

MOLECULAR PHYLOGENETICS & EVOLUTION

EDITOR-IN-CHIEF:
DEREK E. WILDMAN

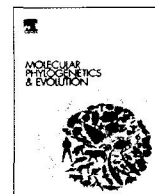
FOUNDING EDITOR:
MORRIS GOODMAN





Molecular Phylogenetics and Evolution

Volume 70, January 2014



CONTENTS

REGULAR ARTICLES

- 1 From species divergence to population structure: A multimarker approach on the most basal lineage of Salamandridae, the spectacled salamanders (genus *Salamandrina*) from Italy
J. Susanne Hauswaldt, Claudio Angelini, Marcelo Gehara, Edgar Benavides, Andy Polok, Sebastian Steinfartz
- 13 Cryptic speciation reversal in the *Etheostoma zonale* (Teleostei: Percidae) species group, with an examination of the effect of recombination and introgression on species tree inference
Dominik Halas and Andrew M. Simons
- 29 The hemagglutinin mutation E391K of pandemic 2009 influenza revisited
Jan P. Radomski, Piotr Płoński, Włodzimierz Zagórski-Ostoja
- 37 Developing nuclear DNA phylogenetic markers in the angiosperm genus *Leucadendron* (Proteaceae): A next-generation sequencing transcriptomic approach
Jeanne Tonnabel, Isabelle Olivieri, Agnès Mignot, Anthony Rebelo, Fabienne Justy, Sylvain Santoni, Stéphanie Caroli, Laure Sauné, Olivier Bouchez, Emmanuel J.P. Douzery
- 47 A multilocus molecular phylogeny of combtooth blennies (Percomorpha: Blennioidei: Blenniidae): Multiple invasions of intertidal habitats
Peter J. Hundt, Samuel P. Iglésias, Andrew S. Hoey, Andrew M. Simons
- 76 Molecular systematics and plumage coloration evolution of an enigmatic babbler (*Pomatorhinus ruficollis*) in East Asia
Feng Dong, Shou-Hsien Li, Fa-Sheng Zou, Fu-Min Lei, Wei Liang, Jun-Xing Yang, Xiao-Jun Yang
- 84 Increased sampling of both genes and taxa improves resolution of phylogenetic relationships within Magnoliidae, a large and early-diverging clade of angiosperms
Julien Massoni, Félix Forest, Hervé Sauquet
- 99 Phylogenetic relationships of the operculate land snail genus *Cyclophorus* Montfort, 1810 in Thailand
Nattawadee Nantararat, Piyoros Tongkerd, Chirasak Sutcharit, Christopher M. Wade, Fred Naggs, Somsak Panha
- 112 How low can you go? The effects of mutation rate on the accuracy of species-tree estimation
Hayley C. Lanier, Huateng Huang, L. Lacey Knowles
- 120 Sequence variability of the *MspI* satellite DNA family of the pinewood nematode *Bursaphelenchus xylophilus* at different geographic scales
Paulo Vieira, Chantal Castagnone, Sophie Mallez, Margarida Espada, Alfonso Navas, Manuel Mota, Philippe Castagnone-Sereno

Continued on inside back cover

Now covered in SCISEARCH, Research Alert, Biochemistry and Biophysics Citation Index, Science Citation Index, Agriculture, Biology, & Environmental Sciences, Current Content/Life Sciences. Also covered in the abstract and citation database Scopus®. Full text available on ScienceDirect®.



1055-7903(201401)70:C;1-J



- 130 Assessing species boundaries and the phylogenetic position of the rare Szechwan ratsnake, *Euprepiophis perlaceus* (Serpentes: Colubridae), using coalescent-based methods
Xin Chen, Ke Jiang, Peng Guo, Song Huang, Dingqi Rao, Li Ding, Hirohiko Takeuchi, Jing Che, Ya-ping Zhang, Edward A. Myers, Frank T. Burbrink
- 137 Hidden diversity in the Andes: Comparison of species delimitation methods in montane marsupials
Thomas C. Giarla, Robert S. Voss, Sharon A. Jansa
- 152 Phylogeny of the Elopomorpha (Teleostei): Evidence from six nuclear and mitochondrial markers
Jhen-Nien Chen, J. Andrés López, Sébastien Lavoué, Masaki Miya, Wei-Jen Chen
- 162 Further insights into the phylogeny of two ciliate classes Nassophorea and Prostomatea (Protista, Ciliophora)
Qianqian Zhang, Zhenzhen Yi, Xinpeng Fan, Alan Warren, Jun Gong, Weibo Song
- 171 Substantial incongruence among the morphology, taxonomy, and molecular phylogeny of the land snails *Aegista*, *Landouria*, *Trishoplita*, and *Pseudobuliminus* (Pulmonata: Bradybaenidae) occurring in East Asia
Takahiro Hirano, Yuichi Kameda, Kazuki Kimura, Satoshi Chiba
- 182 Inferring geographic range evolution of a pantropical tribe in the coffee family (Lasiantheae, Rubiaceae) in the face of topological uncertainty
Jenny E.E. Smedmark, Sylvain G. Razafimandimbison, Niklas Wikström, Birgitta Bremer
- 210 Phylogenetic relationships of North American western chubs of the genus *Gila* (Cyprinidae, Teleostei), with emphasis on southern species
Susana Schönhuth, Anabel Perdices, Lourdes Lozano-Vilano, Francisco J. García-de-León, Héctor Espinosa, Richard L. Mayden
- 231 Molecular phylogeny reveals independent origins of body scales in Entomobryidae (Hexapoda: Collembola)
Feng Zhang, Zhen Chen, Rui-Rui Dong, Louis Deharveng, Mark I. Stevens, Ya-Hong Huang, Chao-Dong Zhu
- 244 Miocene–Pliocene speciation, introgression, and migration of *Patis* and *Ptilagrostis* (Poaceae: Stipeae)
Konstantin Romaschenko, Nuria Garcia-Jacas, Paul M. Peterson, Robert J. Soreng, Roser Vilatersana, Alfonso Susanna
- 260 New Sicydiinae phylogeny (Teleostei: Gobioidi) inferred from mitochondrial and nuclear genes: Insights on systematics and ancestral areas
Laura Taillebois, Magalie Castelin, Clara Lord, Ryan Chabbarria, Agnès Dettai, Philippe Keith
- 272 Resolving deep lineage divergences in core corvid passerine birds supports a proto-Papuan island origin
Marie Aggerbeck, Jon Fjeldså, Les Christidis, Pierre-Henri Fabre, Knud Andreas Jønsson
- 286 The first molecular phylogeny of Chilodontidae (Teleostei: Ostariophysi: Characiformes) reveals cryptic biodiversity and taxonomic uncertainty
Bruno F. Melo, Brian L. Sidlauskas, Kendra Hoekzema, Richard P. Vari, Claudio Oliveira
- 296 Diversification of *Scrophularia* (Scrophulariaceae) in the Western Mediterranean and Macaronesia – Phylogenetic relationships, reticulate evolution and biogeographic patterns
Agnes Scheunert and Günther Heubl

Continued on BM IV

- 314 Dinoflagellate phylogeny revisited: Using ribosomal proteins to resolve deep branching dinoflagellate clades
Tsvetan R. Bachvaroff, Sebastian G. Gornik, Gregory T. Concepcion, Ross F. Waller, Gregory S. Mendez, J. Casey Lippmeier, Charles F. Delwiche
- 323 The intraspecific genetic variability of siliceous and calcareous *Gentiana* species is shaped by contrasting demographic and re-colonization processes
C. Christe, S. Caetano, D. Aeschimann, M. Kropf, K. Diadema, Y. Naciri
- 337 Three-gene based phylogeny of the Urostyloidea (Protista, Ciliophora, Hypotricha), with notes on classification of some core taxa
Jie Huang, Zigui Chen, Weibo Song, Helmut Berger
- 348 Phylogenetic relationships and genome divergence among the AA- genome species of the genus *Oryza* as revealed by 53 nuclear genes and 16 intergenic regions
Ting Zhu, Ping-Zhen Xu, Jiang-Peng Liu, Sheng Peng, Xin-Chun Mo, Li-Zhi Gao
- 362 Multilocus analysis of intraspecific differentiation in three endemic bird species from the northern Neotropical dry forest
Enrique Arbeláez-Cortés, Borja Milá, Adolfo G. Navarro-Sigüenza
- 383 A molecular and morphological exploration of the generic boundaries in the family Melithaeidae (Coelenterata: Octocorallia) and its taxonomic consequences
Bastian T. Reijnen, Catherine S. McFadden, Yosephine T. Hermanlimianto, Leendert P. van Ofwegen
- 402 Phylogenetics of a recent radiation in the mallards and allies (Aves: Anas): Inferences from a genomic transect and the multispecies coalescent
Philip Lavretsky, Kevin G. McCracken, Jeffrey L. Peters
- 412 Molecular phylogeny, biogeography, and host plant shifts in the bee genus *Melitta* (Hymenoptera: Anthophila)
Simon Dellicour, Thomas Lecocq, Michael Kuhlmann, Patrick Mardulyn, Denis Michez
- 420 Ancient mitochondrial genome reveals unsuspected taxonomic affinity of the extinct Chatham duck (*Pachyanas chathamica*) and resolves divergence times for New Zealand and sub-Antarctic brown teals
Kieren J. Mitchell, Jamie R. Wood, R. Paul Scofield, Bastien Llamas, Alan Cooper
- 429 Taxonomic placement of *Paphiopedilum canhii* (Cypripedioideae; Orchidaceae) based on cytological, molecular and micromorphological evidence
Marcin Górniak, Dariusz L. Szlachetko, Agnieszka K. Kowalkowska, Jerzy Bohdanowicz, Chu Xuan Canh
- 442 Phylogeny and biogeography of the fruit doves (Aves: Columbidae)
Alice Cibois, Jean-Claude Thibault, Céline Bonillo, Christopher E. Filardi, Dick Watling, Eric Pasquet
- 454 Evolutionary diversification and speciation in rodents of the Mexican lowlands: The *Peromyscus melanophrys* species group
Susette Castañeda-Rico, Livia León-Paniagua, Ella Vázquez-Domínguez, Adolfo G. Navarro-Sigüenza
- 464 Convergent evolution of ecomorphological adaptations in geographically isolated Bay gobies (Teleostei: Gobionellidae) of the temperate North Pacific
Ryan A. Ellingson, Camm C. Swift, Lloyd T. Findley, David K. Jacobs
- 478 The reticulate evolutionary history of the polyploid NW Iberian *Leucanthemum pluriflorum* clan (Compositae, Anthemideae) as inferred from nrDNA ETS sequence diversity and eco-climatological niche-modelling
Christoph Oberprieler, Roland Greiner, Kamil Konowalik, Robert Vogt

Continued from last page

- 492 The origin of the early differentiation of Ivies (*Hedera* L.) and the radiation of the Asian Palmate group (Araliaceae)
Virginia Valcárcel, Omar Fiz-Palacios, Jun Wen
- 504 Nuclear and plastid markers reveal the persistence of genetic identity: A new perspective on the evolutionary history of *Petunia exserta*
Ana Lúcia Anversa Segatto, Ana Luíza Ramos Cazé, Caroline Turchetto, Ulrich Klahre, Cris Kuhlemeier, Sandro Luis Bonatto, Loreta Brandão Freitas
- 513 Multilocus phylogeny of talpine moles (Talpini, Talpidae, Eulipotyphla) and its implications for systematics
Kai He, Akio Shinohara, Xue-Long Jiang, Kevin L. Campbell

REVIEW ARTICLES

- 195 Evolution of glucose utilization: Glucokinase and glucokinase regulator protein
David M. Irwin and Huanran Tan

SHORT COMMUNICATIONS

- 57 Outgroup effects on root position and tree topology in the AFLP phylogeny of a rapidly radiating lineage of cichlid fish
Paul C. Kirchberger, Kristina M. Sefc, Christian Sturmbauer, Stephan Koblmüller
- 63 Gene tree rooting methods give distributions that mimic the coalescent process
Yuan Tian and Laura S. Kubatko
- 70 Phylogenetic position of the enigmatic clawless eutardigrade genus *Apodibius* Dastych, 1983 (Tardigrada), based on 18S and 28S rRNA sequence data from its type species *A. confusus*
Mirosława Dabert, Hieronymus Dastych, Karin Hohberg, Jacek Dabert
- 94 BaCoCa – A heuristic software tool for the parallel assessment of sequence biases in hundreds of gene and taxon partitions
Patrick Kück and Torsten H. Struck
- 204 Cryptic diversity and population genetic structure in the rare, endemic, forest-obligate, slender geckos of the Philippines
Cameron D. Siler, T. Alex Dececchi, Chris L. Merkord, Drew R. Davis, Tony J. Christiani, Rafe M. Brown
- 240 Phylogenomic analyses support the bifurcation of ciliates into two major clades that differ in properties of nuclear division
Feng Gao and Laura A. Katz
- 378 A nuclear DNA based phylogeny of endemic sand dune ants of the genus *Mycetophylax* (Emery, 1913): How morphology is reflected in molecular data
Danon Clemes Cardoso, Maykon Passos Cristiano, Jürgen Heinze, Mara Garcia Tavares