

前 言

梵净山国家级自然保护区位于贵州省东北部的江口、印江、松桃三县交界处,总面积 419 00 hm^2 。地理位置为北纬 $27^{\circ}49'50'' \sim 28^{\circ}1'30''$,东经 $108^{\circ}48'30'' \sim 108^{\circ}18'30''$ 。境内地形、地貌的特殊性,生态环境和森林类型的多样性,森林植被的原始性,生物资源的丰富性,以及古老孑遗的珍稀动植物繁多,构成了梵净山森林生态特征,是特大的生物基因库,也是科学实验的天然试验室和研究基地,森林覆盖率 90% 以上,是当今地球上同纬度地带,少有的一片以常绿阔叶林为主的绿峰翠岭。

梵净山自然保护区始建于 1978 年;1986 年经国务院批准为贵州梵净山国家级自然保护区(以下简称为“梵净山自然保护区”);1987 年加入联合国教科文组织国际生物保护区网络。20 世纪 80 年代,贵州科学院和贵州省林业厅曾先后组织省内昆虫学科技工作者,对梵净山昆虫进行过调查研究,并出版过调查专辑和发表过相应的文章;20 世纪 90 年代初,中国科学院动物研究所组织国内昆虫学科技工作者,对西南武陵山地区的昆虫进行考察,梵净山昆虫资源同属研究之列。上述考察对梵净山昆虫资源有了初步了解,为昆虫多样性的深入研究打下了良好的基础。

为了进一步了解梵净山昆虫种类组成、区系概貌、景观价值与经济意义,为保护区的规划、管理、生物资源的持续利用提供了本底资料,也为我国昆虫学领域相关学科的研究提供科学依据。2001 年,经贵州省科技教育领导小组批准,贵州大学昆虫研究所李子忠教授主持,邀请国内昆虫学专家、教授及科技工作者,在梵净山自然保护区管理局的协助下,对梵净山景观昆虫资源多样性及应用前景进行全面、细致、深入的研究。3 年来,中国科学院动物研究所有关研究室、中国农业大学昆虫学系、南开大学生命科学学院、河北大学生命科学学院、西北农林科技大学植物保护系、西南大学植物保护学院、中南林学院昆虫资源研究所、浙江大学植物保护系、浙江自然科学博物馆、扬州大学植物保护学院、中山大学昆虫研究所、广西师范大学生物学系、广西农业科学院植物保护研究所、台湾自然科学博物馆、贵州茂兰国家级自然保护区管理局、贵州梵净山国家级自然保护区管理局、贵州大学昆虫研究所和贵州大学林学院等 18 个教学、科研、管理单位的专家、教授、科技工作者 68 人次,赴梵净山考察研究,共采集昆虫和蛛形纲标本 3 万余件。标本鉴定得到

了参与考察单位的有关专家、教授的大力支持,北京林业大学森林资源与环境学院、贵阳医学院、安顺市疾病预防控制中心等单位的相关专家、教授协助鉴定和补充了原收藏的种类。在国内 25 个教学、科研、管理单位 99 位专家、教授共同努力下,完成了梵净山景观昆虫种类鉴定和《梵净山景观昆虫》的撰写。为使梵净山昆虫本底更加系统完整,原《西南武陵山地区昆虫》、《梵净山昆虫考察专辑》、《贵州农林昆虫志》等专著中记载梵净山已有分布的种类,以及以梵净山昆虫标本为模式,建立的新种,并已发表,在本书未详细记述的种类,计 453 种附录于本书。

全书共记述梵净山景观昆虫(含部分蛛形纲)22 目 220 科 1 440 属 2 105 种(不含附录 462 种)。其中新属 5 个,新种 115 个,中国新记录属 1 个,中国新记录种 30 个。该书是各位学者无私奉献的成果、集体智慧的结晶,是梵净山现今最完整的昆虫本底资料,为丰富我国生物资源做出了新的贡献。对科学研究和实际应用都有重要意义。

本研究自始至终都得到了贵州科技教育领导小组的支持,贵州大学各级领导的鼓励;在野外工作中,贵州省林业厅野生动物保护站给予了大力支持,梵净山国家级自然保护区管理局鼎力协助;野外考察、研究、标本鉴定和书稿的撰写得到了国内同行专家通力合作。梵净山国家级自然保护区管理局给予部分出版经费补贴,我们将铭记在心。参与考察研究的专家、教授和科技工作者不畏艰苦,忘我工作,通力协作,严谨治学的高尚品德和情操,是我们永远学习的榜样。

在《梵净山景观昆虫》的编写过程中,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、宋大祥院士、印象初院士,以及郑乐怡教授、何俊华教授、陈树椿教授、刘友樵教授、杨星科研究员等,他们对本书的编辑工作提出了很多宝贵意见,并亲自为本书撰稿,在此谨致衷心感谢。贵州科技出版社的领导和编辑为本书的编辑出版付出了辛勤的劳动,谨致谢意。

最后,特别感谢中国科学院院士、中国昆虫学会原理事长张广学研究员为包括本书在内的系列专著作序。

我们相信,本书的出版将促进梵净山景观昆虫资源的持续利用,并由此引向更加深入的区系研究。由于时间仓促,书中错漏之处难免,望读者不吝赐教。

李子忠 金道超

2004 年 8 月于贵阳花溪

Foreward

Fanjingshan National Nature Reserve (FNNR) is located at $108^{\circ}48'30'' \sim 108^{\circ}18'30''$ E, $27^{\circ}49'50'' \sim 28^{\circ}1'30''$ N, in the juncture of three counties, namely Jiangkou, Yinjiang and Songtao, northeast of Guizhou province. It covers a total area of $41,900\text{km}^2$ with characteristic of forest, topography and geomorphology, and with high diversity in ecological environments, floral and fauna. Forest-covering rate of the reserve is more than 90%. It is regarded as not only an outsize organisms gene pond, but also a nature laboratory or research base for science experiments. The reserve is, so far, the rare green mountain mainly decorating by evergreen broadleaf tree at the same latitude in the world.

The reserve was established in 1978. In 1986 with the approval of the State Council of China, it had its position at national level, and in 1987 became member of the International Biology Protection Net of the United Nations for Educational and Scientific and Cultural Organization. In 1980s, the Guizhou Academy of Sciences and the Forestry Department of Guizhou province successively undertook insect investigations on the reserve by experts from the province. In the early 1990s, the Institute of Zoology of Chinese Academy of Sciences organized some domestic entomologists to study insects of Southwest Wuling Mountains including Fanjingshan. These are fundamental to further study on the diversity of insects in the reserve.

In order to have a better understanding of species composition, general fauna picture, landscape value and economy significance of insects of FNNR, to offer the basic information to the reserve for its planning, administration, and sustainable use of the biological resources, also to provide scientific basis for the study of the disciplines related to entomological field, the research proposal was granted by Guizhou Special Provincial Governor Foundation for Experts of Science, Technology and Education in 2001. Over the past three years, specialists, scholars and entomologists from 18 organizations, such as Institute of Zoology of Chinese Academy of Sciences, Department of Entomology of Agricultural University of China, College of Life Sciences of Nankai University, College of Life Science of Hebei University, Department of Plant Protection of Northwest Sci-Tech University of Agriculture and Forestry, College of Plant Protection of Southwest University, Institute of Resource Entomology of Central South Forestry University, Department of Plant Protection of Zhejiang University, Natural Museum of Zhejiang, Department of Plant Protection of Yangzhou University, Institute of Entomology of Zhongshan University, Biological Department of Guangxi Normal University, Institute of Plant Protection of Guangxi Academy of Agricultural Sciences, Natural Museum of Taiwan, Administrative Department of Maolan National Nature Reserve, Administrative Department of FNNR, Institute of Entomology of Guizhou University, Forestry College of Guizhou University etc. There were 68 persons successively went to the reserve to investigate and make collection of insects. More than 30,000 specimens of insects and Arachnida were obtained. The experts personally conducted identification or offered strong support in

identifying the specimens of groups in which they specialized. Also some scientists from various institutions, such as Forest Resources and Environmental College of Beijing Forestry University, Guiyang Medical College, An-shun Institute of Epidemic Prevention etc., even contributed some species kept in their collections. 99 specialists and professors from universities and institutions, based on the identification of insect species of Fanjingshan landscape, contributed their manuscripts to the book *Insects from Fanjingshan Landscape*. There are total 2,105 species identified in 1,440 genera, 220 families, 22 orders. Among those, 115 species and 5 genera are described new to science, and 30 species and 1 genera are recorded for the first time from China. Other 453 species recorded in previous publications are listed in the appendix. The book is a mutual achievement of every scholar's disinterested contributions and collective efforts. It not only provides us with the most comprehensive and original information about insects of FNNR to this day, but also makes a new contribution to enriching biological resources of our country.

This work got the financial support of Guizhou Special Provincial Governor Foundation for Experts of Science, Technology and Education and the encouragement of Guizhou University during studying. On fieldwork, Department of protection of Wildlife of the Forestry Department of Guizhou Province and Management Department of FNNR provided much help. In the course of studying, domestic academic experts made a united effort. Management Department of FNNR provided some financial support for this book's publishing. We always engrave, on our mind, that experts, scholars and researchers participating in the study showed their morality in making light of difficulties, working selflessly, with concerted effort, and pursuing their studies meticulously. Their lofty qualities and values are the models that we should learn forever.

We express our appreciation to the colleagues and friends who offer support, help and encouragement to the work. Especially pay our respects to the following entomologists: Prof. Zhang Guangxue (Academician of Academy Sinica), Prof. Song Daxiang (Academician of Academy Sinica), Prof. Yin Xiangchu (Academician of Academy Sinica), Prof. Zheng Leyi, Prof. He Junhua, Prof. Chen Shuchun, Prof. Liu Youqiao, Prof. Yang Xingke etc., who contributed not only valuable advice but also articles. We are also grateful to Guizhou Science and Technology Publishing House for its kind effort on this book's publishing.

Finally we are greatly indebted to Prof. Zhang Guangxue for his kindness of contributing preface for the book.

We hope that the book will be helpful to the study on protection and sustainable use of landscape insect resource of FNNR, and leading to make a more deep-going study on the fauna. Due to the work is finished in pressing, there may be some faults in the book. We cordially welcome any criticism from the readers.

Li Zizhong, Jin Daochao

Aug, 2004

at Huaxi, Guiyang