Primate Conservation
The journal of the IUCN SSC Primate Specialist Group

Re:wild
P. O. Box 129, Austin, TX 78767, USA

ISSN 0898-6207 Abbreviation: Primate Conserv.

Editors
Russell A. Mittermeier, Chief Conservation Officer, Re:wild, Austin, TX, USA
Anthony B. Rylands, Primate Conservation Director, Re:wild, Austin, TX, USA

Layout: Paula Katharina Rylands.


Front cover: Adult male Eastern Vervet Chlorocebus pygerythrus centralis (Neumann, 1900), north of Mahale Mountains National Park, Uvinza District, central western Tanzania. Widely recognized by the taxonomic authorities of the primates of Africa for 100 years as a valid subspecies, centralis, but considered a synonym of either Reddish-Green Vervet C. p. rufoviridis (I. Geoffroy, 1843) or Southern Vervet C. p. pygerythrus (F. Cuvier, 1821) since the end of the 20th century, Chlorocebus p. centralis has recently been resurrected due to a better understanding of the geographic distribution of the subspecies of Chlorocebus in East Africa and the resolution of some of the confusion related to the geographic distribution of Hilgert’s Grivet Chlorocebus aethiops hilgerti (Neumann, 1902). See pp. 117–120. Photograph by Yvonne de Jong and Tom Butynski.

Back cover: Weddell’s Saddleback Tamarin, Leontocebus weddelli weddelli, province of Coronel Portillo, Ucayali Region (9°10’53.96’’S, 74°2’48.10’’W), approximately 100 km southeast of the city of Pucallpa, the regional capital, Peru. See pp. 20–34. Photograph by Lorena Fernández-Hidalgo/Neotropical Primate Conservation.

This issue of Primate Conservation was kindly sponsored by the Margot Marsh Biodiversity Foundation, Virginia, USA.
## Contents

### General

**Behavior Changes in Cercopithecidae and Platyrrhini in Response to Anthropogenic Climate Change**
Clara Dell and Allen Rutberg

### Neotropical Region

**Social Networks Predict Group Fission, with Implications for the Management of Northern Muriquis (Brachyteles hypoxanthus)**
Ilianna E. Anise, Rebekah J. Ellis, Jason Altekruse and Karen B. Strier

**Surveys of a High-Diversity Primate Community in a Forestry Concession, Ucayali, Peru**
Sam Shanee, Lorena Fernández-Hidalgo, Jack Walford, Robin Fernandez-Hilario, Alejandro Alarcon, Keyko Geraldy Saravia Llaja and Nestor Allgas

**Mantled Howler Monkey (Alouatta palliata) Demographic Structure in a Continuous Forest Compared to a Small Forest Fragment in Costa Rica**
Amy L. Schreier, C. Eric Johnson, Michael D. Wasserman and Laura M. Bolt

**Population-density Monitoring of the Silvery-brown Tamarin (Oedipomidas leucopus) in Eastern Caldas, Colombia: Third Sampling**

### Madagascar

**Perceptions of Lemur Conservation among Malagasy and Non-Malagasy**
Lynne Venart, Seheno Andriantsaralaza, Misa Rasolozaka, Edgar Rabevao and Hoby Ambinintsoa Rasoanaivo

**Population Assessment of the Crowned Lemur (Eulemur coronatus) in the Bobaomby Area, Northern Madagascar**
Alain J. V. Rakotondrina, Raphali R. Andriantsimanarilafy, Joana F. Andrianarivelo, Laony A. Benjamin, John R. Zaonarivelo and Jonah Ratsimbazafy

### Africa

**Evaluation of Human-monkey Conflicts in the University of Lagos, Nigeria: Public Perceptions and Resolution Options**
F. Olaleru, A. A. Ogunfuwa, and Q. O. Omorogie

**Designation of a New Subspecies of Angola Colobus Colobus angolensis Sclater, 1860 (Primates: Cercopithecidae) Endemic to the Mahale Mountains of Western Tanzania**
Yvonne A. de Jong and Thomas M. Butynski
Notes Concerning the Second Edition of the Primates of East Africa Pocket Identification Guide ........117
Yvonne A. de Jong and Thomas M. Butynski

The Behavioral Sequences of Mountain Gorillas Under Tourism Pressure – Insights for Tourism Sustainability .................................................................................................................................................121
Raquel Costa, Ângela Brandão and Misato Hayashi

Asia

A Hundred Years in Zoos II: Patterns of Reproduction in the Global Historical Captive Population of the Lion-tailed Macaque Macaca silenus .................................................................................................................................................134
Nilofer Begum, Werner Kaumanns, Heribert Hofer and Mewa Singh

Engaging Urban Residents in Primate Conservation: Impact of a Conservation Education Intervention in Hong Kong .................................................................................................................................................155
Michael Ka Yiu Hui and Kim-Pong Tam

Photographic Records Showing Color Variation in the Capped Langur Trachypithecus pileatus ........165
Anwaruddin Choudhury

Status of Proboscis Monkeys in Kota Belud, Sabah, Malaysia: Insights from Population Surveys and Habitat Assessment .................................................................................................................................................174
Henry Bernard, Sharifah N. H. B. Mohammad-Shom, Nicola K. Abram and Ikki Matsuda

Instructions to Contributors .................................................................................................................................................185

Regional Newsletters .................................................................................................................................................186
Instructions to Contributors

Articles submitted to *Primate Conservation*

**Manuscript Format**

All manuscripts should be type written, double spaced, with generous margins, and submitted electronically as a Word document or in Rich Text Format (rtf). Please indicate on a separate cover page the corresponding author, address, and e-mail, the date of submission, up to six key words, and a short running title. Please provide an abstract of 300–500 words. Footnotes are to be avoided (except in tables and figures). IMRAD subtitles can be used but are not obligatory. Please give all measurements in metric units. Please take special care concerning diacritical marks of languages other than English. Bibliographic references should be in the following style:

Example – journal article:

Example – chapter in book:

Example – book:

Example – dissertation:

Example – Website:

**Maps**

Maps should always be made as concise as possible and should include an inset showing the location of the area discussed in relation to its home country or continent.

**Figures - maps, graphs, illustrations and photographs**

We accept high-resolution images in color or black-and-white in EPS, TIF, or JPG formats (300 dpi at the size which you would like to have them printed). All maps, graphs, illustrations, and photographs should be submitted in a file or files separately from the main text. Please list the captions/legends at the end of the main text or in a separate Word document. In the case of photographs, please provide the name of the photographer. We encourage high quality photographs of the species that are the object of the manuscript.

**Please send your contribution to:**

Anthony B. Rylands
Re:wild, Austin, TX, USA
E-mail: <arylands@rewild.org>
Regional Newsletters

The IUCN SSC Primate Specialist Group also produces regional newsletters/journals which publish short articles and notes on general and specific aspects of primate ecology, taxonomy, distributions, behavior and conservation, tropical forest ecology and conservation, forest destruction, and protected areas. Also please send information on projects, research groups, events, recent publications, courses, funding sources, activities of primatological societies and NGOs, and other newsworthy items of interest to primate conservationists, directly to the editors at the addresses below.

**Madagascar - Lemur News**  
*Chief Editor*

Christoph Schwitzer  
Bristol Zoological Society  
Clifton, Bristol BS8 3HA  
UK  
E-mail: <cschwitzer@bristolzoo.org.uk>

**Neotropical Region - Neotropical Primates**  
*News and announcements*

Ernesto Rodríguez-Luna  
Instituto de Neuroetología  
Universidad Veracruzana  
Apartado Postal 566  
Xalapa  
91000 Veracruz  
México  
E-mail: <errodriguez@uv.mx>

**Neotropical Region - Neotropical Primates**  
*Co-chief Editor*

Erwin Palacios  
Conservación Internacional Colombia  
Carrera 13 # 71-41  
Bogotá DC  
Colombia  
E-mail: <epalacios@conservation.org>

**Neotropical Region - Neotropical Primates**  
*Co-Chief Editor*

Jessica W. Lynch  
UCLA Institute for Society and Genetics  
UCLA Department of Anthropology  
3317 Life Sciences Bldg.  
Los Angeles, CA 90095-7221  
USA  
E-mail: <jwlynx@g.ucla.edu>

**Asian Region - Asian Primates Journal**  
*Chief Editor*

Ramesh ‘Zimbo’ Boonratana  
Science Division  
Mahidol University International College  
Mahidol University (Salaya Campus)  
999 Buddhhamonth 4 Road  
Nakhon Pathom 73170  
Thailand  
E-mail: <rbz@loxinfo.co.th>

**African Region - African Primates**  
*Chief Editor*

Janette Wallis  
2901 Ginger Drive  
Norman, OK 73206  
USA  
E-mail: <wallis@africanprimates.net>

The four newsletters and *Primate Conservation* are available, open access, at <http://www.primate-sg.org/journals_and_newsletters/>.
IUCN SSC Primate Specialist Group 2017–2022

Chair, Russell A. Mittermeier, Re:Wild, Austin, TX, USA
Deputy Chairs, Anthony B. Rylands, Re:Wild, Austin, TX, USA; Christoph Schwitzer, Dublin Zoo, Ireland; Kim E. Reuter, Lemur Love, San Diego, CA, USA; Leandro Jerusalinsky, Centro Nacional de Pesquisa e Conservação de Primatas Brasileiros, ICMBio, João Pessoa, PB, Brazil; Andie Ang, Mandai Nature, Singapore

Executive Secretary, Ella M. Outlaw; Assistant, Jill Lucena, Re:Wild, Austin, TX, USA

Vice Chairs, Section on Great Apes
Dirck Byler, Re:Wild, Austin, TX, USA; Serge Wich, Liverpool John Moores University, Liverpool, UK; Ekwoge Abwe, Re:Wild-Ebo Forest Research Project, Cameroon; Jatna Supriatna, Department of Biology, University of Indonesia, Jakarta, Indonesia; Annette Lanjouw, Arcus Foundation, New York, NY, USA; Rebecca Kormos, Berkeley, CA, USA

Vice-Chairs, Section on Small Apes
Susan M. Cheyne, Oxford Brookes University, Oxford, UK & Borneo Nature Foundation, Central Kalimantan, Indonesia; Yan Lu, Dali Biodiversity Conservation and Research Center, Dali, Yunnan, China; Rahayu Oktaviani, KIARA Foundation, Bogor, Indonesia

Vice-Chair, Section on Human-Primate Interactions
Siân Waters, Department of Anthropology, Durham University, UK & Barbary Macaque Awareness and Conservation, Tétouan, Morocco

Regional Vice Chairs – Neotropics
Mesoamerica
Liliana Cortés-Ortiz, Museum of Zoology and Department of Ecology and Evolutionary Biology, University of Michigan, Ann Arbor, MI, USA; Melissa Rodriguez, Asociación Territorios Vivos El Salvador, San Salvador, El Salvador
Northern Andean Countries
Erwin Palacios, Conservación Internacional Colombia, Bogotá, Colombia; Eckhard W. Heymann, Deutsches Primatenzentrum, Göttingen, Germany; Fenny M. Cornejo, Stony Brook University, New York, USA; Stella de la Torre, Universidad San Francisco de Quito, Quito, Ecuador; Diana C. Guzmán Caro, Conservation Bridges Foundation, Bogotá, Colombia; Andrés Link, Department of Biological Sciences and School of Management, Universidad de los Andes, Bogotá, Colombia
Brazil and the Guianas
M. Cecília M. Kierulf, Instituto Pri-Matas, Belo Horizonte, Minas Gerais, Brazil; Fabiano Rodrigues de Melo, Departamento de Engenharia Florestal, Universidade Federal de Viçosa, MG, Brazil; Mauricio Talebi, Universidade Federal de São Paulo, Diadema, São Paulo, Brazil; Leandro Jerusalinsky, Centro Nacional de Pesquisa e Conservação de Primatas Brasileiros, ICMBio, João Pessoa, PB, Brazil; Gabriela C. Rezende, Instituto de Pesquisas Ecológicas, Nazaré Paulista, SP, Brazil; Gustavo R. Canale, Center for Biodiversity Studies of the Southern Amazon, Federal University of Mato Grosso, Sinop, MT, Brazil; Leonardo C. Oliveira, Departamento de Ciências, Universidade do Estado do Rio de Janeiro, RJ, Brazil

Southern Cone – Argentina, Bolivia, Paraguay, Uruguay
Martin Kowalewski, Estación Biológica Corrientes (EBCo), Museo Argentino de Ciencias Naturales BR, Corrientes, Argentina

Regional Vice Chairs – Africa
Rachel Ashegbofe Ikemeh, SW/Niger Delta Forest Project, Nigeria; Inza Koné, Centre Suisse de Recherches Scientifiques, Côte d’Ivoire; David Osei, West African Primate Conservation Action (WAPCA), Ghana; Janette Walls, University of Oklahoma, Norman, OK, USA; Takeshi Furuichi, Primate Research Institute, Kyoto University, Inuyama, Japan; Stanislaus M. Kivai, Institute of Primate Research, National Museums of Kenya, Nairobi, Kenya

Regional Vice Chairs – Madagascar
Christoph Schwitzer, Dublin Zoo, Dublin, Ireland; Jonah Ratsimbazafy, Groupe d’étude et de recherche sur les primates (Gerp), Antananarivo, Madagascar; Steig Johnson, University of Calgary, Calgary, Canada

Regional Vice Chairs – Asia
China
Baoguo Li, Northwest University, Xi’an, China

South-east Asia / Indochina
Jatna Supriatna, University of Indonesia, Jakarta, Indonesia; Christian Roos, Deutsches Primatenzentrum, Göttingen, Germany; Benjamin M. Rawson, World Wildlife Fund, Hanoi, Vietnam; Ramesh Boonratanat, Mahidol University International College, Nakhon Pathom, Thailand; Le Khac Quyet, Wildlife Consultant, Hanoi, Vietnam; Duc Hoang Minh, Southern Institute of Ecology (SIE), Ho Chi Minh City, Vietnam; Herbert H. Covert, University of Colorado Boulder, Boulder, CO, USA; Andie Ang, Mandai Nature, Singapore; Phaivanh Phiapalath, Independent Consultant, Lao PDR; Takeshi Furuichi, Primate Research Institute, Kyoto University, Inuyama, Japan

South Asia
Sanjay Molur, Wildlife Information Liaison Development, Coimbatore, Tamil Nadu, India; Dilip Chetry, Gibbon Conservation Centre, Assam, India

Red List Authority Coordinators
Kim E. Reuter, Lemur Love, San Diego, CA, USA; Liz Williamson, Stirling University, Stirling, Scotland, UK (Great Apes)