

VOLUME 67, NUMBER 7, JULY 2013

# EVOLUTION

*INTERNATIONAL JOURNAL OF ORGANIC EVOLUTION*

**SPECIAL SECTION:**  
**New Model Systems for  
Experimental Evolution**  
**Evolutionarily stable sex ratios  
and mutation load**  
**Dispersal and diversification  
rates across Wallace's Line**

Published by the Society  
for the Study of Evolution



# EVOLUTION

**SPECIAL SECTION: New Model Systems for Experimental Evolution**

Section Editor: Sinéad Collins

New Model Systems for Experimental Evolution SINÉAD COLLINS	1847–1848
Experimental Evolution Meets Marine Phytoplankton THORSTEN B. H. REUSCH AND PHILIP W. BOYD	1849–1859
Temporal Dynamics of Outcrossing and Host Mortality Rates in Host–Pathogen Experimental Coevolution LEVI T. MORRAN, RAYMOND C. PARRISH II, IAN A. GELARDEN, AND CURTIS M. LIVELY	1860–1868
Evolutionary Responses of a Coccolithophorid <i>Gephyrocapsa oceanica</i> to Ocean Acidification PENG JIN, KUNSHAN GAO, AND JOHN BEARDALL	1869–1878
Short- versus Long-Term Responses to Changing CO <sub>2</sub> in a Coastal Dinoflagellate Bloom: Implications for Interspecific Competitive Interactions and Community Structure AVERY O. TATTERS, ASTRID SCHNETZER, FEIXUE FU, ALLE Y.A. LIE, DAVID A. CARON, AND DAVID A. HUTCHINS	1879–1891
Functional Genetic Divergence in High CO <sub>2</sub> Adapted <i>Emiliana huxleyi</i> Populations KAI T. LOHBECK, ULF RIEBESELL, SINÉAD COLLINS, AND THORSTEN B. H. REUSCH	1892–1900
Differences in the Regulation of Growth and Biomineralization Genes Revealed through Long-Term Common-Garden Acclimation and Experimental Genomics in the Purple Sea Urchin MELISSA H. PESPENI, BRYAN T. BARNEY, AND STEPHEN R. PALUMBI	1901–1914

**ORIGINAL ARTICLES**

Evolutionarily Stable Sex Ratios and Mutation Load JOSH HOUGH, SIMONE IMMLER, SPENCER C. H. BARRETT, AND SARAH P. OTTO	1915–1925
Homage to Bateman: Sex Roles Predict Sex Differences in Sexual Selection KAROLINE FRITZSCHE AND GÖRAN ARNQVIST	1926–1936
Operational Sex Ratio But Not Density Affects Sexual Selection in a Fish SEBASTIAN WACKER, KENYON MOBLEY, ELISABET FORSGREN, LISE CATS MYHRE, KAREN DE JONG, AND TROND AMUNDSEN	1937–1949
Transcriptome-Wide Expression Variation Associated with Environmental Plasticity and Mating Success in Cactophilic <i>Drosophila mojavensis</i> GILBERT SMITH, YONGXIANG FANG, XUAN LIU, JOHN KENNY, ANDREW R. COSSINS, CASSIA CARDOSO DE OLIVEIRA, WILLIAM J. ETGES, AND MICHAEL G. RITCHIE	1950–1963
The Effect of Maternal Age and Reproductive History on Offspring Survival and Lifetime Reproduction in Preindustrial Humans DUNCAN O. S. GILLESPIE, ANDREW F. RUSSELL, AND VIRPI LUMMAA	1964–1974
Skull Shape Evolution in Durophagous Carnivorans BORJA FIGUEIRIDO, ZHIJIE JACK TSENG, AND ALBERTO MARTÍN-SERRA	1975–1993

(continues inside back cover)

**WILEY**  
**Blackwell**

Patterns of Ossification in Southern versus Northern Placental Mammals LIONEL HAUTIER, NIGEL C. BENNETT, HERMIEN VILJOEN, LAUREN HOWARD, MICHEL C. MILINKOVITCH, ATHANASIA C. TZIKA, ANJALI GOSWAMI, AND ROBERT J. ASHER	1994–2010
Single-Gene Speciation with Pleiotropy: Effects of Allele Dominance, Population Size, and Delayed Inheritance MASATO YAMAMICHI AND AKIRA SASAKI	2011–2023
Phylogeographic Structure and Outbreeding Depression Reveal Early Stages of Reproductive Isolation in the Neotropical Orchid <i>Epidendrum denticulatum</i> FÁBIO PINHEIRO, SALVATORE COZZOLINO, FÁBIO DE BARROS, TIAGO M.Z.M. GOUVEIA, ROGÉRIO M. SUZUKI, MICHAEL F. FAY, AND CLARISSE PALMA-SILVA	2024–2039
Do Freshwater Fishes Diversify Faster Than Marine Fishes? A Test Using State-Dependent Diversification Analyses and Molecular Phylogenetics of New World Silversides (Atherinopsidae) DEVIN D. BLOOM, JASON T. WEIR, KYLE R. PILLER, AND NATHAN R. LOVEJOY	2040–2057
Geographic and Taxonomic Disparities in Species Diversity: Dispersal and Diversification Rates across Wallace’s Line CHRISTINE D. BACON, FRANÇOIS MICHONNEAU, ANDREW J. HENDERSON, MILES J. MCKENNA, ARWEN M. MILROY, AND MARK P. SIMMONS	2058–2071
Deconstructing Heterostyly: The Evolutionary Role of Incompatibility System, Pollinators, and Floral Architecture ROCÍO SANTOS-GALLY, ALEJANDRO GONZALEZ-VOYER, AND JUAN ARROYO	2072–2082
Components of Reproductive Isolation Between <i>Orchis mascula</i> and <i>Orchis pauciflora</i> GIOVANNI SCOPECE, ANTONIO CROCE, CHRISTIAN LEXER, AND SALVATORE COZZOLINO	2083–2093
<b>BRIEF COMMUNICATIONS</b>	
Unification of Regression-Based Methods for the Analysis of Natural Selection MICHAEL B. MORRISSEY AND KRZYSZTOF SAKREJDA	2094–2100
Asynchronous Evolution of Physiology and Morphology in <i>Anolis</i> Lizards PAUL E. HERTZ, YUZO ARIMA, ALEXIS HARRISON, RAYMOND B. HUEY, JONATHAN B. LOSOS, AND RICHARD E. GLOR	2101–2113
Strong Assortative Mating by Diet, Color, Size, and Morphology But Limited Progress Toward Sympatric Speciation in a Classic Example: Cameroon Crater Lake Cichlids CHRISTOPHER H. MARTIN	2114–2123
Genetic and Developmental Basis of F <sub>2</sub> Hybrid Breakdown in <i>Nasonia</i> Parasitoid Wasps J. D. GIBSON, O. NIEHUIS, B. R. E. PEIRSON, E. I. CASH, AND J. GADAU	2124–2132
Sperm Competitive Ability Evolves in Response to Experimental Alteration of Operational Sex Ratio BODHISATTA NANDY, PRATIP CHAKRABORTY, VANIKA GUPTA, SYED ZEESHAN ALI, AND NAGARAJ GURU PRASAD	2133–2141
<b>TECHNICAL COMMENTS</b>	
Comment on Marden (2013): “Reanalysis and Experimental Evidence Indicate That the Earliest Trace Fossil of a Winged Insect Was a Surface Skimming Neopteran” JACOB S. BENNER, RICHARD J. KNECHT, AND MICHAEL S. ENGEL	2142–2149
Reply to “Comment on Marden (2013) Regarding the Interpretation of the Earliest Trace Fossil of a Winged Insect” JAMES H. MARDEN	2150–2153