

JAMES THOMAS COSTA

CURRICULUM VITAE

Brief • November 2019

Executive Director
Highlands Biological Station
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EDUCATION

- Ph.D. 1992 University of Georgia
Program: Population Genetics/Entomology
Advisor: Dr. Kenneth G. Ross
- M.S. 1988 University of Georgia
Program: Entomology/Community Ecology
Advisor: Dr. D. A. Crossley, Jr.
- B.S. 1985 State University of New York College at Cortland
Program: Biology/Philosophy; SUMMA CUM LAUDE
Advisor: Dr. Terrence D. Fitzgerald

ACADEMIC APPOINTMENTS AND FELLOWSHIPS

- 2016-Present Adjunct Faculty, Department of Biology, UNC-Chapel Hill
- 2013-Present Adjunct Faculty, Institute for the Environment, UNC-Chapel Hill
- 2012-2013 Fellow [in Residence], *Wissenschaftskolleg zu Berlin*, Berlin, Germany
- 2006-Present Executive Director, Highlands Biological Station
Highlands, North Carolina
- 2006-Present Professor of Biology, Western Carolina University
- 2004-2005 Jeanne Rosselet Fellow [in Residence], Radcliffe Institute for Advanced
Study, Harvard University
- 1 Sept. 2005- Interim Director, Highlands Biological Station
January 2006 Highlands, North Carolina

July 2004- June 2007	H. F. and Katherine P. Robinson Professor of Biology Department of Biology, Western Carolina University
August 2002- June 2004	Associate Professor of Biology Department of Biology, Western Carolina University
August 1996- Present	Associate Research Scientist, Dept. of Entomology Museum of Comparative Zoology, Harvard University
August 1996- July 2002	Assistant Professor of Biology Department of Biology, Western Carolina University
July 1994- June 1996	NSF/Sloan Postdoctoral Research Fellow in Molecular Evolution Museum of Comparative Zoology, Harvard University
Jan. 1993 - June 1994	Postdoctoral Fellow in Biology (with Dr. N. E. Pierce) Museum of Comparative Zoology, Harvard University

SELECTED HONORS AND AWARDS

2018	Finalist, 2018 AAAS/Subaru SB&F Prize for Excellence in Science Books for <i>Darwin's Backyard: How Small Experiments Led to a Big Theory</i>
2017	<i>Alfred Russel Wallace Medal</i> ; Wallace Memorial Fund, London http://wallacefund.info/content/award-silver-wallace-medal-2017
2017–2019	Distinguished Lecturer; Sigma Xi Scientific Research Honor Society
2016	Million Dollar Circle Award; Sponsored Programs, Western Carolina University
2015	25 th Joseph LeConte Scholar; Georgia Southern University, Statesboro, Georgia
2014, 2015	Finalist, Outstanding Educator in Conservation Award; Wild South, Asheville, North Carolina
2013	Fellow; Linnean Society of London
2012-2013	Fellow in Residence; <i>Wissenschaftskolleg zu Berlin</i> [Berlin Institute for Advanced Study], Berlin, Germany
2012	Alumnus of the Year Award; SUNY Cortland, Cortland, New York
2012	Outstanding Biodiversity Educator of the Year; Discover Life, Great Smoky Mountains National Park

- 2011 Partnership Award in Science, Mathematics, and Technology Education [on behalf of Highlands Biological Station]; North Carolina Science, Mathematics, and Technology Education Center, Research Triangle Park, NC
- 2004-2007 H. F. and Katherine P. Robinson Professorship, Department of Biology, Western Carolina University
- 2004-2005 Jeanne Rosset Fellow, Radcliffe Institute for Advanced Study, Harvard University

PUBLICATIONS

• BOOKS

- Smith, C., J. T. Costa, and D. Collard (eds.). 2019. *An Alfred Russel Wallace Companion*. Chicago, Ill.: University of Chicago Press.
- Costa J. T. 2017. *Darwin's Backyard: How Small Experiments Led to a Big Theory*. New York: W. W. Norton.
- Costa J. T. 2014. *Wallace, Darwin, and the Origin of Species*. Cambridge, Mass.: Harvard University Press.
- Costa, J. T. 2013. *On the Organic Law of Change: A Facsimile Edition and Annotated Transcription of Alfred Russel Wallace's Species Notebook of 1855-1859*. Cambridge, Mass.: Harvard University Press.
- Costa, J. T. (text) and R. M. Sargent (photographer). 2012. *Highlands Botanical Garden: A Naturalist's Guide*. Highlands, NC: Highlands Biological Foundation, Inc.
- Costa, J. T. 2009. *The Annotated Origin: A Facsimile of the First Edition of On the Origin of Species*. Cambridge, Mass.: Belknap/Harvard University Press.
- Costa, J. T. 2006. *The Other Insect Societies*. Cambridge, Mass.: Belknap/Harvard University Press.

—IN PROGRESS

- Costa, J. T. and E. E. Yale. *The Annotated Descent*. Princeton, NJ: Princeton University Press.

• JOURNALS AND BOOK CHAPTERS [SINCE 2000]

- Smith, C. H, J. T. Costa, and M. Glaubrecht. 2019. Alfred Russel Wallace's "Die Permanenz der Continente und Oceane." *Archives of Natural History* 46(2): 265–282.
- Costa, J. T. 2018. The other insect societies: Overview and new directions. *Current Opinion in Insect Science*. Special Issue on Social Evolution. 28: 40–49.

- Lihoreau, M., T. Gómez-Moracho, C. Pasquaretta, J. T. Costa, and J. Buhl. 2018. Social nutrition: An emerging field in insect science. *Current Opinion in Insect Science*. Special Issue on Social Evolution. 28: 73–80.
- Woodley, S. K., J. T. Costa, and R. Bruce. 2017. Introduction to the Special Highlands Conference on Plethodontid Salamander Biology. *Herpetologica* 73: 177–179.
- Morris, J. R., J. T. Costa, and A. Berry. 2015. Adaptations: Using Darwin's *Origin* to teach biology and writing. *Evolution* 69: 2556–2560.
- Costa, J. T. 2015. Sailing the backyard *Beagle*: Darwin-inspired voyages of discovery in backyard and schoolyard. pp. 131–146 In: C. Boulter, D. Sanders, and M. Reiss (eds.), *Darwin-Inspired Learning*. Rotterdam and Boston: Sense Publishers.
- Costa, J. T. 2014. Rediscovering Wallace's 'Species Notebook.' *Reports of the National Center for Science Education* 34(3): 1.1–1.5.
- Costa, J. T. 2013a. Hamiltonian inclusive fitness: A fitter fitness concept. *Biology Letters* 9(6): 20130335. doi: 10.1098/rsbl.2013.0335.
- Costa, J. T. 2013b. Engaging with Lyell: Alfred Russel Wallace's Sarawak Law and Ternate papers as reactions to Charles Lyell's *Principles of Geology*. *Theory in Biosciences* 132(4): 225–237.
- Costa, J. T. 2013c. Synonymy and its discontents: Alfred Russel Wallace's nomenclatural proposals from the 'Species Notebook' of 1855–1859. *Bulletin of Zoological Nomenclature* 70: 131–148.
- Costa, J. T. 2013d. Wallace on the evolutionary trail. *Current Biology* 23(24): R1069–R1071.
- Costa, J. T. 2012. New landscapes and new eyes: The many voyages of Charles Darwin. pp. 42–55 In: S. G. da Silva et al. (eds.), *(Dis)Entangling Darwin: Cross-Disciplinary Reflections on the Man and His Legacy*. Newcastle, UK: Cambridge Scholars Publishing.
- Lihoreau, M., J. T. Costa, and C. Rivault. 2012. The social biology of domiciliary cockroaches: colony structure, kin recognition and collective decisions. *Insectes Sociaux* 59: 445–452.
- Costa, J. T. 2010. Social evolution in 'other' insects and arachnids. In: Breed M.D. and Moore J. (eds) *Encyclopedia of Animal Behavior*, pp. 231–241. Oxford: Academic Press.
- Costa, J. T. 2009. Darwinian revelation: tracing the origin and evolution of an idea. *BioScience* 59: 886–894.

- Costa, J. T. and T. D. Fitzgerald. 2005. Social terminology revisited: where are we a decade later? *Annales Zoologici Fennici* 42: 559–564.
- Costa, J. T., T. D. Fitzgerald, A. Pescador-Rubio, J. Mays, and D. H. Janzen. 2004. Social behavior of larvae of the Neotropical processionary weevil *Phelypera distigma* (Boheman) (Coleoptera: Curculionidae: Hyperinae). *Ethology* 110: 515–530.
- Fitzgerald, T. D., A. Pescador-Rubio, M. T. Turna, and J. T. Costa. 2004. Trail marking and processionary behavior of the larvae of the weevil *Phelypera distigma* (Coleoptera: Curculionidae). *Journal of Insect Behavior* 17: 627–646.
- Costa, J. T., T. D. Fitzgerald, and D. H. Janzen. 2004. Trail-following behavior and natural history of the social caterpillar of *Arsenura armida* in Costa Rica (Lepidoptera: Saturniidae: Arsenurinae). *Tropical Lepidoptera* 12: 17–23.
- Costa, J. T. 2003. Teaching Darwin with Darwin. *BioScience* 53: 1030–1031.
- Costa, J. T. and K. G. Ross. 2003. Fitness effects of group merging in a social insect. *Proceedings of the Royal Society of London, B* 70: 1697–1702.
- Costa, J. T., D. A. Gotzek, and D. H. Janzen. 2003. Late-instar shift in foraging strategy and trail-pheromone use by caterpillars of the Neotropical moth *Arsenura armida* (Saturniidae: Arsenurinae). *Journal of the Lepidopterist's Society* 57: 220–229.
- Flowers, R. W. and J. T. Costa. 2003. Larval communication and group foraging dynamics in the red-headed pine Sawfly, *Neodiprion lecontei* (Fitch) (Hymenoptera: Symphyta: Diprionidae). *Annals of the Entomological Society of America* 96: 336–343.
- Costa, J. T. 2002. Scale models? What insect societies teach us about ourselves. *Proceedings of the American Philosophical Society* 146: 170–180.
- Costa, J. T. and R. W. Louque. 2001. Group foraging and trail following behavior of the red-headed pine sawfly *Neodiprion lecontei* (Fitch) (Hymenoptera: Symphyta: Diprionidae). *Annals of the Entomological Society of America* 94: 480–489.
- Ruf, C., J. T. Costa, and K. Fiedler. 2001. Trail-based communication in social caterpillars of *Eriogaster lanestris* (Lepidoptera: Lasiocampidae). *Journal of Insect Behavior* 14: 231–245.

• SELECTED MAGAZINES, NEWSLETTERS, ABSTRACTS, CORRESPONDENCE, BOOK REVIEWS, ENCYCLOPEDIA ARTICLES

- Costa, J. T. 2019. The Truth About Animals, by Lucy Cooke. *Quarterly Review of Biology* 94: 218–219. [Book Review]
- Costa, J. T. 2019. Social Evolution in “Other” Insects and Arachnids. In: Choe, J.C. (Ed.), *Encyclopedia of Animal Behavior*, (2nd ed.). vol. 4, pp. 617–631. Elsevier, Academic Press. [2019 update of 2010 article]

- Costa, J. T. 2018. The impish side of evolution's icon. *American Scientist* 106: 104–111.
- Costa, J. T. 2017. A fool's experiments: Lessons from an inveterate experimentiser. *PuLSe* 36 (December 2017): 4–5.
- Costa, J. T. 2017. On the face of it: Darwin and the evolution of expression. *Undark Magazine*, 3 November 2017: <https://undark.org/article/wilo-darwin-evolution/>
- Costa, J. T. 2015. The consilient Mr. Wallace. *Skeptic Magazine* 20(3): 18–23.
- Costa, J. T. and G. Beccaloni. 2014. Deepening the darkness? Alfred Russel Wallace in the Malay Archipelago. *Current Biology* 24(22): R1070–R1072. [Book Review]
- Costa, J. T. 2013. *On the Organic Law of Change: Alfred Russel Wallace and the book that should have been.* *Evolve* [Natural History Museum, London] 17: 30–33.
- Costa, J. T. 2010. Translated from the *Origin(al): A review of The Origin Then and Now: An Interpretive Guide to the Origin of Species*, by David N. Reznick. *BioScience* 60: 648–649. [Book Review]
- Costa, J. T. 2010. Correspondence Course: A review of *The Correspondence of Charles Darwin, Volume 17. Integrative and Comparative Biology* 50: 256–259. [Book Review]
- Costa, J. T. 2009. "Mem. Bartram:" On Charles Darwin's reading of William Bartram. *Chinquapin* (newsletter of the S. App. Botanical Soc.) & NC Bartram Trail Society Newsletter, Fall 2009.
- Costa, J. T. 2007. How a naturalist found safe colours for soldiers. *Nature* 448: 408.
- Costa, J. T. 1997. Caterpillars as social insects. *American Scientist* 85: 150–159.

GRANTS

• SELECTED RESEARCH AND DEVELOPMENT GRANTS [SINCE 2000]

- | | |
|------|---|
| 2017 | National Science Foundation – Field Station/Marine Lab program (co-PI)
<i>A Modernized Aquatics Laboratory for Research & Training at Highlands Biological Station</i> |
| 2016 | Burroughs-Wellcome Fund Student Science Enrichment Program (co-PI)
<i>Watershed Moments: Exploring Science and Math in Cullowhee Creek</i> |
| 2013 | UNC Office of Research Genomics Fund (co-PI)
<i>Enhancing infrastructure for biological collections and genomic accession sampling at Highlands Biological Station</i> |

- 2012 National Science Foundation – Field Station/Marine Lab program (co-PI)
Modernized Research & Training Laboratories for Coker West Wing, Highlands Biological Station
- Fellowship, *Wissenschaftskolleg zu Berlin* [Berlin Institute for Advanced Study], Berlin, Germany, 2012-2013 academic year (PI)
- 2009 University of North Carolina Office of Research (PI)
Molecular ecology research equipment for Highlands Biological Station
- 2007 National Science Foundation – Field Station/Marine Lab program (co-PI)
Teaching laboratories and classrooms for Highlands Biological Station
- 2005 National Science Foundation – MRI/RUI program (co-PI)
Acquisition of a genetic analyzer and real-time PCR system machine for undergraduate research
- 2004 Radcliffe Institute for Advanced Study, Harvard University (PI)
Reconsidering the insect sociality paradigm
- 2004 UNC Office of Research Biotechnology Initiative (PI)
MobiLab: Development of a mobile biotechnology laboratory
- 2000 National Science Foundation – ROA program (co-PI with D. H. Janzen)
*Foraging behavior of *Arsenura armida* (Lepidoptera: Saturniidae) in the Area de Conservación Guanacaste, Costa Rica*

TEACHING

• WESTERN CAROLINA UNIVERSITY

Primary courses presently taught:

- Darwin's *Origin of Species* (U/G)
- Biogeography (G)

Other campus-based courses:

- Darwinian Revolution Seminar (U/G)
- Genetics and Evolution (U)
- Environmental Biology (U, Nonmajors)
- Forensic Biology (U, Nonmajors)
- Entomology (U/G)
- Bioethics and Biotechnology (U)

Field courses:

- Insect Behavior (U/G)
- Hawaiian Ecology and Evolution (U/G)
- Desert Ecology (U/G)
- Evolution in the Blue Ridge: Teaching Darwin with Darwin for Science Educators

• UNC-CHAPEL HILL INSTITUTE FOR THE ENVIRONMENT

2006-2018. Coordinator and instructor in fall-term semester-in-residence program for UNC-Chapel Hill students at Highlands Biological Station; program and coursework focus on regional biogeography, biodiversity, conservation biology, and land use.

• HARVARD UNIVERSITY

2005-2014. Co-Instructor (with Dr. Andrew Berry), Harvard Summer Program in Darwin and the History of Evolutionary Biology, Queens College, University of Oxford, UK.

1995-1996. Non-resident Tutor in Biology, Winthrop House, Harvard University.

1994. History of Life [evolutionary biology] (BS 16); with Prof. S. J. Gould.

1993. Terrestrial Arthropods (BS 155); with Prof. N. E. Pierce.

1993. Classical and Molecular Genetics (BS 14); with Profs. M. Meselson and W. Gelbart.

• GRADUATE STUDENTS

15 MS students graduated since 1998

Invited PhD committees: University of Rennes, France; University of Tennessee, Knoxville

CONSULTING, PANELS, WORKSHOPS [SINCE 2000]

2016 Wildsumaco Biol. Station NSF planning workshop, Ecuador, May 2016.

2015 Wildsumaco Biological Station NSF planning workshop, Francis Marion University, Florence, SC, 14-15 December 2015.

Speaker and Panelist, *Darwin Goes Digital: Celebrating the Darwin Manuscripts Project*, American Museum of Natural History, New York, 10 February 2015.

2014 Keynote speaker, History of Teaching Natural History conference, Horniman Museum, London, UK, 10-11 October 2014: "*Educational outposts: The field station tradition of biological sciences education in the United States.*"

2011-2013 Working Group panel, National Evolutionary Synthesis Center (NESCent), Duke University: *Large-scale demographic, network, and behavioral trait analyses of sociality.*

2010 Invited participant, *Evolution of Insect Sociality: An Integrative Modeling Approach* catalysis meeting, National Evolutionary Synthesis Center (NESCent), Duke University, October 2010.

Panelist, *The Human Spark, Revisited*; North Carolina Science Leadership Association meeting, November 2010.

Profiled in "*Real-Life Science Mysteries*" by Colleen Kessler (2010, Prufrock Press); exploration of hands-on science for grades 5-8.

- 2009 Panelist, UNC-TV special screening of *The Human Spark*, PBS program on human evolution, 8 October 2009.
- Panelist, *RE: Design* post-production discussion, North Carolina State University, 4 November 2009.
- Panelist, Darwin and the *Origin of Species*, Appalachian State University, 19 November 2009.
- Content consultant on National Geographic Magazine article “*What Darwin Didn’t Know*,” February 2009 issue.
- Speaker on human evolution, Center for Life Enrichment program, Highlands, North Carolina, June 2009.
- Faculty advisor and co-developer, *Darwin’s (R)evolution* exhibit, Hunter Library, Western Carolina University, February-December 2009.
- 2008 Speaker on human evolution and diversity in North Carolina Center for the Advancement of Teaching seminar *Climbing the Double Helix: Is DNA Destiny?* November 10-14, 2008.
- 2007 Speaker on “Responsibilities of Scientists to the Public,” *Debating Science* workshop, Center for Ethics, University of Montana, August 2007.
- Co-developer, Highlands Biological Station William Bartram exhibit, trail, and guidebook; *Bartram’s Journey* exhibit, Mountain Heritage Center Museum, Western Carolina University.
- Speaker on Darwin’s *Origin of Species*, Center for Life Enrichment program, Highlands, North Carolina, May 2007.
- 2006 Speaker on insect sociality, Center for Life Enrichment program, Highlands, North Carolina, June 2006.
- 2005 Speaker, *Where Art and Science Intersect* staff development symposium, Newark Museum, Newark, New Jersey, October 2005: “*Small Wonders*”
- 2004 Web quiz and testbank author for *iGenetics* genetics textbook (Benjamin-Cummings/Addison-Wesley Publishers).
- 2003 Speaker on Darwin and evolution in North Carolina Center for the Advancement of Teaching seminar *Science’s Time Machine: How Scientists and Writers Tell the Story of Life*, November 17-21, 2003.
- 2003 Invited speaker on forensic genetics, North Carolina Criminal Justice Association, March 2003.

- 2003 Invited speaker on genetically modified organisms, North Carolina Dietetic Association, May 2003.
- 2002 Benjamin-Cummings/Addison-Wesley Publishers.
Author of end-of-chapter “Evolution Connection” questions for Biology majors textbook *Biology*, 6th ed. (Campbell et al.).
- 2001 & 2002 Speaker on GMOs and forensic biology in North Carolina Center for the Advancement of Teaching seminar *From Frankenstein to Frankenfoods: Genetic Science for Non-scientists*, April 2001 and November 2002.
- 2000 Chapter reviewer for Benjamin-Cummings/Addison-Wesley introductory biology textbooks *Biology* and *Essential Biology*.

STUDY LEADER/TRAVEL LECTURER

- 2019 Leader/lecturer, Harvard Alumni Association Travel.
Madagascar: The Eighth Continent, September 2019.
- 2018 Leader/lecturer, Center for Life Enrichment Travel.
Chile and Patagonia, February 2018.
- 2017 Leader/lecturer, Harvard Alumni Association Travel.
New Zealand by Sea, January-February 2017.
- 2016 Leader/lecturer, Center for Life Enrichment Travel.
Orchids & Chocolate: Mexico City, Puebla, & Oaxaca, November 2016.
- 2015 Leader/lecturer, Harvard Museums of Science and Culture Travel.
Jungle Rivers: Amazonia and Guianas, April 2015.
- 2013 Leader/lecturer, Highlands CLE & Harvard Museums of Science and Culture. *Galápagos Islands*, August 2013.
- 2012 Leader/lecturer, Harvard Museum of Natural History / National Geographic-Lindblad Expeditions. *Galápagos Islands*, February 2012.
- 2010 Leader/lecturer, Harvard Museum of Natural History / National Geographic-Lindblad Expeditions. *Galápagos Islands*, August 2010.
- 2009 Leader/lecturer, Harvard Museum of Natural History / National Geographic-Lindblad Expeditions. *Galápagos Islands*, April 2009.

PROFESSIONAL SERVICE

Current Boards:

International: Trustee, Charles Darwin Trust, London; Down House Stakeholder's Group, Down House, Downe, UK

Local: Coalition for Nonnative Invasive Plant Management, Highlands, NC.

Past Boards: Highlands-Cashiers Land Trust; North Carolina Bartram Trail Society; Association of Southeastern Biologists; Center for Life Enrichment, Highlands, NC.

Grant reviewer: National Science Foundation (ad hoc + panelist), US Department of Agriculture, National Geographic Society, Radcliffe Institute for Advanced Study, Israel Science Foundation, Templeton Foundation

Manuscript reviewer: *American Naturalist*, *Animal Behavior*, *Annals of the Entomological Society of America*, *Behavioral Ecology and Sociobiology*, *Behavioral Ecology*, *Biological Journal of the Linnean Society*, *Biology Letters*, *BioScience*, *Biotropica*, *Canadian Entomologist*, *Centaurus*, *Entomologia Experimentalis et Applicata*, *Entomological Science*, *Ethology*, *Evolution*, *Journal of Insect Behavior*, *Physiological Entomology*, *PLoS One Biology*, *Proceedings of the Royal Society of London*, *Southeastern Naturalist*, *Studies in History and Philosophy of Biological and Biomedical Sciences*, *Trends in Microbiology*

Book proposal reviewer: Cambridge University Press, Columbia University Press, Harvard University Press, Indiana University Press, MIT Press, Oxford University Press, Princeton University Press, University of Chicago Press, World Scientific Press, Yale University Press.

Invited examiner:

Ph.D. examiner, Macquarie University, New South Wales, Australia: "Maternal care and social behaviour in the hibiscus harlequin bug, *Tectocoris diophthalmus*," by Raelene A. Giffney, June 2014.

University of Rennes, Rennes, France: "Organisation and functioning of social groups in a gregarious cockroach: Another insect society," by M. Mathieu Lihoreau, February 2009.

External examiner, *Action de Recherche Concertée* (ARC) proposal, Université Libre de Bruxelles, Brussels, Belgium: "Individual and collective issues in dispersal and aggregation: from proximal causes to ultimate consequences at contrasting scales," by Drs. Serge Aron, Jean-Louis Deneubourg, and Jean-Claude Grégoire, December 2009.

Co-organizer: Charles Darwin Bicentennial Symposium, Association of Southeastern Biologists annual meeting, Birmingham, Alabama, 1-4 April 2009.

Guest editor (2007-2011): *Southeastern Naturalist*

Invited speaker, local organizations: Garden Club of America, Wild Azalea Garden Club, Laurel Garden Club, Mountain Garden Club, Sky Valley Garden Club, Otto Garden Club, Cashiers Village Nature Series, Highlands Rotary, Sylva Rotary, Cashiers Rotary, Georgia ForestWatch, Cashiers Historical Society, Hudson Public Library, Jackson Co. Genealogical Society, Macon County Public Library, Jackson County Public Library, City Lights Bookstore, Malaprops Bookstore, NC Bartram Trail Society, Highlands Center for

Life Enrichment, Highlands Institute for American Religious and Philosophical Thought,
Tryon Garden Club, Highlands Plateau Audubon Society

PROFESSIONAL SOCIETIES

American Association for the Advancement of Science, Linnean Society of London
(Fellow), Sigma Xi Scientific Research Honor Society, Society for the History of Natural
History

INVITED DEPARTMENTAL SEMINARS

Appalachian State University, Central Connecticut State University, Clemson University, College of
Charleston, Cornell University, Duke University, , East Tennessee State University, Elisha Mitchell
Audubon Society, Francis Marion University, Kalamazoo College, Mountain Lake Biological Station,
National Evolutionary Synthesis Center, SUNY Buffalo, The Citadel, Tufts University, University of
California-Berkeley, University of Georgia, University of North Georgia, UNC-Asheville, UNC-Chapel
Hill, UNC-Charlotte, UNC-Greensboro, UNC-Pembroke, University of Missouri, University of New
Hampshire, University of Rochester, University Paul Sabatier (Toulouse, France), Utah State University,
Vanderbilt University

PAPERS PRESENTED [SINCE 2000]

- Costa, J. T. 2019. "Crushed under a mountain of facts:" Wallace and Darwin on sexual
selection and human evolution. *A "Central and Controlling Incident:" Celebrating
The Malay Archipelago and Alfred Russel Wallace's Intellectual Legacy*. Linnean
Society of London, 7 November 2019.
- Costa, J. T. 2019. Alfred Russel Wallace's biogeographic vision in space and time. *A
"Central and Controlling Incident:" Celebrating The Malay Archipelago and Alfred
Russel Wallace's Intellectual Legacy*. Linnean Society of London, 7 November 2019
- Costa, J. T. 2019. An unnatural naturalness? On the nature of humanity and perspectives
on the Anthropocene. *Humanities in the Age of Globalization* conference, Akaki
Tsereteli State University, Kutaisi, Georgia, 1–2 November 2019.
- Costa, J. T. 2013. On the Organic Law of Change: Alfred Russel Wallace's evolutionary
insights and arguments in his "Species Notebook" of 1855-1859. *Unremitting
Passion for the Beauty and Mystery of the Natural World*: Linnean Society of London
& Society for the History of Natural History joint Alfred Russel Wallace Centenary
Event, Bournemouth, UK, 7 June 2013.
- Costa, J. T. 2011. Social terminology redux, or, What's in a name? Invited symposium
speaker, Entomological Society of America National Meeting, Reno, Nevada, 13-16
November 2011.
- Costa, J. T. 2009. New Landscapes and new eyes: The many voyages of Charles Darwin.
(Dis)Entangling Darwin: Cross-Disciplinary Reflections on the Man and his Legacy,
Universidade do Porto, Porto, Portugal, 4-5 December 2009.

- Costa, J. T. 2009. Darwin evolving: A historical perspective on Darwin's view of natural selection and ecology. *Charles Darwin Bicentennial Symposium*, Association of Southeastern Biologists annual meeting, Birmingham, Alabama, April 1-4, 2009.
- Costa, J. T. 2008. Invited Plenary Speaker, 4th European meeting of the International Union for the Study of Social Insects, La Roche-en-Ardenne, Belgium, 30 August – 4 September 2008.
- Costa, J. T. 2007. Forms and functions of social networks in larval societies. Symposium speaker, Entomological Society of America National Meeting, San Diego, California.
- Costa, J. T. 2005. Social biology of a processionary weevil. Symposium speaker, Entomological Society of America National Meeting, Ft. Lauderdale, Florida.
- Costa, J. T. 2003. Fitness effects of group merging in eastern tent caterpillars (*Malacosoma americanum*): The benefits of cooperating with non-kin. Southeastern Population Ecology and Genetics Group, Camp Sequoia, Virginia.
- Costa, J. T. 2003. Fitness effects of group merging in eastern tent caterpillars (*Malacosoma americanum*): The benefits of cooperating with non-kin. Caterpillar Biodiversity Workshop, Tropical Dry Forest Research Station, Santa Rosa National Park, Costa Rica.
- Costa, J. T. 2003. Presenter in workshop “Application of digital technology to the study of insect behavior,” UNAM Biological Research Station, Chamela, Mexico.
- Costa, J. T. 2001. The sociality lexicon past, present, and future: toward an inclusive concept of animal sociality. 27th International Ethological Conference, Tübingen, Germany.
- Costa, J. T. and K. G. Ross. 2000. Effects of genetic heterogeneity on eastern tent caterpillar colony performance. Southeastern Population Ecology and Genetics Group, Highlands, North Carolina.
- Costa, J. T. and K. G. Ross. 2000. Genetic variation for behavior expression and its implications for social evolution in tent caterpillars. Society for the Study of Evolution, Bloomington, Indiana.

KEYNOTES AND OTHER INVITED PUBLIC TALKS

- 2019 *Life@WesternCarolina* lecture series, Cullowhee & Asheville, October 2019: "Ancestors within us: Insights, promise, and perils of direct-to-consumer DNA testing."
- 2018 Invited Lecturer on Darwin and Wallace, Southwest University School of Life Sciences, Chongqing, China, May-June 2018.

Darwin Day Lecturer, Department of Integrative Biology, UC-Berkeley
Sigma Xi Science Cafe speaker, Sylva, North Carolina

2017 *4th Annual Alfred Russel Wallace Lecture*. University College London, UK, 14 October 2017: "Charles Darwin, Alfred Russel Wallace, and the Great Transmutation Debate."

Darwin's Backyard tour: Decatur Book Festival (2 September), Harvard Museums of Natural History (14 September), Google (14 September), NY Botanical Garden/LuEsther T. Mertz Library (22 September), Down House, UK (6 October), Oxford University Museum of Natural History, Oxford, UK (13 October).

2016 Darwin Day speaker, Gray Fossil Site, Gray, TN, 6 February 2016: "Wallace and Darwin on the Evolutionary Trail."

2015 *25th Joseph LeConte Lecture*, Georgia Southern University, Statesboro, GA, 28 Sept 2015: "Wallace and Darwin on the Evolutionary Trail."

Keynote Speaker, Society of Building Science Educators annual meeting, Highlands, NC, June 2015: "Welcome to Our Hotspot."

Keynote Speaker, Undergraduate Research Symposium, Berry College, Mt. Berry, GA, 23 April 2015: "The consilient Mr. Wallace."

Keynote Speaker, Sigma Xi Scientific Research Society Banquet, Appalachian State University, Boone, NC, 27 April 2015: "Charles Darwin: Zealous in Research."

Speaker and Panelist, *Darwin Goes Digital: Celebrating the Darwin Manuscripts Project*, American Museum of Natural History, New York, 10 February 2015: "In Celebration of the Darwin Manuscripts."

Darwin Day speaker, *'Valentine to Alfred Russel Wallace event'*, Daily Planet Theater, Museum of Natural Sciences, Raleigh, NC, February 2015: "Wallace and Darwin on the Evolutionary Trail."

Darwin Day speaker, Western Carolina University, February 2015: "Teaching Darwin With Darwin, or, Sailing the Backyard *Beagle*."

2014 *'Following in the Bartrams' Footsteps' Exhibition Lecture Series*, North Carolina Botanical Garden, UNC-Chapel Hill, 24 August 2014: "Bartram: Well Traveled."

Keynote Address, Experiencing Evolution: A Professional Development Workshop for Undergraduate Educators. Society for the Study of Evolution, June 2014. "Sailing the backyard *Beagle*: Darwin-inspired 'MacGyver science' for home and school."

Life@WesternCarolina lecture series, Cullowhee & Asheville, September & October 2014: "It's Evolutionary, My Dear Watson."

ALLELE speaker 2014, University of Alabama, Tuscaloosa, AL, March 2014: "*The Force of Admiration*: Insights from Alfred Russel Wallace's 'Species Notebook' of 1855-1859."

Science Café, North Carolina Museum of Natural Sciences, Raleigh NC, June 2014: "The Other Darwin: Alfred Russel Wallace and the Origin of Species."

2nd Annual Alfred Russel Wallace Lecture. Natural History Museum, London, UK, 30 July 2014: "Wallace, Darwin, and the Origin of Species."

Department of Continuing Education, University of Oxford, Oxford, UK, 24 July 2014: "Wallace and Darwin on the Evolutionary Trail."

2013 *Science Connections* public talk, Museum of Natural Sciences, Raleigh, NC, 20 November 2013: "'*The Force of Admiration*,' or, the Consilient Mr. Wallace: Insights from Alfred Russel Wallace's 'Species Notebook' of 1855-1859."

Wallace Centenary: Natural Selection and Beyond, American Museum of Natural History, New York, 12 November 2013: "The Consilient Mr. Wallace: Insights from Alfred Russel Wallace's 'Species Notebook' of 1855-1859."

Wallace Centenary: Natural Selection and Beyond, American Museum of Natural History, New York, 12 November 2013: "Wallace, Darwin, and Natural Selection."

Wallace, Islands, and Biogeography: 100 Years Later. NESCent/Beacon Evolution Symposium, National Association of Biology Teacher's national meeting, Atlanta, GA, 22 November 2013: "'*The Force of Admiration*,' or, the Consilient Mr. Wallace: Insights from Alfred Russel Wallace's 'Species Notebook' of 1855-1859."

Wallace100 Lecture Series, Natural History Museum, London, 8 May 2013: "On the Organic Law of Change: Insights from Alfred Russel Wallace's 'Species Notebook.'"

2012 Keynote address, Garden Club of America national meeting, Savannah, GA, April 2012: "Bartram's Travels in Zone VIII."

2011 Keynote address, Scholars' Day celebration, SUNY Cortland, Cortland, NY: "*Patience, industry, and a fair share of invention*: Insights from Charles Darwin and *On the Origin of Species*."

- 2010 Keynote address, Audubon NC annual meeting, Highlands, NC: "If you want to feed the birds, first feed the bugs! Toward an ecological appreciation of insects in your garden."
- Keynote address, Darwin Day event, University of Tennessee, Knoxville, TN: "Darwinian revelation."
- Keynote address, Darwin Day event, Clemson University, Clemson, SC: "*On these grounds I drop my anchor...*" – Insights from Darwin and the *Origin of Species* for teaching evolution today."
- Keynote address, Georgia Museum of Natural History annual fundraiser, Georgia Botanical Garden, Athens, GA, October 2010: "The Darwinian revelation."
- Keynote address, North Carolina Science Leadership Association annual meeting, Greensboro, NC: "*On these grounds I drop my anchor...*" – Insights from Darwin and the *Origin of Species* for teaching evolution today."
- 2009 Keynote address, North Carolina Bartram Trail Society annual meeting, September 2009: "Darwin and Dixie."
- 30th Annual Darwin Festival, Salem State University, Salem, MA: "Darwin's *Origin*."
- Appalachian State University Darwin Bicentennial Lecture Series, Boone, NC: "Darwin's *Origin*."
- 2005 26th Annual Darwin Festival, Salem State University, Salem, MA.

SELECTED INTERVIEWS & RECORDED LECTURES

- 2019 *A "Central and Controlling Incident:" Celebrating The Malay Archipelago and Alfred Russel Wallace's Intellectual Legacy.* Linnean Society of London, 7 November 2019. <https://youtu.be/772mHQ4TeY8>.
- 2018 KQED-FM (San Francisco NPR): *Forum*, with Michael Krasny. <https://ww2.kqed.org/forum/2018/02/06/exploring-charles-darwins-backyard-with-biologist-james-costa/>
- 2017 This Green Earth radio program, KPCW Radio, 14 November 2017 <http://kpcw.org/post/green-earth-november-14-2107>
- 4th A. R. Wallace Lecture, University College London, 15 October 2017 <https://www.youtube.com/watch?v=FshPEALemsg&feature=youtu.be>

English Heritage Blog interview on *Darwin's Backyard*, 4 October 2017
<http://blog.english-heritage.org.uk/how-charles-darwins-garden-inspired-the-theory-of-evolution/>

C-SPAN TV, NY Botanical Garden lecture on *Darwin's Backyard*, 22 September 2017
<https://www.c-span.org/video/?434101-2/darwins-backyard>

Google Cambridge talk on *Darwin's Backyard*, 14 September 2017
<https://www.youtube.com/watch?v=uxKnWYlfwXw&feature=youtu.be>

In Defense of Plants podcast interview on *Darwin's Backyard*, 3 September 2017
<http://www.indefenseofplants.com/podcast/2017/9/3/ep-124-darwins-backyard>

The State of Things NPR radio program interview on *Darwin's Backyard*, 31 August 2017
<http://wunc.org/post/beyond-galapagos-what-was-darwin-s-backyard#stream/0>