

State of the Apes

Killing, Capture, Trade and Conservation

The illegal trade in live apes, ape meat and body parts occurs across all ape range states and poses a significant and growing threat to the long-term survival of wild ape populations worldwide. What was once a purely subsistence and cultural activity, now encompasses a global multi-million-dollar trade run by sophisticated trans-boundary criminal networks. The challenge lies in teasing apart the complex and interrelated factors that drive the ape trade, while implementing strategies that do not exacerbate inequality. This volume of *State of the Apes* brings together original research and analysis with topical case studies and emerging best practices, to further the ape conservation agenda around killing, capture and trade.

This title is available as an open access eBook via Cambridge Core and at www.stateoftheapes.com.

State of the Apes

Series editors

Helga Rainer Arcus Foundation

Alison White Arcus Foundation

Annette Lanjouw Arcus Foundation

The world's primates are among the most endangered of all tropical species. All great ape species – gorilla, chimpanzee, bonobo and orangutan – are classified as either Endangered or Critically Endangered. Furthermore, nearly all gibbon species are threatened with extinction. Whilst linkages between ape conservation and economic development, ethics and wider environmental processes have been acknowledged, more needs to be done to integrate biodiversity conservation within broader economic, social and environmental communities if those connections are to be fully realized and addressed.

Intended for a broad range of policymakers, industry experts and decision-makers, academics, researchers and NGOs, the *State of the Apes* series will look at the threats to these animals and their habitats within the broader context of economic and community development. Each publication presents a different theme, providing an overview of how these factors interrelate and affect the current and future status of apes, with robust statistics, welfare indicators, official and various other reports providing an objective and rigorous analysis of relevant issues.

State of the Apes

Killing, Capture, Trade and Conservation



CAMBRIDGE UNIVERSITY PRESS

University Printing House, Cambridge CB2 8BS,
United Kingdom

Cambridge University Press is part of the University
of Cambridge.

It furthers the University's mission by disseminating
knowledge in the pursuit of education, learning and
research at the highest international levels of excellence.

www.cambridge.org

Information on this title:

www.cambridge.org/9781108487948

DOI: 10.1017/9781108768351

© Cambridge University Press 2020

This work is in copyright. It is subject to statutory
exceptions and to the provisions of relevant licens-
ing agreements; with the exception of the Creative
Commons version, the link for which is provided
below, no reproduction of any part of this work may take
place without the written permission of Cambridge
University Press.

An online version of this work is published at <http://dx.doi.org/10.1017/9781108768351> under a Creative Commons Open Access license CC-BY-NC-ND 4.0 which permits re-use, distribution and reproduction in any medium for non-commercial purposes providing appropriate credit to the original work is given. You may not distribute derivative works without permission. To view a copy of this license, visit <https://creativecommons.org/licenses/by-nc-nd/4.0>.

All versions of this work may contain content repro-
duced under license from third parties. Permission to
reproduce this third-party content must be obtained
from these third-parties directly. When citing this
work, please include a reference to the DOI 10.1017/
9781108768351

First published 2020

Printed in the United Kingdom by TJ Books Limited,
Padstow Cornwall

*A catalogue record for this publication is available from
the British Library*

ISBN 978-1-108-48794-8 Hardback

ISBN 978-1-108-73826-2 Paperback

Cambridge University Press has no responsibility for
the persistence or accuracy of URLs for external or
third-party internet websites referred to in this publica-
tion, and does not guarantee that any content on such
websites is, or will remain, accurate or appropriate.

Credits

Editors

Helga Rainer, Alison White and
Annette Lanjouw

Production Coordinator

Alison White

Editorial Consultant and Copy-editor

Tania Inowlocki

Designer

Rick Jones, StudioExile

Cartographer

Jillian Luff, MAP*grafix*

Fact-checker and Reference Editor

Eva Fairnell

Proofreader

Sarah Binns

Indexer

Caroline Jones, Osprey Indexing

Cover photographs:

Background: © Jabruson

Bonobo: © Takeshi Furuichi

Gibbon: © IPPL

Gorilla: © Annette Lanjouw

Orangutan: © Jurek Wajdowicz, EWS

Chimpanzee: © Nilanjan Bhattacharya/
Dreamstime.com

Foreword


Understanding the impact of human behavior on the environment and the countless species facing serious threats to their survival is critical to developing intelligent and flexible approaches that will enable us to live within our planetary boundaries, sustaining the diversity of life and lives. The *State of the Apes* series brings together data and knowledge about the impact of human activities on apes and their habitat. By identifying potential solutions to avoid or minimise harm, it serves as an important resource for surmounting the many challenges confronting us and all other species on this planet. Across their range, ape populations are declining as a result of habitat loss and degradation, hunting and disease; all ape species face the threat of extinction. Understanding the scope and the impact that killing, capture and trade have on the different ape species across Africa and Asia, and how these threats affect their conservation, as well as the well-being of individual animals, is vital to finding solutions for their protection.

The fourth volume in the *State of the Apes* series focuses on one of the most direct threats to apes: hunting. This activity, which is a threat in almost all areas where non-human apes are found, results in their killing, often with the aim of using their body parts for food, medicine or other purposes, or live capture and trade to keep the animals as pets, for props in the entertainment industry or displayed in collections. All apes are protected under the law in every country where they exist: the killing, capture and trade in apes is therefore illegal. Despite this, apes are hunted in every country where they occur naturally, albeit for different and often complex reasons. In some cases, people hunt for cultural reasons, but often it is motivated by economic drivers, either to earn cash, obtain food or to remove

an animal that is perceived as a nuisance, destroying crops.

Apes are among the most charismatic groups of species in tropical forests across Africa and Asia. They are intelligent, sentient, social and emotional beings, and given their close genetic similarity and shared evolutionary history with humans, they are often fascinating to people. This fascination or attraction has been one of the factors that has given rise to the threats apes currently face. It is largely based on their “almost-human” aspect that great apes and gibbons are captured to fuel the entertainment industry and to supply the vibrant pet trade and animal collections.

The impact of hunting on the individual apes concerned are also severe, leading to traumatized animals that experience fear, loneliness, pain, confusion and isolation from other individuals of their species. Most apes are social animals, spending years with their mother and natal group, learning how to survive and interact in the wild. When kept in captivity in artificial, stressful conditions, they experience trauma that lasts a lifetime. The hunting and killing or capture of apes, and their trade, has severe impacts on the conservation of these highly threatened species, who often exist in fragmented populations in forest patches that have already been seriously degraded by industrial agriculture, extractive industries and infrastructure projects. The removal of even a few individuals can have significant impacts on a species’ future. Their survival is, quite literally, in our hands.



Nadya Hutagalung

United Nations Environment Program (UNEP) and Great Apes Survival Partnership (GRASP) Ambassador/
TV personality

Contents

The Arcus Foundation	ix
Notes to Readers	ix
Acknowledgments	x
Apes Overview	xii

Section 1

Killing, Capture, Trade and Conservation

Introduction	1
1. The Impact of Killing, Capture and Trade on Apes and their Habitat	25
Introduction	25
Direct Impacts of Hunting on Species Decline: Population Size and Social Consequences	28
Why Apes Are Particularly Sensitive to Hunting	38
Ecological Impacts of Ape Hunting	42
Ethical, Legal and Practical Concerns	43
Ape-based Economies	45
Conclusion	47
2. Understanding and Responding to Cultural Drivers of the Ape Trade	49
Introduction	49
The Cultural Context of Human Perceptions of Apes	50
Apes in Belief and Practice	52
The Use of Apes in Traditional Medicine and Rituals	53
Responses to the Cultural Drivers of the Trade	58
Intersectionality of Culture and Other Factors Relevant to the Ape Trade	64
Conclusion	67
3. Socioeconomics and the Trade in Ape Meat and Parts	69
Introduction	69
The Scale of the Problem for Great Apes	75
Biological Consequences of Hunting for Meat and Parts	78
Drivers of Wild Meat Hunting	82
Drivers of Hunting of Great Apes	88
Barriers and Potential Solutions	89
Conclusion	95
4. Drivers of the Illegal Trade in Live Apes	97
Introduction	97
Apes in China's Zoos and Wild Animal Parks	98
Apes in Advertising and Entertainment in the United States and Thailand	106
Trafficked, "Saved" and Rescued: Pet Apes in Indonesia	114
Social Media: Influencing the Demand for and the Perception of Apes	118
Conclusion	126

5. Curbing the Illegal Killing, Capture and Trade in Apes: Responses at Source	131
Introduction	131
Developing Effective Legal Frameworks	133
Strengthening Law Enforcement	135
Promoting Community Engagement	141
Conclusion	150
6. Protecting Apes: The Legal and Regulatory Environment	153
Introduction	153
The National Legal Environment: Trend Analysis	156
International Frameworks	176
Section 2	
The Status and Welfare of Great Apes and Gibbons	
Introduction	196
7. The Status of Apes: A Foundation for Systematic, Evidence-based Conservation	199
Introduction	199
The Importance of Information on Apes	200
Threats to Apes	201
The Status of Apes	204
Methods for Studying Populations	209
Population and Conservation Status of Apes	212
Conclusions on Ape Status	217
Evidence-Based Conservation	218
Conclusion	228
8. The Campaign for Nonhuman Rights and the Status of Captive Apes	231
Introduction	231
The Struggle to Obtain Legal Rights for Nonhuman Animals	233
The Status of Captive Apes: A Statistical Update	255
Annexes	263
Acronyms and Abbreviations	282
Glossary	285
References	292
Index	362

Other Titles in this Series

Arcus Foundation. 2018. *State of the Apes: Infrastructure Development and Ape Conservation*. Cambridge: Cambridge University Press.

Arcus Foundation. 2015. *State of the Apes: Industrial Agriculture and Ape Conservation*. Cambridge: Cambridge University Press.

Arcus Foundation. 2014. *State of the Apes: Extractive Industries and Ape Conservation*. Cambridge: Cambridge University Press.

Other Language Editions

Bahasa Indonesia

Arcus Foundation. 2020. *Negara Kera: Pembunuhan, Penangkapan, Perdagangan, dan Konservasi*.

Arcus Foundation. 2018. *Negara Kera: Pembangunan Infrastruktur dan Konservasi Kera*.

Arcus Foundation. 2015. *Negara Kera: Pertanian Industri dan Konservasi Kera*.

Arcus Foundation. 2014. *Negara Kera: Industri Ekstraktif dan Konservasi Kera*.

Chinese

类人猿现状：捕杀、捕捉、贸易和类人猿保护

类人猿现状：基础设施开发与类人猿保护

French

Arcus Foundation. 2020. *La Planète des grands singes : La destruction, la capture, le trafic et la conservation*.

Arcus Foundation. 2018. *La planète des grands singes : Le développement des infrastructures et la conservation des grands singes*.

Arcus Foundation. 2015. *La planète des grands singes : L'agriculture industrielle et la conservation des grands singes*.

Arcus Foundation. 2014. *La planète des grands singes : Les industries extractives et la conservation des grands singes*.

The Arcus Foundation

The Arcus Foundation is a private grant-making foundation that advances social justice and conservation goals. The Foundation works globally and has offices in New York City, USA and Cambridge, UK. For more information visit:

- arcusfoundation.org.
- Or connect with Arcus at:
- twitter.com/ArcusGreatApes; and
- facebook.com/ArcusGreatApes.

Great Apes and Gibbons Program

The long-term survival of humans, great apes and gibbons is dependent on how we respect and care for other animals and our shared natural resources. The Arcus Foundation seeks to increase respect for and recognition of the rights and value of great apes and gibbons, and to strengthen protection from threats to their habitats. The Arcus Great Apes and Gibbons Program supports conservation and policy advocacy efforts that promote their survival in the wild and in sanctuaries that offer high-quality care, safety and freedom from invasive research and exploitation.

Contact details

New York office:

44 West 28th Street, 17th Floor
 New York, New York 10001, United States
 +1 212 488 3000 / phone
 +1 212 488 3010 / fax

Cambridge office

(Great Apes and Gibbons Program):

Nine Hills Road
 Cambridge CB2 1GE
 United Kingdom
 +44 (0)1223 653040 / phone

Notes to Readers

Acronyms and abbreviations

A list of acronyms and abbreviations can be found at the back of the book, starting on p. 282.

Annexes

All annexes can be found at the back of the book, starting on p. 263, except for the Abundance Annex, which is available from the *State of the Apes* website:

- www.stateoftheapes.com.

Glossary

There is a glossary of scientific terms and keywords at the back of the book, starting on p. 285.

Chapter cross-referencing

Chapter cross-references appear throughout the book, either as direct references in the body text or in brackets.

Ape Abundance Estimates

Definitive, up-to-date abundance estimates are not available for all ape species. The most recent Abundance Annex, which can be accessed at stateoftheapes.com, presents estimates at the site level and uses abundance classes to indicate population ranges. In this volume, the Apes Overview and some chapters feature abundance information based on other geographic scales, drawn from a variety of sources, including forthcoming Red List assessments. Consequently, some figures may not align exactly.

Ape Range Maps

The ape range maps throughout this edition show the extent of occurrence (EOO) of each species. An EOO includes all known populations of a species contained within the

shortest possible continuous imaginary boundary. It is important to note that some areas within these boundaries are unsuitable and unoccupied.

The Arcus Foundation commissioned the ape distribution maps in the Apes Overview, Figures AO1 and AO2, to provide the most accurate and up-to-date illustration of range data. These maps were created by the Max Planck Institute for Evolutionary Anthropology, who manage the A.P.E.S. portal and database. This volume also features maps created by contributors who used ape range data from other sources. As a consequence, the maps may not all align exactly.

Acknowledgments

As with all volumes in the *State of the Apes* series, pulling together the content for this publication has been an extensive undertaking. Our aim is not only to encourage the critical engagement of all stakeholders, including conservation organizations, civil society, industry, donor and financial institutions, and governments, but also to increase support for great apes and gibbons. We would like to express our gratitude to everyone who played a role, from those who attended our stakeholder meeting, to our contributors and reviewers, to all those involved in the production and translation of the book. Thank you for your input, knowledge, advice, expertise, support, flexibility and patience!

Jon Stryker and the Arcus Foundation Board of Directors have been instrumental in enabling us to produce this publication series. We thank them for their ongoing support of our efforts to bring an overview of critical ape conservation issues to important audiences. We also thank Katrina Halliday and the team at Cambridge University Press for their commitment to this series.

In addition to the thematic content, each publication provides an overview of the status of apes, both in their natural habitats and in captivity. We are very grateful to the captive-ape organizations that provided detailed information and to all the great ape and gibbon scientists who contribute their valuable data to build the A.P.E.S. database. Such collaborative efforts are key to effective conservation action.

Particular thanks go to the following individuals and organizations: Marc Ancrenaz, Duncan Brack, Dirck Byler, Susan M. Cheyne, Lauren Coad, Gunung Gea, Charlotte Houpline, Tatyana Humle, Fiachra Kearney, Hjalmar S. Kühl, Noëlle Kümpel, Fabian Leendertz, Legal Atlas, Linda May, Max Planck Institute, Adam Phillipson, Martha

Robbins, Maribel Rodriguez, Julie Sherman, Tenekwetché Sop, Marie Stevenson and Sabri Zain.

We are grateful to the authors and contributors of this volume, including those who provided essential data. They are named at the end of each chapter. We could not have produced this book without them. We also extend thanks to our reviewers for providing constructive feedback and helping to ensure the quality of individual chapters and the book as a whole. They are: Katharine Abernethy, Graham L. Banes, Elizabeth L. Bennett, Tom Blomley, Luke Bond, Liana Chua, Rosie Cooney, Isabel Esterman, David Favre, Anna Frostic, Jessica Graham, Justin Kenrick, Tien Ming Lee, Peter J. Li, Neil Maddison, Fiona Maisels, Vincent Nijman, Colman O’Criodain, Alex Piel, Rajindra Puri, Cindy Rizzo, Steve Ross, Nadine Ruppert, Judith Shapiro, Willie Shubert, Serge A. Wich, Elizabeth A. Williamson, Karen Winfield and Stefan Ziegler.

Credits appear alongside all photographs in this volume, many of which were generously contributed by the photographers. We are also thankful to the organizations that allowed us to include extracts from previously published books, journals, reports and internal documents.

To ensure that the *State of the Apes* series is accessible to as many stakeholders, decision- and policy-makers as possible, it is published under an open access agreement with Cambridge University Press and translated into multiple languages. This volume will be available in Bahasa Indonesia, Chinese (Mandarin) and French thanks to our translators, graphic designers and proof-readers: Alboum Associates, Nelly Aubaud Davies, Exile: Design & Editorial Services, Xuezhu Huff, MAPgrafix, Anton Nurcahyo, Owlingua, Hélène Piantone, Erica Taube, Beth Varley and Rumanti Wasturini. The *State of the Apes* editions are available in all languages on the dedicated website (state

oftheapes.com); our thanks go to the Arcus Communications team for managing this site, especially Angela Cave, Sebastian Naidoo and Bryan Simmons.

Many others contributed in various ways, such as by providing introductions, anonymous input and strategic advice, or by helping with essential, if sometimes tedious, administrative tasks. We also thank all those who provided much-appreciated moral support.

**Helga Rainer, Alison White
and Annette Lanjouw**
Editors