and M.L. Arnold. 2007. QTL analysis of floral traits in Louisiana Iris hybrids. *Evolution* 61: 2308-2319.
14. Cornman, R.S. and M.L. Arnold. 2007. Phylogeography of *Iris missouriensis* (Iridaceae) based on nuclear and chloroplast markers. *Molecular Ecology* 16: 4585-4598.
15. Martin, N.H., A.C. Bouck and M.L. Arnold. 2007. The genetic architecture of reproductive isolation in Louisiana Irises: Flowering phenology. *Genetics* 175: 1803–1812.
16. Arnold, M.L. 2006. My academic life in the swamp. *Fleur de Lis* 205: 8-9. **(Invited**

Essay)

17. Arnold, M.L. and J.M. Burke. 2006. Natural Hybridization. Pp. 399-413. *In Evolutionary Genetics: Concepts and Case Studies*, C.W. Fox and J.B. Wolf eds. Oxford University Press, Oxford. **(Invited Review)**
18. Arnold, M.L. and A. Meyer. 2006. Natural hybridization in primates: One evolutionary mechanism. *Zoology* 109: 261-276.
19. Martin, N.H., A.C. Bouck and M.L. Arnold. 2006. Detecting adaptive trait introgression between *Iris fulva* and *I. brevicaulis* in highly selective field conditions. *Genetics* 172: 2481-2489.
20. Bouck, A.C., R. Peeler, M.L. Arnold and S.R. Wessler. 2005. Genetic mapping of species boundaries in Louisiana Irises using *IRRE* retrotransposon display markers. *Genetics* 171: 1289-1303.
21. Martin, N.H., A.C. Bouck and M.L. Arnold. 2005. Loci affecting long-term hybrid survivability in Louisiana Irises: Implications for reproductive isolation and introgression. *Evolution* 59: 2116-2124.
22. Arnold, M.L. 2004. Natural hybridization and the evolution of domesticated, pest, and disease organisms. *Molecular Ecology* 13: 997-1007. **(Invited Review)**
23. Arnold, M.L. 2004. Transfer and origin of adaptations through natural hybridization: Were Anderson and Stebbins right? *The Plant Cell* 16: 1-9. **(Invited Review)**
24. Arnold, M.L., A.C. Bouck and R.S. Cornman. 2004. Verne Grant and Louisiana Irises: Is there anything new under the sun? *New Phytologist* 161: 143-149. **(Invited Review)**
25. Arnold, M.L. and E.J. Larson. 2004. Evolution's New Look. *The Wilson Quarterly* (Autumn) pp. 60-72.
26. Cornman, R.S., J.M. Burke, R.A. Wesselingh and M.L. Arnold. 2004. Contrasting genetic structure of adults and progeny in a Louisiana Iris hybrid population. *Evolution* 58: 2669-2681.
27. Johnston, J.A., L.A. Donovan and M.L. Arnold. 2004. Novel phenotypes among early generation hybrids of two Louisiana Iris species: Flooding experiments. *Journal of Ecology* 92: 967-976.
28. Hey, J., R.S. Waples, M.L. Arnold, R.K. Butlin and R.G. Harrison. 2003. Understanding and confronting species uncertainty in biology and conservation. *Trends in Ecology and Evolution* 18: 597-603. **(Invited Review)**
29. Johnston, J.A., M.L. Arnold and L.A. Donovan. 2003. High hybrid fitness at seed and seedling life history stages in Louisiana Irises. *Journal of Ecology* 91: 438-446.
30. Kentner, E.K., M.L. Arnold and S.R. Wessler. 2003. Characterization of high copy number retrotransposons from the large genomes of the Louisiana Iris species and their use as molecular markers. *Genetics* 164: 685-697.
31. Marshall, J.L., M.L. Arnold and D.J. Howard. 2003. Reinforcement with multiple mating. *Trends in Ecology and Evolution* 18: 166.
32. Wesselingh, R.A. and M.L. Arnold. 2003. A top-down hierarchy in fruit and seed set on inflorescences of *Iris fulva* (Iridaceae). *Plant Biology* 5: 651-660.
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