

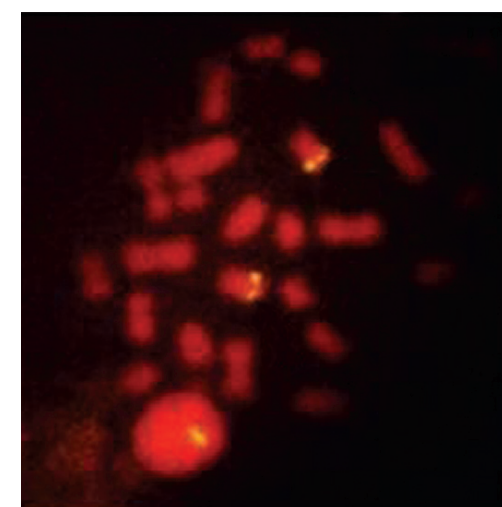
COMPARATIVE Cytogenetics

International Journal of Plant & Animal Cytogenetics, Karyosystematics,
and Molecular Systematics



COMPARATIVE CYTOGENETICS ♦ 6(1), 2012

- 1** **First record of supernumerary (B) chromosomes in electric fish (Gymnotiformes) and the karyotype structure of three species of the same order from the upper Paraná River basin**
Valéria Pereira Mendes, Ana Luiza de Brito Portela-Castro, Horácio Ferreira Júlio-Júnior
- 17** **Cytotaxonomy of the subgenus *Artibeus* (Phyllostomidae, Chiroptera) by characterization of species-specific markers**
Marcela Maria Pereira de Lemos Pinto, Merilane da Silva Calixto, Maria José de Souza, Ana Paloma Tavares de Araújo, Alfredo Langguth, Neide Santos
- 29** **Three sympatric karyomorphs in the fish *Astyanax fasciatus* (Teleostei, Characidae) do not seem to hybridize in natural populations**
Maressa Ferreira-Neto, Roberto Ferreira Artoni, Marcelo Ricardo Vicari, Orlando Moreira-Filho, Juan Pedro Martínez Camacho, Mohammed Bakkali, Claudio de Oliveira, Fausto Foresti
- 41** **Cytogenetic analysis in the incertae sedis species *Astyanax altiparanae* Garutti and Britzki, 2000 and *Hyphessobrycon eques* Steindachner, 1882 (Characiformes, Characidae) from the upper Paraná river basin**
Emanuel R. M. Martinez, Anderson L. Alves, Sara M. Silveira, Fausto Foresti, Claudio Oliveira
- 53** **Cytogeography of the *Humifusa* clade of *Opuntia* s.s. Mill. 1754 (Cactaceae, Opuntioideae, Opuntieae): correlations with pleistocene refugia and morphological traits in a polyploid complex**
Lucas C. Majure, Walter S. Judd, Pamela S. Soltis, Douglas E. Soltis
- 79** **Comparative cytogenetic study on two species of the genus *Entedon* Dalman, 1820 (Hymenoptera, Eulophidae) using DNA-binding fluorochromes and molecular and immunofluorescent markers**
Nadezhda L. Bolsheva, Vladimir E. Gokhman, Olga V. Muravenko, Alex V. Gumovsky, Alexander V. Zelenin
- 93** **Cytogenetic response of Scots pine (*Pinus sylvestris* Linnaeus, 1753) (Pinaceae) to heavy metals**
Mikhail Vladimirovich Belousov, Olga Sergeyevna Mashkina, Vasily Nikolayevich Popov



 PENSOFT

6(1) ♦ 2012

www.pensoft.net/journals/compcytogen



COMPARATIVE A peer-reviewed open-access journal

Cytogenetics

International Journal of Plant & Animal Cytogenetics,
Karyosystematics, and Molecular Systematics

Editors-in-Chief:

Prof. **Dr. Valentina G. Kuznetsova**
Zoological Institute, St. Petersburg
valentina_kuznetsova@yahoo.com

Dr. Ilya A. Gavrilov-Zimin
Zoological Institute, St. Petersburg
coccids@gmail.com

Managing Editor: Dr. Lyubomir Penev

Language Editors: Robert B. Angus

Editorial Board:

Robert B. Angus (University of London, r.angus@rhul.ac.uk), **Irina Yu. Baklushinskaya** (Koltzov Institute of Developmental Biology RAS, Moscow, irina.bakl@gmail.com), **Alicja Boron** (University of Warmia and Mazury, Olsztin, alibo@uwm.edu.pl), **Nina Sh. Bulatova** (Institute of Ecology and Evolution, Moscow, ninbul@mail.ru), **Julio R. Daviña** (Universidad Nacional de Misiones, Posadas, juliordavina@gmail.com), **Grazyna Furgala-Selezniow** (University of Warmia and Mazury, Olsztin, graszka@uwm.edu.pl), **Natalia V. Golub** (Zoological Institute, St. Petersburg, psocid@zin.ru), **Vladimir E. Gokhman** (Moscow State University, gokhman@bg.msu.ru), **Veronika V. Golygina** (Institute of Cytology and Genetics, Novosibirsk, nika@bionet.nsc.ru), **Ekaterina Gornung** (University of Rome "Sapienza", ekaterina.gornung@gmail.com), **Snejana Grozeva** (Institute of Biodiversity and Ecosystem Research, Sofia, sgrozeva@yahoo.com), **Vladimir A. Lukhtanov** (St. Petersburg State University, lukhtanov@mail.ru), **Anna Maryanska-Nadachowska** (Institute of Systematics and Evolution of Animals, Krakow, maryanska@isez.pan.krakow.pl), **Seppo Nokkala** (University of Turku, seppo.nokkala@utu.fi), **Andrey Polyakov** (Institute of Cytology and Genetics SB RAS, Novosibirsk, polyakov@bionet.nsc.ru), **Petr Rab** (Institute of Animal Physiology and Genetics, Libechov, rab@iapg.cas.cz), **Nazar Shapoval** (Russian Academy of Sciences, St. Petersburg, nazaret@bk.ru), **Joan Vallès** (Universitat de Barcelona, joanvalles@ub.edu), **Jan Zima** (Institute of Vertebrate Biology, Brno, jzima@brno.cas.cz)

International Advisory Board:

Ekaterina D. Badaeva (Institute of Molecular Biology, Moscow, _badaeva@mail.ru), **Katsuhiko Kondo** (Hiroshima University, Hiroshima, kkondo@hiroshima-u.ac.jp), **Iya I. Kiknadze** (Institute of Cytology and Genetics, Novosibirsk, kiknadze@bionet.nsc.ru), **Frantisek Marec** (Institute of Entomology, Ceske Budejovice, marec@entu.cas.cz), **Jon Martin** (University of Melbourne, Melbourne, j.martin@unimelb.edu.au), **Paraskeva Michailova** (Institute of Zoology, Sofia, michailova@zoology.bas.bg), **Benjamin B. Normark** (University of Massachusetts, Amherst, bnormark@ent.umass.edu), **Walther Traut** (University of Luebeck, Luebeck, traut@molbio.uni-luebeck.de), **Ludmila V. Vysotskaya** (Novosibirsk State University, Novosibirsk, vysot@fen.nsu.ru)

All correspondence with reference to editorial matters should be addressed to: Dr. Ilya Gavrilov-Zimin by e-mail: coccids@gmail.com with subject "Comparative Cytogenetics" or to the address: Zoological Institute, Russian Academy of Sciences, Universitetskaya nab. 1, St. Petersburg 199034, Russia.

Creative Commons Attribution License. This is an open access journal distributed under the terms of the Creative Commons Attribution License 3.0 CC-BY, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Subscription for 2011:

The printed version: institutional subscription - € 145.00; individual subscription - € 70.00; subscribers from Russia - € 120.00.

PENSOFT Publishers
Geo Milev Str. 13a, 1111 Sofia, Bulgaria
Tel. +359-2-8704281
Fax: +359-2-8704282
e-mail: info@pensoft.net
<http://www.pensoft.net/journals/compcytogen>