

# CURRICULUM VITAE – ELDREDGE BERMINGHAM

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## Personal data

Smithsonian Tropical Research Institute

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Or

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Married to Barrie Chiméne Longwater

Sara Crow Birmingham L., born 11 February 1992

Georgia Macrae Birmingham L., born 21 June 1994

Samuel Eldredge Birmingham L., born 25 December 1997

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## Education

B.S. in Biology (May, 1977): Cornell University (1973-77)

Ph.D. in Genetics (March, 1986): University of Georgia (1981-86) Dissertation advisor: John C. Avise; Dissertation title: Molecular zoogeography of freshwater fishes in the southeastern United States.

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## Professional Experience

From 1986 to 1988	National Research Council Postdoctoral Scholar, National Marine Fisheries Service, Seattle, WA
From 1986 to 1989	Adjunct Assistant Professor, School of Fisheries, University of Washington, Seattle, WA
From 1988 to 1990	Alfred P. Sloan Foundation Postdoctoral Fellow, Cornell University, Ithaca, NY

From 1989 to present	Staff Scientist, Smithsonian Tropical Research Institute, Panamá
From 2000 to present	Research Professor, Department of Biology, University of Missouri-St. Louis
From 2001 to present	Research Adjunct Professor, Department of Biology, McGill University, Montreal, Canada
From 2003 to present	Senior Staff Scientist, Smithsonian Tropical Research Institute
From 2003 to 2007	Deputy Director, Smithsonian Tropical Research Institute
From April 2007 to present	Acting Director, Smithsonian Tropical Research Institute

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## Student Awards and Fellowships

From 1982 to 1986	National Institute of Health Training Grant in Genetics
In 1984	Univ. of Georgia University Wide Fellowship (declined)
In 1984	Ernst Mayr Award, Best Student Paper, Society of Systematic Zoology
In 1984	Stoye Award, Best Student Paper on Genetics, Development, and Morphology, American Society of Ichthyologists and Herpetologists
In 1985	Smithsonian Tropical Research Institute Short-term Fellowship
From 1986 to 1988	National Academy of Sciences, National Research Council Research Associateship
From 1988 to 1990	Alfred P. Sloan Foundation Postdoctoral Fellowship for Studies in Molecular Evolution

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## **Society Memberships**

American Society of Ichthyologists and Herpetologists

American Society of Zoologists

Genetics Society of America

Society for the Study of Evolution

Society for Systematic Zoology

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## **Research Support**

In 1980	Lerner Fund for Marine Research, American Museum of Natural History
From 1980 to 1983	Hydrolab, NULS 1 Undersea Habitat, National Oceanic and Atmospheric Administration, Senior Investigator
In 1984	Raney Award for Ichthyology, American Society of Ichthyologists and Herpetologists
In 1986	Smithsonian Research Opportunities Fund (with Haris Lessios)
In 1986	National Geographic Society (with Myra Shulman)
From 1986 to 1988	National Science Foundation (with Myra Shulman)
From 1988 to 1990	Sloan Foundation
In 1991	James Smithson Society (with Noreen Tuross)
In 1992	National Geographic Society (with Andrew Martin)
From 1991 to 1993	National Geographic Society (with R. E. Ricklefs)

From 1991 to 1993	Abbott Fund, Smithsonian Institution
From 1992 to 1994	Scholarly Studies, Smithsonian Institution
From 1993 to 1995	National Geographic Society (with R. E. Ricklefs)
From 1994 to 1996	Scholarly Studies, Smithsonian Institution
From 1995 to 1997	National Science Foundation (with R. E. Ricklefs)
From 1995 to 1997	Abbott Fund, Smithsonian Institution
From 1998 to 2000	Scholarly Studies, Smithsonian Institution (with Andrew Martin)
From 2001 to 2004	National Science Foundation (with R. E. Ricklefs)

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## **Postdoctoral students sponsored**

**Eva Bellemain (2005-2007)** -PhD University of Grenoble, France, Historical biogeography and population genetics of Caribbean birds.

**Jeff Brawn (1989-1991)** -PhD University of New Mexico, Patterns of mtDNA and Morphological Differentiation across Island and Mainland Populations of Three Species of Neotropical Birds. Presently, Associate Professor, Illinois Natural History Survey, University of Illinois.

**Andrew Crawford (2002-present)** -PhD University of Chicago, Conservation Genetics of Mesoamerican Eleutherodactylus Frogs

**Christopher Dick (1999-2005)** -PhD Harvard University, Neotropical Forest Dynamics and Population Genetic Tests of Refuge Models. Presently Assistant Professor, University of Michigan

**Jessica Eberhard (1997-1999)** -PhD Princeton University, Molecular Systematics and Conservation of the Amazona ochrocephala group. Presently Research Assistant Professor, Louisiana State University

**Allen Herre (1991-1993)** -PhD University of Iowa, Molecular Phylogenies of New and Old World Figs and Wasps: Studies of Biogeography and Coevolution. Presently, Staff Scientist, Smithsonian Tropical Research Institute

**Christopher Jiggins (2000-2006)** -PhD University College London, Heliconius Butterflies: The Genetics of an Adaptive Radiation. Dr. Jiggins also holds a Royal Society Fellowship and is on the faculty at Cambridge University, U.K.

**Connie Kolman (1992-1995)** -PhD Yale University, Molecular Population Genetics of Amerinds: Testing New World Colonization and Dispersal Models. Presently, Associate Professor, University of Florida

**Sue Macrae (1998-2001)** -PhD Cambridge University, A Comparative Analysis of Moorhen Social Parasitism. Presently Assistant Professor, East Carolina State University.

**Jesus Mavarez (2002-2007)** -PhD Université Montpellier, The comparative population genetics of the Heliconius erato and melpomene clades of Butterflies

**Andrew Martin (1992-1994)** -PhD University of Hawaii, Molecular Phylogenies of Neotropical Freshwater Fishes: Tools for Studying Biogeography and Evolution in Central America. Presently, Associate Professor, University of Colorado.

**Ulrich Mueller (1995-1997)** -PhD Cornell University, Molecular Ecology and Phylogeny of Attine Ants and Fungi. Presently, Associate Professor, University of Texas.

**Anabel Perdices (1997-2001)** -PhD University of Madrid, Rates of Colonization and Diversification of Central American Characiform Fishes. Presently, Staff Scientist, Museo Nacional de Ciencias Naturales. Madrid, Spain.

**Steve Rehner (1995-1997)** -PhD University of Washington, Molecular Phylogeny and Coevolution of Attine Ants and Fungi. Presently, Staff Scientist, USDA Mycology Laboratories

**Gilles Seutin (1992-1996)** -PhD Queens University, Molecular Biogeography of Caribbean Birds. Presently, Director of Research, Parks Canada

**Ben Warren (2004 – 2007)** -PhD University of East Anglia, Phylogeography and evolution of species rich bird lineages of the Western Indian Ocean Islands. Presently postdoctoral researcher.

**David Zeh (1991-1993)** -PhD University of Arizona, How Sexual Selection Works in Nature: New Insights from DNA Fingerprinting. Presently, Associate Professor, University of Nevada, Reno.

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## **Predoctoral students advised**

\* Heidi Banford (USA) -Virginia Institute of Marine Sciences

Oriana Batista (Panama) – University of Heidelberg

\* Margartia Beltrán (Colombia) - University College London

\* Michael Blum (USA) – Duke University

Maria Carles (Panama) - Boston University

\* Liliana Cortés-Ortiz (Mexico) – University of East Anglia

\* Neil Davies (Great Britain) - University College London

\* Luis Fernando De León (Panama) – McGill University

\* Andrea Gager (USA) – Princeton University

Luis Fernando Garcia (Colombia) - University of California, Berkeley

\* Denise Hardesty (USA) – University of Georgia

\* Irby Lovette (USA) - University of Pennsylvania

Vittorio Lucchini (Italy) - University of Bologna, Italy

Carlos Machado (Colombia) - University of California, Irvine

Monica Medina (Colombia) - RSMAS, University of Miami

\* Nathan Millar (Canada) - McGill University

\* Matthew Miller (USA) – University of Alaska

\* Andrew Moeser (Canada) – McGill University

Carla Penz (Brazil) - University of Texas, Austin

\* Oscar Puebla (Switzerland) - McGill University

\* Brice Quenouille (France) - University of Perpignan

\* Guy Reeves (Great Britain) - University of Nottingham

\* Camilo Salazar (Colombia) – Universidad de los Andes

Patricia Sanchez (Colombia) - University of California, Berkeley

\* Scott Smith (Canada) – McGill University

Gustavo Ybazeta (Peru) - University of Toronto, Canada

Ivania Cerón (Colombia) –University of Puerto Rico

Jason Weir (Canada) –University of British Columbia

Eloisa Lasso (Panamá) –University of Illinois

Luis Fernando De León (Panamá) –McGill University

José Loaiza (Panamá) –McGill University

\*The Smithsonian is not a degree-granting institution; therefore I am the formal academic advisor only for the McGill University graduate students. For the most part the Latin American students listed received fellowship training in my lab prior to enrolling in the named PhD programs. Students marked with an \* conducted the majority of their PhD research in my lab and I serve or served on their committee.

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## Publications

1. Arias, Carlos F., Munoz, Astrid G., Jiggins, Christopher D., Mavarez, Jesus, Bermingham, Eldredge, and Linares, Mauricio. 2008. "A hybrid zone provides evidence for incipient ecological speciation in *Heliconius* butterflies." *Molecular Ecology* 17(21): 4699-4712.
2. Caballero-George, Caterina, Sorkalla, T., Bermingham, Eldredge, and Haberlein, H. 2008. "Fluorescence correlation spectroscopy (FCS) a powerful biophysic method for drug discovery: Study of Alexa532- endothelia 1 binding on the endothelia ETA receptor on living cells." *Planta Medica* 74(9): 1156-1157.
3. Puebla, Oscar, Bermingham, Eldredge and Guichard, Frederic. 2008. Population genetic analyses of Hypoplectrus coral reef fishes provide evidence that local

- processes are operating during the early stages of marine adaptive radiations. *Molecular ecology* 17(6): 1405-1415.
4. Ricklefs, Robert E. & Bermingham, Eldredge. 2008. "Likely human introduction of the red-legged trush (*turdus plumbeus*) to Dominicana, West Indies." *The Auk Online* version.
  5. Vanegas-Anaya, Myriam, Crawford, Andrew J., Escobedo-Galvan, Armando H., Sanjur, Oris I., Densmore III, Llewellyn D., and Bermingham, Eldredge. 2008. "Mitochondrial DNA phylogeography of *Caiman crocodilus* in Mesoamerica and South America." *Journal of Experimental Zoology Part A: Ecological Genetics and Physiology* 309A Online.
  6. Weir, Jason, Bermingham, Eldredge, Miller, Matthew, Klicka, John and González, Maribel. 2008. Phylogeography of a morphologically diverse Neotropical montane species, the Common Bush-Tanager (*Chlorospingus ophthalmicus*). *Molecular Phylogenetics and Evolution*. 47: 650-664.
  7. Beltran, Margarita, Jiggins, Chris D., Brower, Andrew V.Z., Bermingham, Eldredge and Mallet, James. 2007. Do pollen feeding, pupal-mating and larval gregariousness have a single origin in *Heliconius* butterflies? Inferences from multilocus DNA sequence data. *Biological Journal of the Linnean Society* 92(2): 221-239.
  8. Betancur, Ricardo, Acero, Arturo, Bermingham, Eldredge and Cooke, Richard G. 2007. Systematics and biogeography of New World sea catfishes (Siluriformes: Ariidae) as inferred from mitochondrial, nuclear, and morphological evidence. *Molecular Phylogenetics and Evolution* 45(1): 339-357.
  9. Concheiro, Gustavo, Rican, Oldrich, Ortí, Guillermo, Bermingham, Eldredge, Doadrío, Ignacio and Zardoya, Rafael. 2007. Phylogeny and biogeography of 91 species of heroine cichlids (Teleostei: Cichlidae) based on sequences of the cytochrome b gene. *Molecular Phylogenetic and Evolution* 43:91-110
  10. Cortes-Ortiz, Liliana, Duda, Jr., Thomas F., Canales-Espinosa, Domingo, Garcia-Orduña, Francisco, Rodriguez-Luna, Ernesto and Bermingham, Eldredge. 2007. Hybridization in large-bodied New World primates. *Genetics* 176: 2421-2425.
  11. Crawford, Andrew J., Bermingham, Eldredge and Polania S., Carolina. 2007. The role of tropical dry forest as a long-term barrier to dispersal: a comparative phylogeographical analysis of dry forest tolerant and intolerant frogs. *Molecular Ecology* 16(22): 4789-4807.
  12. Dick, Christopher W., Bermingham, Eldredge, Lemes, Maristerra R. and Gribel, Rogerio. 2007. Extreme long-distance dispersal of the lowland tropical rainforest

- tree *Ceiba pentandra* L. (Malvaceae) in Africa and the Neotropics. *Molecular Ecology* 16:3039-3049.
13. Huber, Sarah K., De Leon, Luis Fernando, Hendry, Andrew P., Bermingham, Eldredge and Podos, Jeffrey. 2007. Reproductive isolation of sympatric morphs in a population of Darwin's finches. *Proceedings of the Royal Society (London) B* 274(1619): 1709–1714.
  14. Knowlton, Nancy, Weight, Lee A., Solorzano, Luis Anibal, Mill, DeEtta K. and Bermingham, Eldredge. 2007. Diferenciación de proteínas, ADN mitocondrial y compatibilidad reproductora a través del istmo de Panamá. In: J. Leigh, Egbert Giles, E. A. Herre, J. B. C. Jackson and F. Santos-Granero (Ed.), *Ecología y evolución en los trópicos*: 402-406. Panama: Editora Nova Art.
  15. Miller, Matthew J., Bermingha, Eldredge and Ricklefs, Robert. 2007. Historical Biogeography of the New World Solitaires (MYADESTES spp.). *The Auk* 124 (3): 868-885.
  16. Puebla, Oscar, Bermingham, Eldredge, Guichard, Frederick and Whiteman, E. 2007. Colour pattern as a single trait driving speciation in Hypoplectrus coral reef fishes?. *Proceedings of the Royal Society B: Biological Sciences* 274(1615): 1265-1271.
  17. Ricklefs, Robert E. and Bermingham, Eldredge. 2007. The causes of evolutionary radiations in Archipelagoes: Passerine birds in the Lesser Antilles. *American Naturalist* 169(3): 285–297.
  18. Ricklefs, Robert E. and Bermingham, Eldredge. 2007. Ciclos de taxones en la avifauna de las Antillas menores. In: J. Leigh, Egbert Giles, E. A. Herre, J. B. C. Jackson and F. Santos-Granero (Ed.), *Ecología y evolución en los trópicos*: 422-438. Panama: Editora Nova Art.
  19. Ricklefs, Robert E. and Bermingham, Eldredge. 2007. The West Indies as a laboratory of biogeography and evolution. *Philosophical Transactions of the Royal Society – Series B, Biological Sciences*, published online doi:10.1098/rstb.2007.2068.
  20. Rusch, Douglas B., Halpern, Aaron L., Sutton, Granger M., Heidelberg, Karla B., Williamson, Shannon, Yooseph, Shibu, Wu, Dongying, Eisen, Jonathan A., Hoffman, Jeff M., Remington, Karin, Beeson, Karen, Tran, Bao, Smith, Hamilton, Baden-Tillson, Holly, Stewart, Clare, Thorpe, Joyce, Freeman, Jason, Andrews-Pfannkoch, Cynthia, Venter, Joseph E., Li, Kelvin, Kravitz, Saul, Heidelberg, John F., Utterback, Terry, Rogers, Yu-Hui, Falcon, Luisa I., Souza, Valeria, Bonilla-Rosso, German, Eguiarte, Luis E., Karl, David M., Sathyendranath, Shubha, Platt, Trevor, Bermingham, Eldredge, Gallardo, Victor, Tamayo-Castillo, Giselle, Ferrari, Michael R., Strausberg, Robert L., Nealson,

- Kenneth, Friedman, Robert, Frazier, Marvin and Venter, J. Craig. 2007. The Sorcerer II Global Ocean Sampling expedition: Northwest Atlantic through Eastern Tropical Pacific. PLoS Biology 5(3): 399-431.
21. Rubinoff, Ira, Bermingham, Eldredge, Lydeard, Charles and Davies, Stuart J. 2007. Smithsonian Institution Global Earth Observatories. Published in The Full Picture: 82-84.
  22. Bull, Vanessa, Beltran, Margarita, Jiggins, Chris D., McMillan, W. Owen, Bermingham, Eldredge and Mallet, James. 2006. Polyphyly and gene flow between non-sibling *Heliconius* species. BMC Biology 4(11):1-17.
  23. Hardesty, Britta Denise, Hubbell, Stephen P. and Bermingham, Eldredge. 2006. Genetic evidence of frequent long-distance recruitment in a vertebrate-dispersed tree. Ecology Letters 9: 516-525.
  24. Jiggins, Chris D., Mallarino, Ricardo, Willmott, Keith R. and Bermingham, Eldredge. 2006. The phylogenetic pattern of speciation and wing pattern change in Neotropical *Ithomia* butterflies (Lepidoptera: Nymphalidae). Evolution 60(7): 1454–1466.
  25. Joron, Mathieu, Papa, Riccardo, Beltran, Margarita, Chamberlain, Nicola, Mavarez, Jesus, Baxter, Simon, Abanto, Moises, Bermingham, Eldredge, Humphray, Sean J., Rogers, Jane, Beasley, Helen, Barlow, Karen, French-Constant, Ricard H., Mallet, James, McMillan, W. Owen and Jiggins, Chris D. 2006. A conserved supergene locus controls colour pattern diversity in *Heliconius* butterflies. PLoS Biology 4(10): e303.
  26. Mavarez, Jesus, Salazar, Camilo A., Bermingham, Eldredge, Salcedo, Christian, Jiggins, Chris D. and Linares, Mauricio. 2006. Speciation by hybridization in *Heliconius* butterflies. Nature 441(7095): 868-871.
  27. Raposo do Amaral, Fabio S., Miller, Matthew J., Silvera, Luis F., Bermingham, Eldredge and Wajntal, Anita. 2006. Polyphyly of the hawk genera *Laucopternis* and *Buteogallus* (aves, Accipitridae): multiple habitat shifts during the Neotropical buteonine diversification. Wilson Journal of Ornithology 119 (3): 450-454.
  28. Reeves, R. Guy and Bermingham, Eldredge. 2006. Colonization, population expansion, and lineage turnover: phylogeography of Mesoamerican characiform fish. Biological Journal of the Linnean Society 88(2): 235-255.
  29. Warren, Ben H., Bermingham, Eldredge, Prys-Jones, Robert P. and Thebaud, Christophe. 2006. Immigration, species radiation and extinction in a highly diverse songbird lineage: white-eyes on Indian Ocean islands. Molecular Ecology 15(12): 3769-3786.

30. Bermingham, Eldredge and Dick, Christopher W. 2005. Overview: The history and ecology of tropical rainforest communities. In: E. Bermingham, C. W. Dick and C. Moritz (Ed.), Tropical rainforests: Past, present, and future: 7-15. Chicago and London: University of Chicago Press.
31. Bermingham, Eldredge, Dick, Christopher W. and Moritz, Craig (Ed.). 2005. Tropical rainforests: past, present, and future. Chicago: University of Chicago Press.
32. Cadena, Carlos Daniel, Ricklefs, Robert E., Jimenez, Ivan and Bermingham, Eldredge. 2005. Is speciation driven by species diversity?. *Nature* 438(4308): E1-E2.
33. Dick, Christopher W., Condit, Richard S. and Bermingham, Eldredge. 2005. Biogeographic history and the high beta diversity of rainforest trees in Panamá. In: R. S. Harmon (Ed.), The Rio Chagres, Panama: A multidisciplinary profile of a tropical watershed series: 259-268. Dordrecht, The Netherlands: Springer.
34. Eberhard, Jessica R. and Bermingham, Eldredge. 2005. Phylogeny and comparative biogeography of *Pionopsitta* parrots and *Pteroglossus* toucans. *Molecular Phylogenetics and Evolution* 36(2): 288-304.
35. Fallon, Sylvia M., Bermingham, Eldredge and Ricklefs, Robert E. 2005. Host specialization and geographic localization of avian malaria parasites: A regional analysis in the Lesser Antilles. *American Naturalist* 165(4): 466-480.
36. Hardesty, Britta Denise, Dick, Christopher W., Kremer, A., Hubbell, Stephen P. and Bermingham, Eldredge. 2005. Spatial genetic structure of *Simarouba amara* Aubl. (Simaroubaceae), a dioecious, animal-dispersed Neotropical tree, on Barro Colorado Island, Panama. *Heredity* 95(4): 290-297.
37. Jiggins, Chris D., Mavarez, Jesus, Beltrán, Margarita, McMillan, Owen, Johnston, Spencer and Bermingham, Eldredge. 2005. A genetic linkage map of the mimetic butterfly, *Heliconius mepomene*. *Genetics* 171: 557-570.
38. Mallarino, Ricardo, Bermingham, Eldredge, Willmott, Keith R., Whinnett, Alaine and Jiggins, Christopher D. 2005. Molecular systematics of the butterfly genus *Ithomia* (Lepidoptera: Ithomiinae): a composite phylogenetic hypothesis based on seven genes. *Molecular Phylogenetics and Evolution* 34(3): 625-644.
39. Moeser, Andrew A. and Bermingham, Eldredge. 2005. Isolation and characterization of eight microsatellite loci for the Neotropical freshwater catfish *Pimelodella chagresi* (Teleostei: Pimelodidae).. *Molecular Ecology Notes* 5(2): 363-365.

40. Moritz, Craig, Dick, Christopher W. and Bermingham, Eldredge. 2005. From the past to the future: evolution, ecology, and conservation of tropical rainforests. In: E. Bermingham, C. W. Dick and C. Moritz (Ed.), Tropical rainforests: Past, present, and future: 1-3. Chicago and London: University of Chicago Press.
41. Moritz, Craig, Dick, Christopher W. and Bermingham, Eldredge. 2005. Overview: Processes, people, and prospects for tropical rainforests. In: E. Bermingham, C. W. Dick and C. Moritz (Ed.), Tropical rainforests: Past, present, and future: 529-531. Chicago and London: University of Chicago Press.
42. Olson, S. L., Fleischer, R. C., Fisher, C. T. and Bermingham, E. 2005. Expunging the “Mascarene starling” *Necropsar leaguati*: archives, morphology and molecules topple a myth. *Bulletin of the British Ornithologists' Club* 125(1): 31-42.
43. Perdices, Anabel, Doadrio, Ignacio and Bermingham, Eldredge. 2005. Evolutionary history of the synbranchid eels (Teleostei: Synbranchidae) in Central America and the Caribbean islands inferred from their molecular phylogeny. *Molecular Phylogenetics and Evolution* 37(2): 460-473.
44. Ricklefs, Robert E., Fallon, Sylvia M., Latta, S., Swanson, B.L. and Bermingham, Eldredge. 2005. Migrants and their parasites. A bridge between two worlds. In: R. Greenberg and P. Marra (Ed.), 210-221.
45. Salazar, Camilo A., Jiggins, Christopher D., Arias, C.F., Tobler, A., Bermingham, Eldredge and Linares, Mauricio. 2005. Hybrid incompatibility is consistent with a hybrid origin of *Heliconius heurippa* Hewitson from its close relatives, *Heliconius cydno* Doubleday and *Heliconius melpomene* Linnaeus. *Journal of Evolutionary Biology* 18(2): 247-256.
46. Smith, Scott A. and Bermingham, Eldredge. 2005. The biogeography of lower Mesoamerican freshwater fishes. *Journal of Biogeography* 32(10): 1835-1854.
47. Warren, Ben H., Bermingham, Eldredge, Prys-Jones, Robert P. and Thebaud, Christophe. 2005. Tracking island colonization history and phenotypic shifts in Indian Ocean bulbuls (Hypsipetes: Pycnonotidae). *Biological Journal of the Linnean Society* 85(3): 271-287.
48. Banford, Heidi M., Bermingham, Eldredge and Collette, Bruce B. 2004. Molecular phylogenetics and biogeography of transisthmian and amphi-Atlantic needlefishes (Belonidae: Strongylura and Tylosurus): perspectives on New World marine speciation. *Molecular Phylogenetics and Evolution* 31: 833-851.
49. Dick, Christopher W., Roubik, David Ward, Gruber, Karl F. and Bermingham, Eldredge. 2004. Long-distance gene flow and cross-Andean dispersal of lowland

- rainforest bees (Apidae: Euglossini) revealed by comparative mitochondrial DNA phylogeography. *Molecular Ecology* 13(12): 3775–3785.
50. Eberhard, Jessica R. and Bermingham, Eldredge. 2004. Phylogeny and biogeography of the *Amazona ochrocephala* (Aves: Psittacidae) complex. *The Auk* 121(2): 318-332.
51. Joseph, Leo, Wilke, Thomas, Bermingham, Eldredge, Alpers, Deryn and Ricklefs, Robert E. 2004. Towards a phylogenetic framework for the evolution of shales, rattles, and rolls in *Myiarchus* tyrant-flycatchers (Aves: Passeriformes: Tyrannidae). *Molecular Phylogenetics and Evolution* 31(1): 139-152.
52. Quenouille, Brice, Bermingham, Eldredge and Planes, Serge. 2004. Molecular systematics of the damselfishes (Teleostei: Pomacentridae): Bayesian phylogenetic analyses of mitochondrial and nuclear DNA sequences. *Molecular Phylogenetics and Evolution* 31(1): 66-88.
53. Ricklefs, Robert E. and Bermingham, Eldredge. 2004. Application of Johnson et al.'s speciation threshold model to apparent colonization times of island biotas. *Evolution* 58(8): 1664–1673.
54. Ricklefs, Robert E. and Bermingham, Eldredge. 2004. History and the species-area relationship in Lesser Antillean birds. *American Naturalist* 163(2): 227-239.
55. Ricklefs, Robert E., Fallon, Sylvia M. and Bermingham, Eldredge. 2004. Evolutionary relationships, cospeciation, and host switching in avian malaria parasites. *Systematic Biology* 53(1): 111-119.
56. Smith, Scott A., Bell, Graham and Bermingham, Eldredge. 2004. Cross-cordillera exchange mediated by the Panama Canal increased the species richness of local freshwater fish assemblages. *Proceedings of the Royal Society (London) B* 271(1551): 1889-1896.
57. Blum, Michael J., Bermingham, Eldredge and Dasmahapatra, Kanchon K. 2003. A molecular phylogeny of the neotropical butterfly genus *Anartia* (Lepidoptera: Nymphalidae). *Molecular Phylogenetics and Evolution* 26(1): 46-55.
58. Cortes-Ortiz, L., Bermingham, Eldredge, Rico, Ciro, Rodriguez-Luna, E., Sampaio, I., Ruiz-Garcia, M. and Eakin, Carlton Mark. 2003. Molecular systematics and biogeography of the Neotropical monkey genus, *Alouatta*. *Molecular Phylogenetics and Evolution* 26(1): 64-81.
59. Dick, Christopher W., Abdul-Salim, Kobinah and Bermingham, Eldredge. 2003. Molecular systematic analysis reveals cryptic tertiary diversification of a widespread tropical rain forest tree. *American Naturalist* 162(6): 691-703.

60. Fallon, Sylvia M., Bermingham, Eldredge and Ricklefs, Robert E. 2003. Island and taxon effects in parasitism revisited: Avian malaria in the Lesser Antilles. *Evolution* 57(3): 606-615.
61. Fallon, Sylvia M., Ricklefs, Robert E., Swanson, B.L. and Bermingham, Eldredge. 2003. Detecting avian malaria: an improved polymerase chain reaction diagnostic. *Journal of Parasitology* 89(5): 1044–1047.
62. Gonzalez, Maribel A., Eberhard, Jessica R., Lovette, Irby J., Olson, Storrs L. and Bermingham, Eldredge. 2003. Mitochondrial DNA phylogeography of the bay wren (Troglodytidae: *Thryothorus nigricapillus*) complex. *The Condor* 105(2): 228-238.
63. McCartney, Michael A., Acevedo, Jenny, Heredia, Christine, Rico, Ciro, Quenouille, Brice, Bermingham, Eldredge and McMillan, W. Owen. 2003. Genetic mosaic in a marine species flock. *Molecular Ecology* 12(11): 2963–2973.
64. Novick, Rachel Roth, Dick, Christopher W., Lemes, Maristerra R., Navarro, Carlos, Caccone, Adalgisa and Bermingham, Eldredge. 2003. Genetic structure of Mesoamerican populations of Big-leaf mahogany (*Swietenia macrophylla*) inferred from microsatellite analysis. *Molecular Ecology* 12(11): 2885–2893.
65. Warren, Ben H., Bermingham, Eldredge, Bowie, Rauri C.K., Prys-Jones, Robert P. and Thebaude, Christophe. 2003. Molecular phylogeography reveals island colonization history and diversification of western Indian Ocean sunbirds (Nectarinia: Nectariniidae). *Molecular Phylogenetics and Evolution* 29(1): 67-85.
66. Beltran, Margarita, Jiggins, Christopher D., Bull, Vanessa, Linares, Mauricio, Mallet, James, McMillan, W. Owen and Bermingham, Eldredge. 2002. Phylogenetic discordance at the species boundary: Comparative gene genealogies among rapidly radiating *Heliconius* butterflies. *Molecular Biology and Evolution* 19(12): 2176-2190.
67. Bermingham, Eldredge. 2002. Evolutionary assembly of the Mesoamerican freshwater fish fauna. *Integrative and Comparative Biology* 42:1195.
68. Cherry, Joshua L., Adler, Frederick R., Johnson, Kevin P., Ricklefs, Robert E. and Bermingham, Eldredge. 2002. Islands, equilibria, and speciation. *Science* 296(5570): 975a.
69. Dasmahapatra, Kanchon K., Blum, Michael J., Aiello, Annette, Hackwell, Stuart, Davies, Neil, Bermingham, Eldredge and Mallet, James. 2002. Inferences from a rapidly moving hybrid zone. *Evolution* 56(4): 741-753.

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