

CURRICULUM VITAE

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Education:

1969-1973 B.A. (*Magna cum laude*), Harvard University.
1973-1979 M.Phil., Ph.D., Yale University.

Honors:

1979 John Spangler Nicholas Prize for the outstanding doctoral dissertation in experimental zoology, Yale University.
2003 Fellow, American Association for the Advancement of Science
2017 Secretary's Research Prize, Smithsonian Institution

Editorial duties:

1995-1997 Editor, Proceedings and Abstracts, 8th International Coral Reef Symposium, Panama.
2001- present Member, editorial board, *Coral Reefs*
2012-2015 Associate Editor, *Coevolution*
2019-present Member, editorial board, *Diversity*

Other activities:

1985 Co-organizer, Symposium on Evolutionary Ecology of Coral Reef Organisms, 5th International Congress on Coral Reefs, Tahiti
1995-1996 Organizing committee, 8th International Coral Reef Symposium, Panama
2000 Organizer, symposium on molecular biogeography of marine organisms, XVIIIth International Congress of Zoology, Athens, Greece
2000 Organizer, symposium on ecology of Caribbean reefs 17 years after the mass mortality of *Diadema antillarum*, 9th International Coral Reef Symposium, Bali
2011 Scientific committee, Primer Congreso Latinoamericano de Equinodermos
2015 Scientific committee, 15th International Echinoderm Conference

Positions Held:

1970-1973 Research Assistant, Department of Marine Invertebrates, Museum of Comparative Zoology, Harvard University
1972-1973 Teaching Assistant, Department of Biology, Harvard University
1974-1976 Teaching Assistant, Department of Biology, Yale University
1978 Research Assistant, Department of Marine Invertebrates, Peabody Museum, Yale University
1979-1980 Staff Biologist, Smithsonian Tropical Research Institute
1981 Private, Greek Army
1982-2007 Staff Biologist, Smithsonian Tropical Research Institute
1992-1993 Visiting Professor, Aristotelian University, Thessaloniki, Greece
1996 Visiting Professor, Universidad de Las Palmas, Tafira, Canary Islands

2003-2007	Director of Marine Research, Smithsonian Tropical Research Institute
2004	Visiting Professor, Princeton University
2007-2008	Acting Deputy Director, Smithsonian Tropical Research Institute
2007-2017	Adjunct Professor, Department of Biology, McGill University
2008-present	Senior Scientist, Smithsonian Tropical Research Institute
2013-2014	Acting Deputy Director, Smithsonian Tropical Research Institute

Professional Societies:

Society for the Study of Evolution
International Society for Reef Studies

Scientific Meetings Attended (*: presented papers; **: symposium speaker, ***: plenary speaker)

1979*	American Society of Zoologists, Tampa, Florida, USA
1980*	Association of Island Marine Laboratories of the Caribbean, Jamaica
1980*	Benthic Ecology Meetings, Williamsburg, Virginia, USA
1980	American Society of Zoologists, Seattle, Washington, USA
1982	Western Society of Naturalists, Long Beach, California, USA
1983*	Benthic Ecology Meetings, Melbourne, Florida, USA
1983*	American Society of Zoologists, Philadelphia, Pennsylvania, USA
1984*	Benthic Ecology Meetings, Baltimore, Maryland, USA
1984*	Fifth International Echinoderm Congress, Galway, Ireland
1985*	Fifth International Congress on Coral Reefs, Tahiti
1985	American Society of Zoologists, Baltimore, Maryland, USA
1986*	Society for the Study of Evolution, Durham, New Hampshire, USA
1987*	Sixth International Echinoderm Conference, Victoria, British Columbia, Canada
1988*	Sixth International Congress on Coral Reefs, Townsville, Australia
1989	Fourth International Conference on Environmental Quality and Ecosystem Stability, Jerusalem, Israel
1990*	Fourth International Congress of Systematic and Evolutionary Biology, College Park, Maryland, USA
1991*	Society for the Study of Evolution, Hilo, Hawaii, USA
1991	Third European Colloquium on Echinoderms, Lecce, Italy
1993*	Fourth Congress of the European Society for Evolutionary Biology, Montpellier, France
1993*	Eighth International Echinoderm Conference, Dijon, France
1994	National Academy of Sciences Colloquium on Tempo and Mode of Evolution, Irvine, California, USA
1994*	Society for the Study of Evolution, Athens, Georgia, USA
1994**	Ninth meeting of the Developmental Biology of the Sea Urchin, Woods Hole, Massachusetts, USA
1995**	Keystone Symposium on Molecular Approaches to Marine Ecology and Evolution, Santa Fe, New Mexico., USA
1995	Society for the Study of Evolution, Montreal, Canada
1995	Fifth Congress of the European Society for Evolutionary Biology, Edinburgh, Scotland
1996**	Endless Forms: Species and Speciation, Asilomar, California, USA
1996	Eighth International Coral Reef Symposium, Panama
1996*	Ninth International Echinoderm Conference, San Francisco, USA

- 1996** American Academy of Underwater Sciences, Scientific Diving Symposium, Washington, DC, USA
- 1997* Society for the Study of Evolution, Boulder, Colorado
- 1997** XXIII Reunión de Interciencia y Jornadas Científicas, Panama
- 1998* Society for the Study of Evolution, Vancouver Canada
- 1998* World Congress of Malacology, Washington, DC
- 1998* Fifth European Conference on Echinoderms, Milan, Italy
- 1999** Use of NASA's remote sensing capabilities to map and monitor the health of coral reefs: present status and future needs, St. Petersburg, Florida
- 1999* Society for the Study of Evolution, Madison, Wisconsin, USA
- 2000*** 10th International Echinoderm Conference, Dunedin, New Zealand.
- 2000* Society of Molecular Biology and Evolution, New Haven, Connecticut, USA
- 2000** XVIIIth International Congress of Zoology, Athens, Greece
- 2000*** Aquatic habitats as ecological islands, Meeting of the British Ecological Society, Plymouth, England
- 2000** 9th International Congress on Coral Reefs, Bali, Indonesia
- 2002** Society of Integrative and Comparative Biology, Anaheim, California, USA
- 2002** 9th International Congress on the Zoogeography and Ecology of Greece and adjacent regions, Thessaloniki, Greece
- 2002** Sixth International Congress of Systematic and Evolutionary Biology, Patras, Greece
- 2003 11th International Echinoderm Conference, Munich, Germany
- 2004** Workshop on use of molecular markers for the study of marine biodiversity, Azores, Portugal
- 2004* 10th International Congress on Coral Reefs, Okinawa, Japan
- 2005* Society for the Study of Evolution, Fairbanks, Alaska
- 2005* Workshop on Geographical Gradients in Biodiversity and Speciation, National Center for Ecological Analysis and Synthesis, Santa Barbara, California, USA
- 2005 Symposium on Barcoding of Coral Reef Organisms, Bocas del Toro, Panama
- 2006** Symposium in Honor of John S. Pearse, Santa Cruz, California, USA
- 2006* Society for the Study of Evolution, Stony Brook, New York, USA
- 2006*** 12th International Echinoderm Conference, Durham, New Hampshire, USA
- 2006* European Coral Reef Society, Bremen, Germany
- 2007* Smithsonian Marine Science Network meetings, Washington, DC, USA
- 2008* 11th International Coral Reef Symposium, Ft. Lauderdale, FL, USA
- 2009** Symposium: Coral Reef Ecosystem Studies: Integrating Science & Management in the Caribbean. La Parguera, Puerto Rico
- 2009*** 34th Scientific Meeting of the Association of Marine Laboratories of the Caribbean, Roseau, Commonwealth of Dominica.
- 2010** Research and Discoveries: The Revolution of Science through Scuba. Washington, D.C. USA
- 2010* European Echinoderm Conference, Göttingen, Germany
- 2011* Society for Integrative and Comparative Biology, Salt Lake City, USA
- 2012 Workshop on Molecular Ecology and Evolution of the Indo-Pacific. National Evolutionary Synthesis Center, Durham, NC.
- 2012 14th International Echinoderm Conference, Brussels, Belgium
- 2012*** Workshop: "Responses of key sea urchin populations to climate change processes: from larvae to ecosystems. Tenerife, Spain

- 2014 Workshop on Molecular Ecology and Evolution of the Indo-Pacific. National Evolutionary Synthesis Center, Durham, NC.
- 2015*** 15th International Echinoderm Conference, Cancun, Mexico
- 2019 Society for the Study of Evolution meetings, Providence, RI, USA

Teaching Experience:

- 1972 Teaching assistant in Introductory Ecology, Harvard University
- 1973 Teaching assistant in Marine Invertebrate Ecology, Harvard University
- 1973-1974 Teaching assistant in Introductory Biology, Yale University
- 1974-1975 Head teaching assistant in Ecology, Yale University.
- 1979-present Adviser to pre- and post-doctoral students Smithsonian Tropical Research Institute
- 1983-1999 Member, Educational Board, Smithsonian Tropical Research Institute
- 1982-1984 Member, Tropical Biology Fellowship Committee, Smithsonian Institution.
- 1990-1991 Member, Ph. D. thesis committee, University of Miami
- 1992-1993 Guest lecturer in undergraduate courses on Genetics and on Evolution, Aristotelian University, Greece
- 1996 Graduate Seminar Course in Universidad de Las Palmas, Canary Islands, Spain
- 1996, 1998 Guest lecturer in Tropical Field Course of Princeton University
- 1999 Guest lecturer in Tropical Marine Invertebrate Course of Princeton University.
- 2002 Member, Ph. D. thesis committee, Duke University
- 2003 Member, Ph. D. thesis committee, Univesidad de Las Palmas, Gran Canaria, Spain
- 2004 Visiting Professor, Course of Tropical Ecology, Princeton University
- 2010 Visiting Professor, Course in Molecular Phylogenetics, CEMarin program, Santa Marta, Colombia
- 2011 Member, Ph. D. thesis committee, McGill University
- 2015 Member, Ph. D. thesis committee, Université Aix Marseille

Administrative Experience:

- 1976 Head Teaching Assistant, Ecology course, Yale University
- 1979-1980 Scientist-in-charge, Naos Marine Laboratory, Smithsonian Tropical Research Institute
- 1979-1980 Scientist-in-charge, San Blas Marine Station, Smithsonian Tropical Research Institute
- 1979-1981 Diving Officer, Smithsonian Tropical Research Institute
- 1982-1986 Deputy Scientist-in-charge, San Blas Marine Station, Smithsonian Tropical Research Institute
- 1990-1992 Scientist in charge of STRI's Research Vessel
- 2003-2007 Director of Marine Research, Smithsonian Tropical Research Institute
- 2007-2008 Acting Deputy Director, Smithsonian Tropical Research Institute
- 2013-2014 Acting Deputy Director, Smithsonian Tropical Research Institute

Languages:

English, Modern and Ancient Greek, Spanish

Research Interests**Evolution:**

Genetic, morphological and ecological divergence of geographically isolated populations.

Phylogeography of marine organisms

The origin of reproductive isolation between populations.

Evolutionary effects of catastrophic events.

Evolution of life history parameters in echinoderms.

Evolution of gamete recognition molecules.

Ecology of tropical marine invertebrates:

Role of sea urchins in coral reef communities.

Coral recruitment.

Dynamics of sea urchin populations.

Impact of mass mortality on coral reef biota.

Reproductive periodicity in marine invertebrates

Publications:

- 106.** T.J. Carrier, **H.A. Lessios**, A. M. Reitzel. 2020c. Eggs of echinoids separated by the Isthmus of Panama harbor divergent microbiota. *Marine Ecology Progress Series*. 648:169-177. doi.org/10.3354/meps13424
- 105.** L. Geyer and **H.A. Lessios**. 2020b. Slow evolution under purifying selection in the gamete recognition protein binding of the sea urchin *Diadema*. *Nature Scientific Reports*. 10:9834 DOI:10.1038/s41598-020-66390-2
- 104.** R. Collin, D. E. Venera-Pontón, A. C. Driskell, K. S. Macdonald, L. Geyer, **H. A. Lessios**, M. J. Boyle. 2020a. DNA Barcoding of larvae uncovers cryptic diversity in echinoids. *Invertebrate Zoology* 2020; 00:e12292 DOI:10.1111/inb.12292
- 103.** A. Hiller and **H.A. Lessios**. 2019d. Marine species formation along the rise of Central America: The anomuran crab *Megalobrachium* *Molecular Ecology* 29:413-428. DOI: 10.1111/mec.15323
- 102.** L. G. E. Wilkins, M. Leray, B. Yuen, R. Peixoto, T. J. Pereira, H. M. Bik., D. A. Coil, J. E. Duffy, E. A. Herre, **H. Lessios**, N. M. Lucey, L. C. Mejia, A. O’Dea, D. B. Rasher, K. Sharp, E. M. Sogin, R. W. Thacker, R. V. Thurber, W. T. Weislo, E. G. Wilbanks, and J. A. Eisen. 2019c. Host-associated microbiomes and their roles in marine ecosystem functions. *PLOS Biology* 17(11): e3000533. doi.org/10.1371/journal.pbio.3000533
- 101.** C. J. Moura, A. G. Collins, R. S. Santos, **H. Lessios**. 2019b. Predominant east to west colonizations across major oceanic barriers: Insights into the phylogeographic history of the hydroid superfamily Plumularioidea, suggested by a mitochondrial DNA barcoding marker. *Ecology and Evolution* 9: 13001-13016. DOI: 10.1002/ece3.5608
- 100.** Eric Crandall, C. Riginos, C. Bird, L. Liggins, E. Treml, M. Beger, P. Barber, B.W. Bowen, S. Connolly, P. Cowman, J. Dibattista, J. Eble, S. Magnuson, J. Horne, M. Kochzius, **H.A. Lessios**, S. Liu, W. Ludt, H. Madduppa, J. Pandolfi, R. Toonen, Contributing Members of the Diversity of the Indo-Pacific Network, M. Gaither. 2019a. The molecular biogeography of the Indo-Pacific: testing hypotheses with multispecies genetic patterns. *Global Ecology and Biogeography* 28:94-960
- 99.** C.J. Moura, **H. Lessios**, J. Cortés, M.S. Nizinski, J. Reed, R.S. Santos, A.G. Collins. 2018c. Hundreds of genetic barcodes shed light on the species-rich hydroid superfamily Plumularioidea (Cnidaria, Medusozoa) provide a guide toward more reliable taxonomy. *Nature Scientific Reports* (2018) 8:17986 | DOI:10.1038/s41598-018-35528-8

98. N. Mongiardino Koch, S. Coppard, **H.A. Lessios**, D. Briggs, R. Mooi, G. Rouse. 2018b A phylogenomic resolution of the sea urchin tree of life. *BMC Evolutionary Biology* (2018) 18:189 doi.org/10.1186/s12862-018-1300-4
97. E. S. Bellis, R. B. Edlund, H. K. Berrios, **H. A. Lessios**, and D. R. Denver. 2018a Molecular signatures of host specificity linked to habitat specialization in *Exaiptasia* sea anemones. *Ecology and Evolution* 2018: 1-14 DOI: 10.1002/ece3.4058
96. Q. Jossart, C. De Ridder, **H.A. Lessios**, M. Bauwens, S. Motreuil, T. Rigaud, R.A. Wattier, B. David. 2017d. Highly contrasted genetic structures between a sea urchin and its parasitic crab in the Caribbean Sea. *Ecology and Evolution* 2017:7:9267–9280. DOI: 10.1002/ece3.3413
95. Coppard, S.A. and **H. A. Lessios**. 2017c. Phylogeography of the sand dollar genus *Encope*: implications regarding the Central American isthmus and rates of molecular evolution. *Nature Scientific Reports* 7: 11520. DOI: 10.1038/s41598-017-11875-w
94. Hiller, A and **H. A Lessios**. 2017b. Phylogeography of *Petrolisthes armatus*, an invasive species with low dispersal ability. *Nature Scientific Reports* 7: 3359. DOI: 10.1038/s41598-017-03410-8
93. **H. A. Lessios** and I. Baums. 2017a. Gene flow in coral reef organisms of the tropical eastern Pacific. In: P.W. Glynn, I.C. Enochs, and D. Manzello (eds.) pp. 477-499 In: *Coral Reefs of the Eastern Pacific*. Springer-Verlag. DOI: 10.1007/978-94-017-7499-4_16
92. A. O’Dea, **H. A. Lessios**, A.G. Coates, R.I. Eytan, L.S. Collins, A.L. Cione, A. de Queiroz, D.W. Farris, R.D. Norris, S.A. Restrepo-Moreno, R.F. Stallard, M.O. Woodburne, O.Aguilera, M.-P. Aubry, W.A. Berggren, A.F. Budd, M.A. Cozzuol, S.E. Coppard, H.Duque-Caro, S.Finnegan, G.M. Gasparini, E.L. Grossman, K.G. Johnson, L.D. Keigwin, N.Knowlton, E.G. Leigh, J.S. Leonard-Pingel, P.B. Marko, N.D. Pyenson, P.G. Rachello-Dolmen, E.Soibelzon, L. Soibelzon, J.A.Todd, G.J. Vermeij, J.B.C. Jackson. 2016c. Formation of the Isthmus of Panama. *Science Advances*, 2: 8, e1600883. DOI: 10.1126/sciadv.1600883
91. S. A. Balaguera-Reina, M. Venegas-Anaya, A. Sánchez, I. Arbelaez, **H. A. Lessios**, L. D. Densmore III. 2016b. Spatial Ecology of the American Crocodile in a Tropical Pacific Island in Central America. *PLOS one* DOI:10.1371/journal.pone.0157152
90. **H. A. Lessios**. 2016a. The great *Diadema antillarum* die-off: 30 years later. *Annual Review of Marine Science* 8:267-283 doi:10.1146/annurev-marine-122414-033857
89. **H. A. Lessios**. 2015e. Appearance of an early closure of the Isthmus of Panama is the product of biased inclusion of data in the meta-analysis. *Proceedings of the National Academy of Sciences, USA* doi/10.1073/pnas.1514719112
88. F. Armstrong and **H. A. Lessios**. 2015d. The evolution of larval developmental mode: insights from hybrids between species with obligately and facultatively planktotrophic larvae. *Evolution and Development*. 17:278-288 DOI: 10.1111/ede.12133
87. S. A. Balaguera-Reina, M. Venegas-Anaya, O. I. Sanjur, **H. A. Lessios**, L. D. Densmore. 2015c. Reproductive Ecology and Hatchlings' Growth Rates of American Crocodile (*Crocodylus acutus*) on Coiba Island, Panama. *South American Journal of Herpetology* 10:10-22
86. Q. Jossart, L. B. Geyer, and **H.A. Lessios**. 2015b. Characterization of eight microsatellite loci for the sea-urchin *Meoma ventricosa* (Spatangoida, Brissidae) through Next Generation Sequencing. *Biochemical Systematics and Ecology* 59:100-103
85. S. Jagadeeshan, S. E. Coppard and **H.A. Lessios**. 2015a. Evolution of gamete attraction molecules: evidence for purifying selection in speract and its receptor, in the pantropical sea urchin *Diadema*. *Evolution and Development* 17:92-108
84. B.W. Bowen, K. Shanker, N. Yasuda, M.C.D Malay, S. von der Heyden, G. Paulay, L.A Rocha, K. A. Selkoe, P.H Barber, S.T. Williams, **H.A. Lessios**, E.D. Crandall, G. Bernardi, C.P. Meyer, K.E. Carpenter, R.J. Toonen. 2014. Phylogeography unplugged:

- Comparative geographic surveys in the genomic era. *Bulletin of Marine Science*. 90: 13-46.
83. H.A. Lessios. 2013d. "Natural" population density fluctuations of echinoids. Do they help predict the future? Pp. 341-359 In: José María Fernández-Palacios, Lea De Nascimento, J. C. Hernández, S. Clemente & J. P. Díaz-González (Eds.) *Climate Change Perspectives from the Atlantic: Past, Present and Future..* Servicio de Publicaciones de la Universidad de La Laguna. Tenerife.
82. H.A. Lessios, H.A. Lasker, D.R. Levitan. 2013c. The use of SCUBA to study early life histories of marine invertebrates. In: M. A. Lang, R. L. Marinelli, S. J. Roberts, P. R. Taylor (eds.) *Research and Discoveries: The revolution of Science Through Scuba*. Smithsonian Press. *Smithsonian Contribution to the Marine Sciences* 39: 87-97
81. S. E. Coppard, K. S. Zigler, and H. A. Lessios. 2013b Phylogeography of the sand dollar genus *Mellita*: cryptic speciation along the coasts of the Americas. *Molecular Phylogenetics and Evolution*. 69:1033-1042.
80. H. A. Lessios and D.R. Robertson. 2013a Speciation in a round planet: phylogeography of the goatfish *Mulloidichthys*. *Journal of Biogeography*, 40:2373-2384. doi:10.1111/jbi.12176
79. H. A. Lessios. 2012d. A sea water barrier to gene flow in corals. *Molecular Ecology*, 21:5390-5392
78. H. A. Lessios and K.S. Zigler. 2012c. Rates of sea urchin bindin evolution. P.p. 136-143 in: R. S. Singh, J. Xu, and R. J. Kulathinal. *Rapidly Evolving Genes and Genetic Systems*. Oxford University Press.
77. K. S. Zigler, M. Byrne, E. C. Raff, H. A. Lessios, and R.A. Raff. 2012b. Natural hybridization in the sea urchin genus *Pseudoboletia* between species without apparent barriers to gamete recognition. *Evolution*. 66: (6) 1695-1708. DOI: 10.1111/j.1558-5646.2012.01609.x
76. H. A. Lessios, S. Lockhart, R. Collin, G. Sotil, P. Sanchez-Jerez, K. S. Zigler, A. F. Perez, M. J. Garrido, L.B. Geyer, G. Bernardi, V. D. Vacquier, R. Haroun, B.D. Kessing. 2012a. Phylogeography and bindin evolution in *Arbacia*, a sea urchin genus with an unusual distribution. *Molecular Ecology*, 21:130-144
75. H. A. Lessios. 2011. Speciation genes in free-spawning marine invertebrates. *Integrative and Comparative Biology*, 51: 456-465
74. D. E. Zulliger and H. A. Lessios. 2010c. Phylogenetic relationships in the genus *Astropecten* (Paxilloidea: Asteroidea) on a global scale: molecular evidence for morphological convergence, occurrence of species-complexes and possible cryptic speciation. *Zootaxa*, 2504: 1-19
73. I. Calderón, C.R.R. Ventura, X. Turon and H.A. Lessios. 2010b. Genetic divergence and assortative mating between color morphs of the sea urchin *Paracentrotus gaimardi*. *Molecular Ecology*, 19:484-493.
72. H.A. Lessios. 2010a. Speciation in sea urchins. pp. 91-101. In: L.G. Harris, S.A. Böttger, C.W. Walker and M.P. Lesser (eds.) *Echinoderms: Durham. Proceedings of the 12th Echinoderm Conference, Durham, New Hampshire*. CRC Press, London [plenary lecture]
71. R. Sponer and H.A. Lessios. 2009e. Mitochondrial phylogeography of the intertidal isopod *Excirrolana braziliensis* on the two sides of the Isthmus of Panama. pp. 219-228. In: M.A. Lang, I.G. Macintyre, and K. Rützler (eds.) *Proceedings of the Marine Science Symposium*. (Smithsonian contributions to the marine sciences, no. 38). Smithsonian Institution Scholarly Press. Washington, D.C.

70. L. B. Geyer and H.A. Lessios. 2009d. Lack of character displacement on the male recognition molecule, bindin, in Atlantic sea urchins of the genus *Echinometra*. *Molecular Biology and Evolution* 26:2135–2146
69. T. Duda and H.A. Lessios. 2009c. Connectivity of populations within and between major biogeographic regions of the tropical Pacific in a widespread marine gastropod. *Coral Reefs* 28: 651-659
68. Isabel Calderón, Xavier Turon, H.A. Lessios. 2009b. Characterization of the sperm molecule bindin in the sea urchin genus *Paracentrotus*. *Journal of Molecular Evolution* 68:366-376.
67. M. P. Miglietta and H. A. Lessios. 2009a. A silent invasion. *Biological Invasions* 11: 825-834
66. C. Vogler, J. Benzie, H.A. Lessios, P. Barber, and G. Wörheide. 2008d. A threat to coral reefs multiplied? Four species of crown-of-thorns starfish. *Biology Letters* 4: 696-699
65. K. S. Zigler, H. A. Lessios, and R. A. Raff. 2008c. Egg energetics, fertilization kinetics, and population structure in echinoids with facultatively feeding larvae. *Biological Bulletin* 215:191–199
64. L. A. Rocha, K. Lindeman, C.R. Rocha, and H.A. Lessios. 2008b. The Amazon barrier, the Isthmus of Panama and speciation in the New World genus *Haemulon* (Teleostei: Haemulidae). *Molecular Phylogenetics and Evolution*. 98:918-928
63. H.A Lessios. 2008a. The Great American Schism: Divergence of marine organisms after the rise of the Central American Isthmus. *Annual Review of Ecology Evolution and Systematics*. 39:63–91.
62. H.A. Lessios, D.R. Robertson, J.D. Cubit. 2007d. Diseminación de la mortalidad masiva de *Diadema* en todo el Caribe. pp.526-530 in: E.G. Leigh Jr, E.A. Herre, and J.B.C. Jackson (eds.). **Ecología y Evolución en los Trópicos**. Smithsonian Tropical Research Institute, Balboa, Panama. [Translation of a paper previously published in *Science*].
61. H.A. Lessios. 2007c. Utilización de los erizos panameños para poner a prueba el reloj molecular. pp.397-401 in: E.G. Leigh Jr, E.A. Herre, and J.B.C. Jackson (eds.). **Ecología y Evolución en los Trópicos**. Smithsonian Tropical Research Institute, Balboa, Panama. [Translation of a paper previously published in *Nature*]
60. H.A. Lessios. 2007b. Reproductive isolation between species of sea urchins. *Bulletin of Marine Science*, 81:191–208, 2007. [Invited contribution]
59. G.G. Mittelbach, D. Schemske, H. V. Cornell, A. P. Allen, J. Brown, M. Bush, S. P. Harrison, A. Hurlbert, N. Knowlton, H. A. Lessios, C. M. McCain, A. R. McCune, Lucinda A. McDade, M. A. McPeck, T. J. Near, T. D. Price, R. E. Ricklefs, K. Roy, D. F. Sax, D. Schluter, J. M. Sobel, M. Turelli. 2007a. Evolution and the latitudinal diversity gradient: Speciation, extinction, and biogeography. *Ecology Letters*, 10:315-331.
58. M. J. Hickerson, E. Stahl and H.A. Lessios. 2006b. Test for simultaneous divergence using approximate Bayesian computation. *Evolution*, 60: 2435-2453.
57. H.A. Lessios and D. R. Robertson. 2006a. Crossing the impassable: genetic connections in 20 reef fishes across the Eastern Pacific Barrier. *Proceedings of the Royal Society, London series. B*, 273: 2201–2208.
56. H.A. Lessios. 2005f. Echinoids of the Pacific waters of Panama: Status of knowledge and new records. *Revista de Biología Tropical* 53 (Sup. 3): 147-170.
55. K.S. Zigler, M.A. McCartney, D. R. Levitan and H. A. Lessios. 2005e. Sea urchin bindin divergence predicts gamete compatibility. *Evolution* 59:2399-2404.

54. B. Stockley, A. B. Smith, T. Littlewood, **H. A. Lessios**, and J.A. Mackenzie-Dodds. 2005d. Phylogenetic relationships of spatangoid sea urchins (Echinoidea): taxon sampling density and congruence between morphological and molecular estimates. *Zoologica Scripta*, 34:447-468.
53. S.R. Palumbi and **H.A. Lessios**. 2005c. Evolutionary animation: How do molecular phylogenies compare to Mayr's reconstruction of speciation patterns? pp. 143-161 in J. Hey, W.M. Fitch and F.J. Ayala. *Systematics and the Origin of Species*. The National Academies Press, Washington, DC. [reprint of article in PNAS].
52. S.R. Palumbi and **H.A. Lessios**. 2005b. Evolutionary animation: How do molecular phylogenies compare to Mayr's reconstruction of speciation patterns? *Proceedings of the National Academy of Sciences, USA*. 102:6566-6572.
51. **H.A. Lessios**. 2005a. *Diadema* populations twenty years following mass mortality. *Coral Reefs* 24:125-127.
50. K.S. Zigler, and **H.A. Lessios**. 2004b. Speciation on the coasts of the New World: Phylogeography, reproductive isolation, and the evolution of bindin in *Lytechinus*. *Evolution* 58:1225-1241.
49. McCartney, M.A. and **H.A. Lessios**. 2004a. Adaptive evolution of sperm bindin tracks egg incompatibility in neotropical sea urchins of the genus *Echinometra*. *Molecular Biology and Evolution* 21:732-745.
48. K.S. Zigler, E.C. Raff, E. Popodi, R.A. Raff and **H.A. Lessios**. 2003d. Adaptive evolution of bindin is correlated with the shift to direct development in the genus *Heliocidaris*. *Evolution* 57:2293-2302.
47. **H.A. Lessios**, J. Kane, and D.R. Robertson 2003c Phylogeography of the pantropical sea urchin *Tripneustes*: contrasting patterns of population structure between oceans. *Evolution* 57:2026-2036.
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