



都江堰生物多样性小丛书
A Series Books of Biodiversity In Dujiangyan

Extraordinary Birds

奇妙的鸟类

龙溪-虹口国家级自然保护区管理局
The Management Bureau of Longxi-Hongkou National Nature Reserve

一起去了解羽族世界吧!
Let's appreciate extraordinary birds together!



四川科学技术出版社

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生物多样性是数以百万计的动物、植物、微生物和它们所拥有的基因以及它们与其生存环境形成的复杂的生态系统。

生物多样性是人类赖以生存的物质基础。多种多样的生物不仅给我们带来全部的食物、许多药物和工业原料，而且还有巨大的间接价值。据估计，生物多样性在固定太阳能、调节气候、保持水土、吸收和分解污染物、贮存营养元素并促进养分循环、维持进化过程等方面，每年为人类创造约33万亿美元的价值。

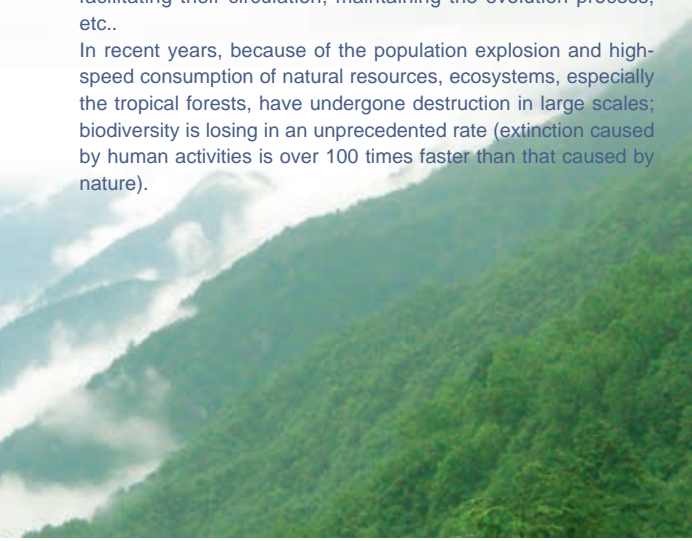
近年来，由于人口的剧增、自然资源的高速消耗，使生态系统特别是热带的森林遭到大规模破坏，造成生物多样性以空前的速度衰减（人类活动造成生物物种灭绝的速度比自然灭绝高100倍以上）。



Biodiversity is the grandeur of the biosphere on planet Earth composed of plant, animals and microbe with their constantly changing genetic materials, various morphology and functions, as well as complex ecosystems.

Biodiversity is the material basis of human's survival. It not only provides us with all the food, many medicines and industrial raw materials, but also has great indirect value. It is estimated that biodiversity contributes to approximately 33,000 billion dollars per year, in the aspects of stabilizing solar power, regulating the climate, conserving water and soil, absorbing and degrading contaminative substance, keeping nutrient elements and facilitating their circulation, maintaining the evolution process, etc..

In recent years, because of the population explosion and high-speed consumption of natural resources, ecosystems, especially the tropical forests, have undergone destruction in large scales; biodiversity is losing in an unprecedented rate (extinction caused by human activities is over 100 times faster than that caused by nature).



为保护和持续利用生物多样性，1992年在巴西里约热内卢召开的联合国环境与发展大会上，来自150多个国家的首脑共同签署了《生物多样性公约》。公约于1993年12月29日正式生效，目前已有188个国家和地区成为缔约方。我国是第一批签署《生物多样性公约》的国家。

都江堰市是我国生物多样性的代表地区，拥有“四川大熊猫栖息地世界自然遗产”“青城山—都江堰世界文化遗产”“龙溪—虹口国家级自然保护区”，既是保护生物多样性的重要基地，也是生物多样性的展示窗口。

都江堰市地理位置独特，地质历史悠久。地处青藏高原东缘、横断山北段，属中国地貌三大阶梯中第一阶梯向第二阶梯过渡区域。境内最高峰光光山在距今十亿年前就已出露海面，中高山则是受第三纪、第四纪两次喜马拉雅造山运动的强烈影响迅速抬升而成。市域内有平原、河谷、丘陵、低山、中山和高山峡谷等多种地貌类型。海拔从592米到4 582米，相对高差达3 990米；气候垂直变化显著，植被亦呈现典型的垂直分布。

都江堰市位于我国中部一个气候、植被、植物区系、动物地理多种地理要素交汇、过渡的大尺度复合性生态过渡区。气候区划上，都江堰市处于在中亚热带、北亚热带



In order to preserve and ensure sustainable use of biodiversity resources, heads from more than 150 countries signed the Convention on Biological Diversity at the United Nations Conference on Environment and Development, which was held in the year of 1992 in Rio de Janeiro, Brazil. The convention came into effect on 29th December, 1993; by now, there are 188 signatory parties. China was among the first group of states that signed the convention.

Dujiangyan is a representative region of biodiversity in China, owning World Natural Heritage of Sichuan Giant Panda Habitat, World Cultural Heritage of Mount Qingcheng and Dujiangyan, and Longxi-Hongkou Nature Reserve. It is not only an important base of biodiversity conservation, but also a window displaying it.

Dujiangyan has a unique location and ancient geology. It is situated on the east margin of Qinghai-Tibet Plateau and northern part of Hengduan Mountains, often known as the transition region from the first step to the second step down the “three steps of topography in China”. Guangguang Mountain is the highest peak in this region, which has emerged from the sea surface as early as one billion years ago; mid-high mountains were quickly lifted by the strong influence of Himalayan orogeny in the Tertiary and Quaternary Periods. In this territory, there are various topography features including plains, river valleys, uplands, low mountains, mid mountains, alpine canyons, etc.. The elevation ranges from 592 to 4,582 metres, rendering the relative difference as huge as 3,990 metres. The vertical change of climate is very obvious; hence, the vegetation is also vertically distributed.

Dujiangyan lies in large-scaled ecological transition zone, where

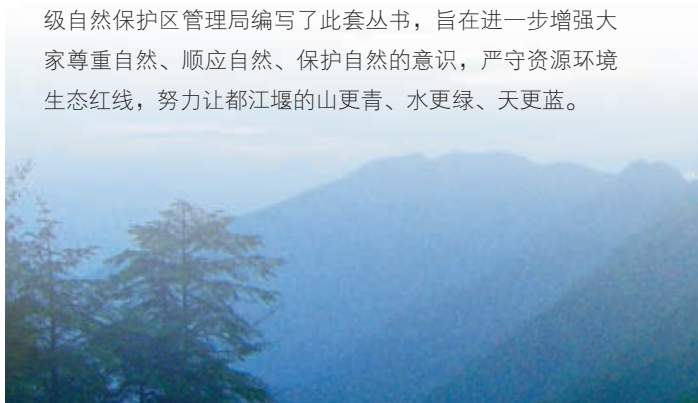


和青藏高原三个气候区的交汇带；中国森林植被区划上，都江堰市处在青藏高原高寒植被区域与亚热带常绿阔叶林区域的交汇处；从植物区系上讲，都江堰市属于横断山脉植物区系地区向华中植物区系地区的过渡区。

得天独厚的地理条件使这里植被类型和生物物种极为丰富。市域内由低到高分布着常绿阔叶林、常绿和落叶阔叶混交林、针叶阔叶混交林、亚高山暗针叶林、高山灌丛、高山草甸和高山流石滩稀疏植被7个植被带；有维管植物3 284种，脊椎动物568种。这里生物多样性的显著特点是：区位独特，起源古老，类型多样，结构复杂，种类丰富，特有性强，濒危物种多。

我国陆地11个生物多样性保护关键区域中排列第二的“岷山-横断山北段”，保护国际列出的“中国西南山地生物多样性热点地区”（全球25个生物多样性热点地区之一），均涵盖了都江堰市所在区域。

都江堰市是长江上游生态屏障重要组成，一直以来，都江堰市委、市政府都高度重视生物多样性保护和生态文明建设。为充分展示良好的生态本底，由龙溪-虹口国家级自然保护区管理局编写了这套丛书，旨在进一步增强大家尊重自然、顺应自然、保护自然的意识，严守资源环境生态红线，努力让都江堰的山更青、水更绿、天更蓝。



converge mixed types of climate, vegetation, flora and fauna. In terms of the climate, it is in a mixing region of middle subtropical climate, north subtropical climate and Qinghai-Tibet Plateau climate. Regarding to vegetation, Qinghai-Tibet Plateau alpine vegetation and subtropical evergreen broadleaf forests intersect here. As for the floristic regions, it belongs to the transition area from the Hengduan Mountains to Central China.

With particularly favorable geographic conditions, this region is rich in vegetation types and species. From low to high, there are 7 vegetation zones: evergreen broad-leaved forest, evergreen and deciduous broad-leaved mixed forest, coniferous and broad-leaved mixed forest, subalpine dark coniferous forest, alpine shrub, alpine meadow and alpine rocky beach sparse planting; it includes 3,284 vascular plant species and 568 vertebrate animal species. The biodiversity of this area is characterized by its unique location, ancient origin, diverse types, complex structure, rich species, high endemism and many endangered species.

Dujiangyan area is covered by both the “Minshan-north Hengduan Mountains” critical conservation regions of biodiversity (ranked 2 out of 11 in mainland China), and the “Southwest China mountains biodiversity hotspot”, one of the 25 global hotspots listed by Conservation International.

Dujiangyan City is an important integral part of the ecological screen in the upper reaches of the Changjiang River. The Dujiangyan Party Committee and municipal government have always addressed great attention to the bio-diversity protection and eco-civilization construction. With the purpose of showcasing its rich ecological resources, the Administrative Bureau of Longxi-Hongkou National Nature Reserve has organized the compilation of this book series, hoping to promote public awareness of respecting nature, conforming to nature and conserving nature, strictly observing the red-line control over resources, environment and ecology, and make our mountains and waters greener and sky bluer.

前言

《奇妙的鸟类》

Preface of *Extraordinary Birds*

都江堰市处于青藏高原向四川盆地过渡地带，是我国西部高原山地与成都平原两大地形阶梯的结合部。市域内地质结构复杂，新构造运动强烈，地形高差悬殊，气候变化大，地带性十分明显。

特殊的自然地理条件和复杂多变的生境铸就了都江堰鸟类物种的丰富多样。都江堰已记录的鸟类有266种，其中以雀形目占绝对优势，共有189种，占总数的71.05%。根据当地生态环境和周边地区资料统计，估计全部鸟类可达350种以上。在已记录鸟类中，按其繁殖区和越冬区的地理位置及其在当地的获见时间推断，计有留鸟142种，夏候鸟89种，冬候鸟21种，旅鸟14种，依次占总数的53.38%、33.46%、7.89%和5.26%，夏季种类较冬季种类更加



Dujiangyan City is located in the transitional zone between Qinghai-Tibet Plateau and Sichuan Basin. It is the junction of two topographical steps of the western plateau and the Chengdu Plain. The geological structure in the city is complex, with strong neotectonics and significant terrain height differences. And the changing climate in Dujiangyan City is characterized by an obvious zonality.

It is the special geographical condition and the complex and varied environments that contribute to the diversity of birds in Dujiangyan areas. It is estimated that more than 350 bird species inhabit in Dujiangyan areas. But the recorded one is 266 species, the majority of which is Passeriformes, with a total of 189 species accounting for 71.05 % of the total. Inferring from birds' breeding and wintering areas as well as the time of occurrence in Dujiangyan, there are 142 resident species, 89 summer resident species, 21 winter resident species and 14 passing migrant species among the recorded birds, taking up 53.38%, 33.46%, 7.89% and 5.26% of the total, respectively. 25 species



丰富。境内主要国家重点保护鸟类有金雕、绿尾虹雉、凤头蜂鹰、黑冠鹃隼、勺鸡、血雉、红腹锦鸡、红腹角雉等25种，四川省重点保护鸟类有小鸮、鹰鹃等5种。中国特有鸟类有雉鹑、绿尾虹雉、红腹锦鸡、橙翅噪鹛、银脸长尾山雀、蓝鹇等13种。

本书以图文并茂的方式，根据鸟类的生活习性和结构特征，按照猛禽、陆禽、攀禽、涉禽、游禽、鸣禽六大生态类群，分别介绍都江堰市较为珍贵及最为常见的鸟类物种，生动地展示都江堰丰富多彩的鸟类资源，希望读者能对都江堰鸟类多样性有所了解。



have been listed as key species under national protection, such as *Aquila chrysaetos*, *Lophophorus ihuysii*, *Pernis ptilorhyncus*, etc. Whereas 5 species including *Tachybaptus ruficollis* and *Hierococcyx sparverioides* are on the list of provincial protected birds of Sichuan province. There are also, in Dujiangyan areas, 13 species which are peculiar to China, for instance, *Tetraophasis obscurus*, *Chrysolophus pictus* and *Garrulax elliotii*.

This book makes full use of illustrations to introduce rare and common species in Dujiangyan city, dividing them into raptors, terrestores, scansores, waders, natatores, and songbirds in terms of their living habits and other characteristics. It is hoped that readers can appreciate and have a better understanding of the diversity of birds in Dujiangyan city.

