

前 言

贵州赤水桫欏国家级自然保护区(简称赤水自然保护区)位于贵州省遵义市葫市乡境内。地理位置为东经 $105^{\circ}57'54''\sim 106^{\circ}7'7''$,北纬 $28^{\circ}20'19''\sim 28^{\circ}28'40''$ 。总面积 1.3 km^2 ,自然风貌原始,环境质量优良,林海茫茫,动植物资源丰富,其中蕨类植物多达164种,是我国惟一以桫欏植物为保护对象的国家级自然保护区。它是黔北高原上一块璀璨夺目的绿宝石,是蕨类植物的王国。

赤水自然保护区建立于1984年;1992年经国务院批准为国家级自然保护区;1993年成为中国生物圈保护区网络成员。1987年贵州省环境保护局曾组织省内相关学科的专家对保护区进行多学科综合考察,编辑出版了《赤水桫欏自然保护区科学考察集》。该书编辑出版对赤水桫欏自然保护区的建立和发展起到了积极作用。由于历史原因该书中未能完全反映保护区昆虫全貌,影响该保护区昆虫资源的评价和利用,亦是我国昆虫区系研究的弱点和空白。

为了深入了解赤水自然保护区景观昆虫资源,贵州大学昆虫研究所金道超教授等提出“赤水桫欏自然保护区昆虫资源与应用前景评价研究”项目,1999年获贵州省教育厅批准立项资助。在赤水桫欏自然保护区管理处的协助下,项目组邀请了中国科学院动物研究所、南开大学生物系、中国农业大学昆虫学系、河北大学生命科学院、中南林学院昆虫资源研究所、浙江大学植物保护系、浙江省自然博物馆、西南农业大学植物保护系、安顺市疾病预防控制中心、茂兰国家级自然保护区管理处、贵州赤水桫欏国家级自然保护区管理处、贵州大学昆虫研究所等单位的专家、学者和科技人员41人赴保护区考察采集昆虫(含部分蛛形纲)标本3万号。标本鉴定还得到国内相关专家、教授的支持、帮助并亲自鉴定标本。南京农业大学植物保护学院、贵州大学昆虫研究所还补充了原收藏的种类。在全国14个教学、科研、管理单位,61位专家、教授的共同努力下,共鉴定出16目150科507属781种,其中以赤水桫欏自然保护区昆虫标本为模式建立的新种54个(5个新种已先期发表,5个新种另文发表),中国新记录种4个。参与鉴定的专家、教授在鉴定、分析、整理的基础上撰写出《赤水桫欏景观昆虫》一书。该书是各位专家学者无私奉献的成果、集体智慧的结晶,是科学研究工作中协作的真

实体现。她是现今赤水自然保护区最完整的昆虫本底资料。为丰富我国生物资源做出了新的奉献,为我国昆虫分类学、昆虫地理学等学科的深入研究提供信息,对保护区的巩固发展、对生物多样性研究和可持续发展,对生态学、农学、林学等学科研究提供部分基础资料。在学术价值和实践应用等方面都有重要意义。

本研究自始至终都得到贵州省教育厅的支持,贵州大学各级领导的鼓励;在野外工作中贵州省环境保护局自然处、贵州赤水桫欏国家级自然保护区管理处等单位都给予支持和帮助,深表谢意。参与考察和研究的专家、学者及科技人员不畏艰苦,忘我工作,通力协作,严谨治学的高尚素质和情操是我们永远学习的榜样。

在《赤水桫欏景观昆虫》编写过程中,不少朋友、同行以及老一辈昆虫学家都给予了各方面的支持帮助和鼓励,特别是张广学院士以及郑哲民教授、郑乐怡教授、何俊华教授、刘友樵教授、虞佩玉研究员、杨星科研究员等,他(她)们对本书的编写工作提出了很多宝贵的意见,并亲自为本书撰稿;本书图版由买国庆、刘晓武提供。谨致谢意。

本书由华夏英才基金资助而得以及时出版,并得到了贵州科技出版社的鼎力支持,特表致谢。最后我们还要感谢中国科学院院士张广学研究员为本书及系列研究专著作序。

我们有理由相信,本书的出版将促进赤水桫欏自然保护区昆虫资源的保护和利用研究,对生物多样性研究和可持续利用以及对赤水生态示范区生物多样性的建设和发展,对生态学、农学、林学和生物地理学等学科提供参考资料,对我国昆虫区系分类研究提供有价值的基础资料。由于时间仓促,书中错漏之处,望读者赐教。

金道超 李子忠

2002年12月于花溪

FOREWORD

The Chishui National Reserve in Spinulose Tree Fern (Chishui reserve or Chishui landscape in brief) is located at $105^{\circ}57'54'' \sim 106^{\circ}7'7''\text{E}$, $28^{\circ}20'17'' \sim 28^{\circ}20'40''\text{N}$, in Chishui City, in the north of Guizhou Province. The reserve has an area of 13000 km^2 with ancestral natural features showing high quality environmentally due to vast immense primitive forest. It is rich in fauna and flora, in the later there are 164 species of fern plants that makes the reserve wined a beautiful name, kingdom of fern plant. The reserve is, so far, the only one having Spinulose tree fern as protection object among national reserves of our country. It is a bright dazzling emerald on highland of north Guizhou.

The reserve was established in 1984 by local government. In 1992 by the approval of the State Council of People's Republic of China, it had its position at national level and became member of the Chinese biosphere network. In 1987 the Department of Environmental Protection of Guizhou Province undertook a synthetical investigation on the reserve by experts from the province. The investigation resulted in a publication, namely Scientific Survey of Chishui Spinulose Reserve. The publication offered essential data for establishing of the reserve, but it was weak in information of flora and fauna especially of insect since the limitation in disciplinary participates involved in the survey. Insect fauna in the reserve still remained to know when the present study began in year 1999. The situation was of restrictive to development of valuation, supervision and use of the insect as resource.

To go deep into to know insect resources of Chishui landscape, Prof. Dr. Jin Daochao, Prof. Li Zizhong etc. of Institute of Entomology, Guizhou University, organized a three-year research project on insect fauna under a grant from Education Department of Guizhou in 1999. The project was undertaken successfully in collaboration with Administrative Department of the reserve. The 41 scientists involved in the project are from Institute of Zoology of Chinese Academy of Science, Biological Department of Nankai University, Department of Entomology of Agricultural University of China, Department of Life Science of Hebei University, Institute of Entomology of Central South Forestry University, Department of Plant Protection of Zhejiang University, Natural Museum of Zhejiang, Department of Plant Protection of Southwestern Agricultural University, Anshun Sanitarian Institute of Epidemic Prevention, Administrative Department of Maolan National Reserve of Kast Forestry. More than 30000 specimens of insects and arachnides were collected from the reserve. Department of Plant protection of Nanjing Agricultural University and Institute of Entomology of Guizhou University kindly offered specimens kept. From the specimens 781 species are recognized in 16 orders, 150 families and 507 genera. In the recognized species 54 are new to science, of which 5 published in advance of the book and 5 described in separate publications from the book, and 4 newly recorded species from China. The book, named Insects from Chishui Spinulose Tree

Fern Landscape, is the contribution by 61 scientists from 14 institutes and universities participated in identifying the animals. It is a mutual achievement of the participated scientists with their excellent works on the animal groups in which they are specialized. All identified taxa are described and biogeographical, ecological and managing information are reviewed in respective section of the book. We believe that the book provides not only the most comprehensive information about the Insecta so far, but essential data for the reserve in scientific research and sustainable use of the biological resources.

We are grateful to the Education Department of Guizhou Province and Guizhou University for their support and encouragement to the research group and to the Administrative Department of the reserve for offering facilities during field collecting. The participators showed their spiritual moralities, such that hard working with selflessness, pursuing their studies with preciseness, concerted effort with enthusiasm, in either field investigation or laboratory examination and preparing of manuscript. With these moral qualities they behaved themselves great models from that we should learn forever.

We express appreciation to the colleagues and friends kindly offering help and encouragement in process of the research and compiling of Insects from Chishui Spinulose Tree Fern Landscape. Great respects are paid to following zoologists and entomologists, Prof. Zhang Guangxue (Academician of Academy Sinica, the former Chairman of Entomology Society Sinica), Prof. Zheng Zhe-min, Prof. Zheng Leyi, Prof. He Junhua, Prof. Liu Youqiao, Prof. Yu Peiyu, Prof. Yang Xingke, etc., who contribute not only valuable advices in editing but also manuscripts.

We are especially grateful to China Talent Fund for support and to Guizhou Science and Technology Publishing House for kind effort on publishing of the book. We express our thanks and respects to Prof. Zhang Guangxue for his kindness of contributing references of the book.

It is our pleasure that the publication may serve as an impetus to promote the studies in protection of biodiversity and sustainable use of biological resources including insects of the reserve. We will be very pleased with any comment and remark from the readers.

Jin Daochao, Li Zizhong

June, 2002

At Huaxi, Guiyang