



The Green Gold of China

绿色中国

John Mackinnon (马敬能) and Wang Haibin (王海滨)

EU-CHINA BIODIVERSITY PROGRAMME

Translated by Hefen and Wang Zanxin



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The Green Gold of China

绿色中国

中国绿色农业的发展与前景

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马敬能 王海滨 著
中国-欧盟生物多样性项目
吕和芬 王赞信 译







Serge Abou, Ambassador
European Commission Delegation to China
and Mongolia

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欧洲委员会驻华代表团团长

Foreword

for Green Gold of China
EU-China Biodiversity Programme publication

Conserving biodiversity is a fundamental part of development. China's exceptionally high biodiversity makes it even more relevant. Through this beautiful book, we can spread this important message.

The EU-China Biodiversity Conservation Programme (ECBP) is the EU's largest biodiversity programme worldwide. It underlines the EU's recognition of biodiversity's importance and of the great economic value of the products and services it provides.

The book highlights the great beauty and value of Chinese biodiversity. It also tells the story of threats posed to biodiversity by China's rapid development, the measures being taken to protect biodiversity and the specific activities being undertaken by the EU-China Biodiversity Programme. I offer my best wishes to all those working on the important task of conserving China's green gold. I hope the expertise that the EU brings to China in this cooperation will be fruitful and leave a lasting legacy.

Serge Abou, Ambassador
European Commission Delegation to China and Mongolia

前言

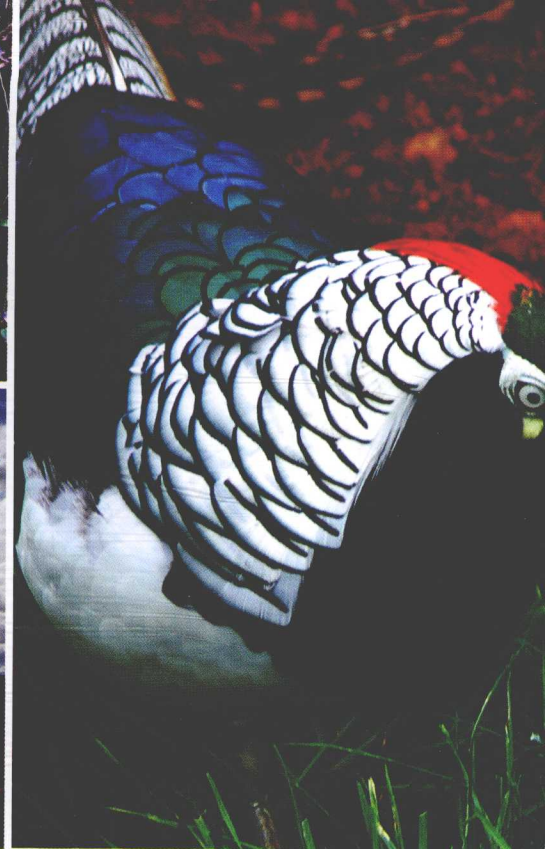
绿色中国
中国—欧盟生物多样性

生物多样性保护是社会发展的一个重要组成部分。中国的生物多样性极其丰富，这使得中国的生物多样性保护在社会发展中的地位尤为重要。希望通过这本精美的书，这一重要信息能够得到广泛的传播。

中国—欧盟生物多样性项目（ECBP）是欧盟在全球范围内资助的最大规模的生物多样性保护项目。该项目充分表明了欧盟对生物多样性的重要性及其提供的产品和服务功能的重要经济价值的认可。

本书不仅突出了中国丰富多彩的生物多样性，还强调了其不可替代的价值。同时也讲述了中国快速发展给生物多样性带来的威胁，中国对生物多样性保护所采取的措施，还有中国—欧盟生物多样性项目在生物多样性保护方面开展的具体活动。在此，我衷心地祝愿那些工作在保护中国生物多样性第一线的“绿色卫士”。我希望通过这一项目，来自欧盟的专业知识能够使中国的生物多样性保护获得显著的成效，使后代永久受益。

赛日·安博大使
欧洲委员会驻华代表团团长



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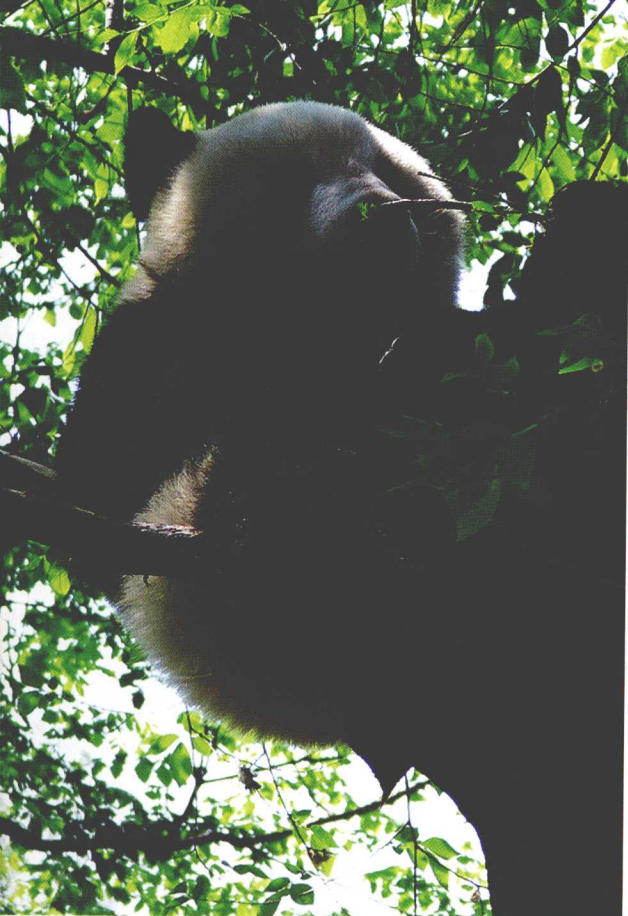
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PART ONE

The Richness of China's Biodiversity

Introduction

Like the light shimmering off the scales of a dragon, China reflects many colours. To the yellow banners of its imperial past and the red banners of modern China is added the green banner of environment. Of course China was by nature green—a vast expanse of forested mountains and verdant grasslands. We took green for granted. It was our natural inheritance. But 5 millenia of human development and endeavour have changed the nature of the land forever. If we are to retain any of the original green or if we are to make green once more the degraded deserts and denuded hills, that will be done by human effort. Our new challenge—Green China.

China is blessed with a diversity of ecosystems, habitats and living species second to none. Whether we use this wealth wisely or whether we let it slip through our fingers is in our own hands. This 'greenness' of China is very precious. It is gold. Its value is counted in economic benefits, ecological services, human health and living standards as well as spiritual well-being.

As a consequence of the vast size, varying nature and complex geological history of China, a very wide range of habitat types and very large numbers of species are represented—from the high peaks of the Himalayas to the depths of the Turpan basin; from the deserts, steppes and meadows to a range of forest types, wetlands, coasts and coral reefs.

Approximately 35,000 species of higher plants belonging to 353 families and 3,184 genera (of which 190 are endemic) occur here. China contains the richest temperate regions in the world and ranks globally as one of the richest countries in terms of overall plant diversity. The country is also recognised as one of the world's ten 'mega-diversity' countries on account of its rich vertebrate and other zoological wealth.

China has about 11.5% of the world mammal species, 13.5 % of the world bird species, 6.7 % of world reptile species and 6.8% of the world amphibian species. The Chinese fauna is also characterized by high levels of endemism or creatures found nowhere else in the world.



Turnstone has a chisel-shaped beak, well adapted for prizing shells off rocks and rolling over small stones to search for hiding crustaceans underneath.

翻石鹬的凿形嘴，可从石块上撬取贝类，能翻滚小石块搜寻藏匿其下的甲壳类动物为食。

第一章

中国丰富多采的生物多样性

导 言

正如龙鳞片上闪亮的微光一样，中国反映了多种色彩。在旧日中华帝国时代皇家尊崇的黄色旗帜，以及现代共和国高高飘扬的五星红旗之外，另一面绿色的环保旗帜也已在中华大地树立起来。当然，远古的中国也是绿色的一广袤的森林和翠绿的草地。中国大地当然是绿色的，它是我们的自然遗产。然而，五千年的人类发展已经改变了大地的本色。若要想保留一些原始的绿色，让退化的沙漠和光秃的丘陵重现昔日的绿色，就需要我们的努力。现在我们正面临着一个新的挑战：绿化中国。

中国拥有世界上最丰富的生态系统、栖息地和物种多样性。是合理地利用这些财富，还是让它从我们的手指间流失掉，这都取决于我们的双手。中国的绿色资源珍贵无比，价比黄金，它的价值体现在经济利益，生态服务，人类健康，生活质量以及精神福祉等各个方面。

中国幅员辽阔，自然条件多样；经历了复杂的地理历史变迁，拥有广泛的栖息地类型和多样的物种：从世界之巅的喜马拉雅山到海平面 154 米以下的吐鲁番盆地；从沙漠、大草原和草甸，到广袤的森林、湿地、海岸和珊瑚礁。

中国大约有高等植物 35,000 余种，分属于 353 个科和 3,184 个属(其中有 190 个是中国特有属)。中国拥有世界上资源最丰富的温带区，是世界上植物多样性最丰富的国家之一。中国也是世界公认的十大“多样性巨丰”国家之一，拥有丰富的脊椎动物及其他动物。

中国拥有世界上大约 11.5% 的哺乳类、13.5% 的鸟类、6.7% 的爬行类和 6.8% 的两栖类。中国动物区系的一个特点，是具有很高的地方特有性，也就是说，其中很多种类是中国特有的，在世界其他地区没有分布。

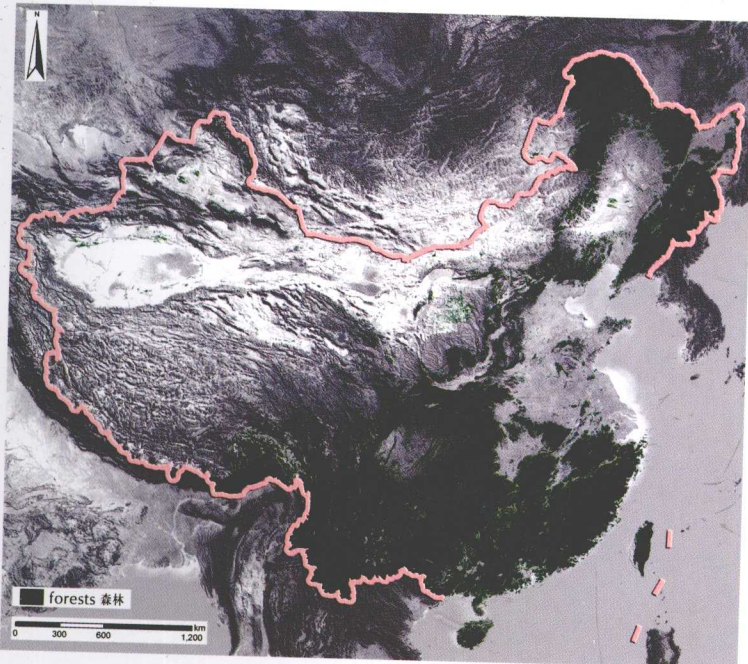
Forests

Natural forests cover 10% of the surface of China. Many types and subtypes are recognized. Forests in the north and on high mountains belong to the mixed conifer type and dominated spruce, hemlock or in some places firs. Forests of the temperate lowlands are dominated by mixed deciduous broadleaf trees. Forests in the south are dominated by sub-tropical evergreen and subtropical monsoon forest types whilst only a few small patches in Hainan, SW Yunnan, SE Xizang and southern Taiwan are clothed in evergreen rainforests. Broad transition zones grade between these major types and different species assemblages make up the respective types in different biogeographical regions of the country. Highly specialized mangrove forests form a narrow fringe in muddy bays along the south coast and around Hainan Island.

Few of the forests in China are in a primary or pristine condition. All have been affected by human activities of logging, thinning, wood collection, burning or replanting. Extensive areas are now reforested with monocultures to produce timber, combat desertification, protect watershed and banks of waterways.

Species richness in the temperate broad leaf and subtropical evergreen forests are the richest of their type in the world and rival the richness of the tropical evergreen forests. Tropical forests are the richest in terms of total flora and total fauna of all terrestrial habitats in China.

Many of China's trees now play a big role in silviculture such as Dawn Redwood (*Metasequoia glyptostoboides*), Chinese fir (*Cunninghamia lanceolata*) and Chinese pine (*Pinus massoniana*). Some forest trees have been developed as valuable economic crops such as kiwi fruit (*Actinidia*), chestnuts (*Castanea spp.*), walnuts (*Juglans regia*), ginkgo (*Ginkgo biloba*) and the host trees of the valuable lac resin derived from the insect (*Kerria lacca*). Such native timbers as Fujian cypress (*Fokienia hodginsii*), Rosewood (*Dalbergia spp.*) and Agarwood (*Aquilaria spp.*) are among the most precious woods in the world.





Hainan still harbours some of the densest tropical rainforests in China.

海南仍是中国一些热带雨林的密集港湾。



In temperate woodlands, the spring is a season of many flowers before the deciduous trees develop new leaves that shade the forest floor from sunlight through the hotter summer months.

温带林地，春暖花开后，落叶林生出新的叶片，在炎炎夏季为林地遮阳盖荫。



Fungi serve a vital role in the decomposition ecology of forests.

真菌在林木分解过程中起着重要作用。