

The International Journal of Conservation

Oryx

Published for
Fauna & Flora International

www.oryxthejournal.org

October 2014 · Volume 48 · Number 4

Conservation in Protected Areas

Where now for protected areas?

Stewardship & conservation in
Game Management Areas

Human-tiger conflict in
Bardia National Park

Snow leopards vs wolves in
Sarychat-Ertash Reserve?

Bringing clarity to the clouded
leopard in the Kerinci landscape

Human & wildlife usage of a buffer zone

Red-shanked douc in Nakai-Nam
Theun National Protected Area

Plants in arid ecosystems:
microreserves required

EditorDr Martin Fisher, *FFI, UK***Editorial Assistants**Cella Carr, *FFI, UK*Nikki Burton, *FFI, UK***Senior Editors**Professor Bill Adams *University of Cambridge, UK*Professor Andrew Balmford, *FRS University of Cambridge, UK*Dr Porter P. Lowry II *Missouri Botanical Garden, USA and France*Dr Mike Maunder *Florida International University, USA*Dr Jeffrey A. McNeely *IUCN – The World Conservation Union, Switzerland*Professor E. J. Milner-Gulland *Imperial College London, UK*Dr John G. Robinson *Wildlife Conservation Society, USA*Professor William Sutherland *University of Cambridge, UK***International Board of Editors**Dr Elizabeth L. Bennett *USA*Dr Robert K. Bonde *USA*Dr Katrina Brown *UK*Professor Neil Burgess *Denmark*Dr Robert H. Cowie *USA*Dr Jenny Daltry *France*Dr Brendan Fisher *USA*Professor Brendan J. Godley *UK*Professor Rhys Green *UK*James Igoe *USA*Professor Zhigang Jiang *China*Dr K. Ullas Karanth *India*Dr Gustavo Kattan *Colombia*Professor Sandra Knapp *UK*Ashish Kothari *India*Dr Kathy MacKinnon *UK*Dr David Mallon *UK*Dr Charudutt Mishra *India and USA*Professor Yaa Ntiamao-Baidu *Ghana*Dr David Obura *Kenya*Sara Oldfield *UK*Professor Hugh Possingham *Australia*Dr Kent H. Redford *USA*Dr Jon Paul Rodriguez *Venezuela*Dr Anthony B. Rylands *USA*Dr Philip Seddon *New Zealand*Dr Noah Sitati *Kenya*Dr Bob Smith *UK*Dr Paul Smith *UK*Dr Rashid Sumaila *Canada*Dr Matt Walpole *UK*Dr Sven Wunder *Brazil***Fauna & Flora International****Patron**

Her Majesty The Queen

President

HRH Princess Laurentien of The Netherlands

Vice Presidents

Baroness Amos

Sir David Attenborough, OM, FRS

Professor David Bellamy, OBE

The Lord Browne of Madingley, FR Eng

Field Marshal Sir John Chapple, GCB, CBE, DL

Lord John De Ramsey

Dame Judi Dench

Dr Lee Durrell

Dorette Louise (Dielle) Fleischmann

Stephen Fry

Rupert Goodman

Edward Hoare

Professor Frederick Kayanja

The Lady Emma Kitchener LVO

Rove McManus

Sir Mark Moody-Stuart

Blaine T. Phillips

Dr Lisbet Rausing

Dr Claudio Segré

Hugh Sloane

Jon L. Stryker

Dr Charlotte Uhlenbroek

The Rt Hon Baroness Young of Old Scone

Council**Chair** Andrew Sykes**Vice Chairs**

Professor Nigel Leader-Williams

Charles Whitbread

Treasurer Philip Prettejohn

Melanie Gee

Stephen Georgiadis

Professor Brendan Godley

Dr Charlotte Grezo

Andrew Joy

Dr Tony Juniper

Dr Sandra Knapp

Professor E.J. Milner-Gulland

Sir Gareth Rhys-Williams

Professor Callum Roberts

Edward van Cutsem

Dr Bhaskar Vira

John Wotton

Chief Executive Officer Mark Rose**US Board of Directors****Executive Director** Katie Frohardt**Honorary Director** Betty White**Chair** Clea Newman Soderlund**Vice Chair** Thomas S. Foster**Treasurer** C. Jonathan Fischer**Secretary** Dorette Louise (Dielle) Fleischmann

Virginia M. Busch

Joy Jacobson

Blaine T. Phillips

Mark Rose

Beth Ann Ruoff

Amelia Salzman

Stephen J. Symonds

Karen B. Winnick

Anita Winsor-Edwards

Australian Board of Directors**Chair** Lisa Gay**Treasurer** Michael Forsdick**Secretary** Joe Heffernan

Dr Angela Dwyer

Tim King

Mark Rose

Deborah Snelson

FFI Member Subscription Membership of Fauna & Flora International starts from £45 a year for concessions and £85 for other members (or equivalent price in dollars/euros). For more information about FFI membership visit <http://www.fauna-flora.org/membership>. Enquiries about back issues for members should be addressed to the Membership Secretary (members@fauna-flora.org) at FFI.

Institutional Subscription *Oryx* (ISSN 0030-6053) is published four times a year (one volume per annum) in January, April, July, and October. The 2014 subscription price (excluding VAT) of a volume, which includes print and electronic access, is £537.00 (US \$967.00 in USA, Canada and Mexico). The electronic-only price available to institutional subscribers is £426.00 (US \$763.00 in USA, Canada and Mexico).

Orders, which must be accompanied by payment, may be sent to any book seller, subscription agent or direct to the publisher: Cambridge University Press, The Edinburgh Building, Shaftesbury Road, Cambridge CB2 8RU, UK; or in the USA, Canada and Mexico: Journals Fulfillment Department, Cambridge University Press, 100 Brook Hill Drive, West Nyack, New York 10994-2133, USA. EU subscribers (outside the UK) who are not registered for VAT should add VAT at their country's rate. VAT registered members should provide their VAT registration number. Japanese prices for institutions (including ASP delivery) are available from Kinokuniya Company Ltd, P.O. Box 55, Chitose, Tokyo 156, Japan. Prices include delivery by air. Periodicals postage paid at New York, NY, and at additional mailing offices. *Postmaster*: send address changes in USA, Canada and Mexico to: *Oryx*, Cambridge University Press, 100 Brook Hill Drive, West Nyack, New York 10994-2133, USA. Claims for missing issues should be made immediately on receipt of the subsequent issues.

Back volumes Copies of the current volume and two previous volumes can be obtained from Cambridge University Press at the above address. Requests for previous volumes should be directed to the Membership Secretary (members@fauna-flora.org) at FFI.

Copyright and Permissions This journal is registered with the Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923, USA. Organizations in the USA who are also registered with C.C.C. may therefore photocopy material (beyond the limits permitted by Section 107 and 108 of U.S. Copyright law) subject to payment to C.C.C. of the per-copy fee of \$16.00. This consent does not extend to multiple copying for promotional or commercial purposes. Code 0030-6053/2014 \$16.00. ISI Tear Sheet Service, 3501 Market Street, Philadelphia, PA 19104, USA, is authorized to supply single photocopies of separate articles for private use only. Organizations authorized by the UK Copyright Licensing Agency may also copy material subject to the usual conditions. For all other use, permission should be sought from Cambridge University Press.

No part of this publication may otherwise be reproduced, stored or distributed by any means without permission in writing from Cambridge University Press, acting for the copyright holder.

Internet Access This journal is included in the *Cambridge Journals Online* service which can be found at: <http://journals.cambridge.org> For further information on other Press titles access <http://uk.cambridge.org> or <http://us.cambridge.org>

This journal issue has been printed on FSC-certified paper and cover board. FSC is an independent, non-government, not-for-profit organization established to promote the responsible management of the world's forests. Please see www.fsc.org for information.