中国环境与发展国际合作委员会生物多样性工作组
Biodiversity Working Group of
China Council for International Cooperation on
Environment and Development

BWG/CCICED

中国物种红色名录
China Species Red List

主 编：汪 松 解 焱
Editors: WANG Sung & XIE Yan

第二卷 脊椎动物 下册
Vol. II Vertebrates Part 2

高等教育出版社
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内容简介

本套书共分6卷。第二卷为脊椎动物卷，内容为1 500多种受威胁的脊椎动物物种的评估资料。其中，上册为658种鱼类和182种两栖类物种的评估资料；下册为174种爬行类、204种鸟类和294种哺乳类物种的评估资料。每个物种收集了迄今为止最晚近的信息，包括：分类信息（物种学名、中文名、英文名、重要的同物异名和分类信息备注），现有濒危等级信息（IUCN红色名录、中国红皮书、CITES附录、国家重点保护级别），中国分布占全球的比例，本次评估的濒危等级和所依据的标准及理由，生境、分布（分布图）、种群状况、致危因素、保护措施、参考文献、评估人及年代等等，具有重要的学术参考价值。

本套书的出版能为国内外生物多样性保护、自然保护和野生动植物保护有关的科研、管理、保护、执法、履行国际公约等方面的人士提供一本重要的基础性参考书，促进我国生物多样性保护方面的科研、教育、管理、保护、立法和执法以及科普工作的进一步发展。

注：中国物种红色名录电子版本在：《保护中国的生物多样性》网站 http://www.baohu.com

Electronic version of China Species Red List is in: Conserving China's Biodiversity at

http://www.chinabiodiversity.com

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研究保护物种

当代人类圣责

宋健

二〇〇四年四月

工程漫谈

名垂青史

曲格平 题

中国物种红色名录

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国际野生生物保护学会

顾　　问： 陈宜瑜　Peter Schei

主　　编： 汪　松　解　焱

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Institute of Zoology, Chinese Academy of Sciences
Wildlife Conservation Society (WCS)

Advisers: CHEN Yiyu　Peter Schei

Editors: WANG Sung　XIE Yan

Species Assessment Core Group:
LIU Ruiyu (LIU J. Y.), SONG Daxiang, ZHAO Er'mi, LI Zhenyu, WU Hanlin, WU Yunfei, HE Fenqi, DING Changqing, ZHOU Jiang, CHEN Yousheng, LIU Yueying, WU Min, YUAN Decheng, WU Chunsheng, YANG Qin'er, GENG Yuying, FEI Liang, Michael Wai Neng Lau, YANG Siliang

中国物种红色名录
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主　　编： 汪　松　解　焱

物种评估核心专家组：
赵尔宓、何芬奇、丁长青、吕顺清、周　江、赵小苓

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翻译人员： Janna Mariano-Groza、陈　莹、印松霞、王春燕

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Chief Editors: WANG Sung　XIE Yan

Species Assessment Core Group:
ZHAO Er'mi, HE Fenqi, DING Changqing, LU Shunqing, ZHOU Jiang, ZHAO Xiaoling

Invited Reviewers (in alphabetical order of family name): CHEN Yanxi, DONG Jinhai, Simon Dowell, Peter Garson, FEI Liang, GAO Wei, GU Huiqing, HAN Lianxian, JIANG Xuelong, Michael Wai Neng Lau, LI Weidong, LIU Naifa, MA Jianzhang, SHENG Helin, SHI Haitao, Andrew T. Smith, WANG Qishan, WANG Yingxiang, WANG Zongyi, WEI Tianhao, William Bleisch, XIE Feng, XIONG Yuliang, YANG Datong, YANG Lan, YANG Xiaojun, ZHAO Kentang, ZHENG Changlin, ZHOU Kaiya

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Translators: Janna Mariano – Groza, CHEN Ying, YIN Songxia, WANG Chunyan

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序

刚刚完稿的《中国物种红色名录》将分成3卷出版。这套专著包含了如此浩瀚的详细技术信息，是其他同类出版物所不可比拟的，也是十分难能可贵的。这套专著是由108位科学家和保护专家历时3年半完成的。该著作对中国这一世界幅员最大、地理上最多样化的国家中的一万多个现生物种的保护现状作出了评估。

本红色名录展示了对所有哺乳类、鸟类、两栖爬行类和部分鱼类，以及部分昆虫、软体动物等无脊椎动物和维管束植物等的评估结果。根据IUCN（世界自然保护联盟）制订的红色名录等级标准，所有评估的濒危物种都确定了其濒危状况的等级。书中还包括物种的分布图，显示了分布记录。陆生脊椎动物部分的记录是基于《中国物种信息系统》所积累的资料。这个信息系统，是中国环境与发展国际合作委员会生物多样性工作组多年努力建设和完善的成果，设立在中国科学院动物研究所。

这套纲要性的专著包含了所有专家们的通力合作，以及这套专著的主编汪松教授个人对此工作的成功推动。这一成功的确实现了合作者们的一个梦想。因为不但这一工作的工作量本身对组织者和参与者是个极大挑战，而且这一巨著是在资金支持有限的情况下完成的。

除了学术上的贡献外，本套专著所展示的物种现状分析结果的意义是重大的。过去的20多年，中国经济的快速增长是令人瞠目的，但这种增长的实现是以牺牲环境为代价的。新的大坝、道路、工厂、城镇等等的快速发展，对土地、木材、岩石、水泥、水、野生食物、传统医药和其他各类资源不断增长的需求，导致野生栖息地的不断退化和破坏。红色名录记录了这些变化。数以千计的物种在20世纪60年代还是很常见的，现在都已列入了濒危物种名单。

我们希望这套红色名录的出版能推动对物种编目和保护的新努力，而不仅仅是生物多样性丧失的一部文献记录。有些种类许多年没有发现记录，可能只是因为它们没有被注意到，或者是因为它们生存在过去所知道的分布范围之外。面临灭绝危险的一些种类，还可能通过计划周密的适当行动而得到拯救。这套专著的出版有助于专家们制订和规划未来若干年的保护规划和优先项目。

希望这套专著能引起有关保护部门的注意和充分应用。我个人感谢和祝贺这套重要著作的参与者和编撰者，并向他们表示崇高的敬意。

马敬能

东南亚生物多样性保护中心主任

2004年4月4日

Preface

Few publications can claim to have captured such a vast compilation of 3 detailed technical information as the newly completed China Red Listings, published as a series of 3 volumes. A team of 108 scientists and conservation experts have worked for three and half years to review the conservation status of over 10 000 living species, across the face of one of the world's largest and geographically most diverse countries — China.

The listings present the findings and conclusions of all species of mammals, birds, amphibians and reptiles, fishes, as well as selected groups of insects, molluscs and vascular plants, etc. All have been assigned status according to the newly defined red listing categories developed by IUCN. Detailed description maps of species are included showing all point records held in the rather comprehensive CSIS database managed by the Biodiversity Working Group of China Council for International Cooperation on Environment and Development based in the Institute of Zoology of Chinese Academy of Sciences.

The compendium comprises a stupendous effort by the experts and a personal triumph for the editor Prof. Wang Sung, who has been the driving force behind the whole exercise. It is truly a dream come true despite the large scale of the challenge and the shortage of funding and support for much of the work.

Scholarship and dedication apart, the results of the analysis are of grave importance. China's rapid economic growth over the past two decades has been spectacular but not achieved without environmental sacrifice. Much wild habitat has been destroyed or degraded in the great rush towards development — new dams, roads, factories, new towns and associated growth in demand for land, timber, rock, cement, water, wildlife foods, traditional medicines and other resources. The red listing volumes document the losses. Thousands of species that were common in the 1960's have to be now classified as endangered. Some are already extinct.

Let us hope that the volumes will serve as a stimulus for new inventory and conservation effort and not just a documentation of biodiversity loss. Some species not recorded for many years may yet be found overlooked or living outside of their formerly known ranges. Other species facing extinction can still be saved by well-planned and appropriate interventions. These volumes can help plan and prioritise efforts for many years to come.

I hope the conservation agencies concerned will take heed and use these volumes wisely. I personally offer a salute of gratitude and congratulations to the compilers and editors of these important volumes.

John MacKinnon
Co-director, ASEAN Regional Centre for
Biodiversity Conservation (ARCBC)
4 April 2004

前　言

中国是世界上生物多样性最丰富的国家之一。保护生物多样性首先遇到的问题是中国的生物多样性的现状如何，有多少动植物种的生存受到威胁，也就是有多少种濒危物种？这就需要对物种现状进行客观的科学的评估。此类工作在国际上已经有将近半个世纪的历史，也就是红色名录的制订。

物种现状评估和红色名录制订是生物多样性保护的一项基础性任务，是确定保护优先项目，制订保护法规和保护物种名录、保护规划，建立自然保护区，开展科学研究和普及教育，培养专业人员，履行生物多样性公约、濒危物种公约、湿地公约等多项国际条约等的重要依据。为此，生物多样性公约和国家生物多样性保护行动计划等都对此有明确要求。

中国环境与发展国际合作委员会（CCICED）生物多样性工作组（1992—2001 年）从建立之初，就明确提出以生物多样性现状评估为己任，其中包括物种评估。在委员会的第二阶段后期，此项《中国物种红色名录》项目得以正式列入工作组的计划，并先后得到挪威政府 NORAD、保护国际（Conservation International，CI）应用生物多样性科学中心和加拿大国际开发署（CIDA）的支持，项目也得到世界自然保护联盟（IUCN）物种生存委员会全球红色名录项目技术上的支持。

事实上，早在 20 世纪 80 年代，在国家环保局的支持下，我国曾先后启动了植物和动物的红皮书的编写和出版（1992 年，1997—1998 年）。当时，依据的标准是 20 世纪 60 年代的 IUCN 濒危等级标准，并根据国情作了一些变更，主要的是列有“稀有”和“国内绝迹”这两个等级。IUCN 在 20 世纪 90 年代经过反复研讨后，通过了修订后的新等级标准（1994 年，2001 年），从量的角度，为物种评估提供了更为客观的等级标准，从而提高了物种评估结果的科学性。这项新标准的又一特点是适用于各类动植物，可以进行横向的比较。新标准发布后，很快得到国际保护界的认可，约 40 个国家将之应用于本国的物种的评估。保护事业是全球性的任务，为了同国际保持一致，便于沟通和合作，我们与 IUCN 红色名录项目官员共同研讨后，决定本项目全面采用 IUCN 的新标准作为评估的依据标准。

国内从事动植物研究的专家队伍十分庞大。要全面评估中国物种的状况，应该邀请更多的专家参与。比如，每一个门类都邀请 10～20 位或更多专家来共同做此项目。然而，由于项目的资金有限，显然不可能这样做。于是，我们决定每一个大的类群邀请 1～2 位有经验的专家来牵头，根据需要，由这些专家再组织必要的少数同行来一起做。但在项目进行过程中，邀请了 100 多位相关的专家来共同审核和评估。

这个项目从 2000 年 7 月 30 日—8 月 2 日在四川都江堰市举行第一次启动研讨会开始。那次研讨会邀请了国内 50 多位主要从事动植物分类、生态和保护方面的专家到会，并且特意邀请了 IUCN 全球红色名录项目的负责人 Simon Stuart、Susan Mainka、Wendy Strahm 以及生物多样性工作组外方主席 Peter Schei 和成员 Andrew Smith 等参会。会议作为项目的启动，着重就 IUCN 红色名录等级新标准作了深入的研讨，为开展我国物种评估奠定了

技术基础。此后，又先后举行了项目分工落实、项目中期进度检查和交流、各主要类群的初稿评审和最后的终审研讨会。项目历时3年半，终于在2003年底完成了对将近一万个动植物种的评估。这无疑是一个划时代的行动。评估的结果体现了：

1. 项目的历史性意义，即我国作为一个生物多样性大国，处在20世纪末和21世纪初的历史时期，对物种现状的一次现阶段的、独立的、全面的、科学的评估；

2. 提出了现阶段我国濒危物种的红色名录，包括各受威胁物种的濒危等级和所依据的国际通用的标准，物种的现状和保护状况，揭示了我国不同类群的动植物种和生境面临的威胁；

3. 基于这个基础，可以找出我国在生物多样性特别是物种多样性保护方面存在的问题和差距，为进一步监测及保护物种奠定了科学基础，明确了为加强保护中国的生物多样性、实现可持续发展所面临的挑战。

在开展物种全面评估时，遇到的一个棘手的问题是分类系统问题。我国的分类学基础本来就薄弱，加上半个世纪以来，分类学研究不断遭遇波折，时断时续。而且与国际分类学界的联系和交往很不够，与国际显然不能接轨。这就给评估工作带来更大的困难。我们在此项目中，尽可能地参照国际最新的分类系统作为依据，但不能保证所有的动植物都如此。如脊椎动物中的哺乳类和鸟类，得益于国际同行的协作，基本上同国际现行分类系统接轨。

物种评估是阶段性的，IUCN在20世纪80年代到90年代的红色名录就是每两年修订出版一次。我们这项物种评估的出版，也就意味着今后还需要有后续行动，对现有物种评估不断地进行修订和补充，已经评估的类群需要再评估，没有评估的类群需要从头开始。这样，就可以使我国的物种评估不断更新和完善，及时反映各个时期的真实状况，为保护生物多样性行动提供适时的科学依据。网站的建立将有助于更快捷地体现这些更新。

在项目即将完成时，作为中国环境与发展国际合作委员会原生物多样性工作组中方组长和本项目的主持人，首先要感谢委员会的历任主席、副主席和秘书长以及国际和中方的秘书处对生物多样性保护的一贯关心和支持。在项目完成之际，我们特别得到尊敬的宋健博士和曲格平教授百忙中的亲笔题词，Peter Schei博士和陈宜瑜教授作为顾问，从项目启动开始就十分支持这项任务，我们由衷地感谢他们的勉励。作为项目负责人，我要衷心感谢本项目的支持者和合作者，他们有来自国际保护界的著名专家，更有国内一生从事某类动物、植物研究的资深专家，还有一部分学有所长的中青年专家，总共有100多位。为了完成这一历史性任务，他们多年来认真负责，为此项目付出了很多心血，特别是本项目各门类的负责人刘瑞玉、宋大祥、赵尔宓、伍汉霖、武云飞、刘月英、杨思谅、李振宇、杨亲二、袁德成、武春生、陈又生、耿玉英、何芬奇、丁长青、吴岷、周江、费梁、刘惠宁等。项目启动和历次评估研讨会又得到Peter Schei, Simon Stuart, Susan Mainka, Andrew Smith, Wendy Strahm, William Bleisch, 尹文英、马建章、陈心启、宋佳坤、王岐山、杨大同、董金海、刘廼发、杨岚、裴盛基、陈书坤、武素功、李德铢、王献溥、王宗祎、傅立国、王应祥、许再富、高玮、张春光等近百位专家的参与。解焱作为工作组和本项目的协调员，在项目的全过程做了大量组织、推动、协调、评估、地图制作、翻译、统稿和编辑工作；办公室工作人员杜有梅、杜有才、李圣标、陈莹、李立姝、王春燕等完成大量数据录入、地图制作、编辑加工和翻译等工作；乔轶伦、周

婷、向高世、岩崑、候勉等积极为本书提供照片和图片。有如此一大批志同道合的合作者的鼎力支持和合作，是项目得以顺利完成的根本保证。

最后，我要特别感谢挪威政府 NORAD、保护国际尤其是应用生物多样性科学中心、加拿大国际开发署和中国环境与发展国际合作委员会国际秘书处以及世界自然保护联盟红色名录项目对本项目的支持。没有他们的支持，这个项目是难以启动和完成的。

汪　松
中国环境与发展国际合作委员会
生物多样性工作组中方组长
中国科学院动物研究所
2004 年春节于北京

Foreword

China is one of the richest biodiversity countries in the world. One of the initial challenges to protect China's biodiversity is to understand its current status, that is, how many existing species are threatened and what are the threat categories for these species according to the internationally recognized criteria. A scientific, objective assessment is required to inventory existing species. The assessment of the current status of species is one fundamental task for the conservation of biodiversity, and the categorization of species has been going on for over half a century in the world, i. e. , the compilation of the Red List. This list is the basis for prioritizing conservation projects, creating conservation laws and endangered species lists, planning and establishing nature reserves, performing scientific research and public education, training and developing conservation professionals, and implementing international treaties, such as the Convention on Biological Diversity (CBD), the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), and the Ramsar Convention, etc. The CBD and the National Biodiversity Action Plan (BAP) have clearly spelled out the requirement for species and biodiversity evaluation.

Since the establishment of the Biodiversity Working Group (BWG) of China Council for International Cooperation on Environment and Development (CCICED) in 1992, biodiversity assessment, including species diversity evaluation, has been identified as one of the most important tasks for the BWG. During the late 1990's, the China Red List was formally listed as one of the major tasks of the BWG. Thanks to generous financial support from the Norwegian Government (NORAD) and Center for Applied Biodiversity Science at Conservation International (CABS/CI) the initiative could begin. It also received support from IUCN's Red List Programme.

In fact, as early as the 1980s, supported by the National Environmental Protection Agency, the Red Data Books (China's RDBs) on wild flora and subsequently on fauna in China were compiled and published (1992; 1997—1998). The criteria used in the RDBs were based on the 1960's IUCN Red List Categories with modifications to suit the specific conditions in China. For instance, "Extirpated" was added to the Categories as separate from the worldwide "Extinct" for those species that had declined and disappeared in China, and "Rare" was retained to distinguish those naturally rare species from those that had declined and were threatened on the verge of extinction.

In 1990's, IUCN developed new criteria for categorization (1994, 2001), which, from a quantitative perspective, provide more objective standards for species evaluation and lead to more scientific results of the assessment. Another feature of the new criteria is that they can be applied to all kinds of species, plants and animals, higher or lower taxa, and can be used for cross-taxa comparisons. The newly-developed criteria are quickly recognized among the international com-

munity and adopted in the assessment of species in countries and regions. Since conservation is a worldwide effort and international exchange or communication is vital, it was decided that the present China Red List should be developed according to the newly-revised IUCN Red Categorizes for consistency, better communication and international cooperation.

Development of the Red List for China has by no means been an easy task. China has comparatively strong and abundant resources of professionals (zoologists and botanists). Ideally an evaluating team of 20 to 30 experts from various parts of the country for each taxon would be the best for the amount of work involved, but only 1 or 2 top and well-experienced experts for each major taxon were appointed as project leaders due to the budget constraints. Additional help was obtained from their colleagues to provide information on specific groups or species whenever this was deemed necessary. In order to gather expert opinions from outside the project teams, peer review workshops were held on plants, invertebrates and fishes, as well as terrestrial vertebrates. More than one hundred experts were invited to make their valuable contributions in the workshops.

The project was initiated in July 2000 at a kick-off workshop in Dujiangyan city, Sichuan province. It was successfully completed in December 2003 after three and half years of hard work by the project team. It evaluated approximately 10 000 species of wild fauna and flora. This project is a milestone in the history of biodiversity assessment in China. It represents:

1. The first comprehensive evaluation of the status of wild fauna and flora in China during the late 20th century to the early 21st century, using internationally recognized IUCN Red List Categories;

2. A detailed Red List and databank for species conservation. This databank contains information on 10 000 species of animals and plants, the present status of their populations and habitats, threats and their threat categories; and,

3. A gap analysis based on the Red List and Databank to identify problems and challenges in biodiversity conservation and sustainable development in China. The analysis, while still necessarily preliminary, provides a scientific basis for future policy-making, priorities, and projects for biodiversity conservation in China.

Since the present evaluation is based on the availability of data and information at the present phase, it is apparent that there is a need for further action to update the database and re-evaluate species status in the future, not only for those evaluated species, but especially for those not evaluated in the project. Continuation of species evaluation is vital to illuminate the real situation as much as possible.

One of the most confused issues during the evaluation process was the taxonomic conflict due mainly to the weakness of taxonomic research in China. Poor communication has caused many conflicts in the past. We tried our best to follow the latest progress of taxonomy in various taxa. The website version will be updated as new changes are constantly being made.

With the successful completion of the Red List Programme, and as the organizer of the project representing BWG/CCICED, I would like to extend my heartfelt appreciation to our friends who have strongly supported the project: Susan Mainka (SSC), Simon Stuart (CI), Wendy Strahm (SSC), Russell Mittermeier (CI; BWG/CCICED), Anthony Rylands (CI), Andrew Smith (ASU; BWG/CCICED), John MacKinnon (ARCBC; BWG/CCICED), William Bleisch (FFI), Earl Drake and Yichun Dai (CCICED). Dr. Peter Schei (Norway; BWG/CCICED) and Prof. Chen Yiyu (President of National Natural Science Foundation of China) have been so kind to support this initiative as our advisors, for which I extend my sincere appreciation. I also wish to thank all of my colleagues of the project for their great efforts and contributions in evaluation of species of various taxa in which they have been well-experienced, including J. Y. Liu, Daxiang Song, Ermi Zhao, Wenying Yin, Jianzhang Ma, Xinqi Chen, Zhenyu Li, Qin'er Yang, Yueying Liu, Min Wu, Siliang Yang, Decheng Yuan, Chunsheng Wu, Hanlin Wu, Yunfei Wu, Jiakun Song, Liang Fei, Fenqi He, Changqing Ding, Jiang Zhou and Micheal Wai Neng Lau. Their close and selfless cooperation in the same camp for three and half years has ensured the progress and success of the project. I must also thank Yan Xie, Coordinator of the BWG/CCICED and of the project, for her inexhaustibly hard work in organizing, training, coordinating, evaluating, mapping, compiling and reviewing the entire text. Appreciation also goes to the staffs in the office: Youmei Du, Youcai Du, Shengbiao Li, Ying Chen, Lishu Li, Chunyan Wang and others, who have also worked very hard on data entry, mapping, editing and translation; Qiao Yilun, Zhou Ting, Xiang Gaoshi, Yan Kun, Hou Mian and others for providing many photos and drawings.

I wish to extend my special thanks to the Norwegian NORAD, Center for Applied Biodiversity Science at Conservation International (CABS/CI), Canadian CIDA as well as the CCICED's International Secretariat for their financial contribution to this milestone project.

Finally, I wish to thank Dr. Song Jian and Prof. Qu Geping for their continuous support and interest, and for providing the beautiful calligraphic dedication to complement this work.

I very much hope that the China Red List will play a constructive role in elaborating the challenges on the way forward in biodiversity conservation in China and look forward to comments and advice from all those who wish to give them.

Wang Sung

Co-chair, Biodiversity Working Group of
China Council for International Cooperation on
Environment and Development
Institute of Zoology, Chinese Academy of Sciences

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