

前 言

泰山地处古北区与东洋区交界，海拔1545米，面积426平方公里，生物资源十分丰富，已知植物种类达1136种。建国以来，泰山曾发生过多处虫害，其中以松毛虫、油松巢蛾、白头松针巢蛾、松实小卷蛾、侧柏银蛾等尤为严重，造成光枝秃干，形同火焚一般，使一些古树也难逃幸免，甚至死亡。这些害虫大多属鳞翅目昆虫。为确保泰山林木的完好，使其始终保持青山翠岭的美丽景观，维护好祖国和全世界的这一自然文化遗产，我们编著了《泰山蝶蛾志》一书。

泰山的蝶蛾种类繁多，过去知道的很少，短时间全部搞完难度较大，为此计划分三集陆续出版。本书为《泰山蝶蛾志》上集，共收入蝶蛾20科183种。其中，小蛾类13科98种；大蛾类10科55种；蝶类7科30种。为了便于读者识别种类，除每种都有成虫图外，小蛾类还尽量每种增绘雌、雄外生殖器图。

本书由卢秀新、刘士儒编写螟蛾科、斑蛾科和刺蛾科；刘友樵编写蝶蛾简介及除以上三科外的小蛾类；孙渔稼编写大蛾类；牟吉元编写蝶类。

本书编写中承蒙刘静、庞献伟、刘志荣等同志搜集蝶蛾标本，刘友樵、刘静同志制作解剖玻片，李广武同志绘制成虫图，刘友樵同志绘制雌、雄外生殖器图，谨此表示谢忱。

书中讹误、不足之处在所难免，恳请读者批评指正。

编著者

1989年7月27日

Introduction

Mountain Tai is located in between the Palaearctic and Oriental Realm with an altitude of 1545 m, an area of 426 km². It has plenty of biological resources, having a plant variety of 1136 known species. However, since the founding of New China, there have been many insect outbreaks, the worst of which are outbreaks of *Dendrolimus spectabilis*, *Ocnerostoma piniariellum*, *Cedestis gysselinella*, *Petrova cristata* and *Argyresthia sabinae*. The trees were defoliated seriously, leaving only bare branches and trunks, just like those burned by fire, even the ancient trees could not escape the fate, some of which even died. Most of the injurious insects belong to Lepidoptera. For the purpose of keeping the trees there in a perfect condition, maintaining the beauty of the green mountains so as to preserve well the natural heredity for the world as well as our motherland, we compiled the book "Noths and Butterflies in Mount Tai".

There are a lot of species of moths and butterflies in Mount Tai, which were not well-known before. Since it is difficult to compile a book including all of the insect species in a short time, we plan to publish 3 books consecutively. This is the first volume of "Moths and Butterflies in Mount Tai", which includes a collection of 183 species belonging to 30 families. Among these; micro-lepidoptera 13 families, 98 species; macro-lepidoptera 10 families, 55 species and butterflies 7 families, 30 species. To make it convenient for the readers to identify the insects, we provide figures of genitalia of both male and female for each species of micro-lepidoptera as well as the adult figure for all the species.

Finally, we are grateful to show our acknowledgement to Liu Jing, Pang Xian-wei, Liu Zhi-rong etc for their contribution of collecting specimens, to Professor Liu You-qiao and Liu Jing for their contribution of making slides for anatomy, to Li Guang-wu for his contribution of drawing adult figures, to Professor Liu You-qiao for his contribution of drawing figures of genitalia of both male and female.

Since time is short for the preparations of this volume, shortcomings and mistakes are unavoidable, so your suggestions and comments are welcome.

The Authors

4th, June, 1990

前 言

泰山地处古北区与东洋区交界，海拔1545米，面积426平方公里，生物资源十分丰富，已知植物种类达1136种。建国以来，泰山曾发生过多处虫害，其中以松毛虫、油松巢蛾、白头松针巢蛾、松实小卷蛾、侧柏银蛾等尤为严重，造成光枝秃干，形同火焚一般，使一些古树也难逃幸免，甚至死亡。这些害虫大多属鳞翅目昆虫。为确保泰山林木的完好，使其始终保持青山翠岭的美丽景观，维护好祖国和全世界的这一自然文化遗产，我们编著了《泰山蝶蛾志》一书。

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本书由卢秀新、刘士儒编写螟蛾科、斑蛾科和刺蛾科；刘友樵编写除以上三科外的小蛾类；孙渔稼、卢秀新编写大蛾类；牟吉元编写蝶类。编写中由刘静、庞献伟、刘志荣等同志搜集蝶蛾标本；刘友樵、刘静同志制作解剖玻片，绘制雌、雄外生殖器图。

本志蒙业师中国昆虫学会理事长80高龄的朱弘复教授题名，其中成虫图由魏梅同志绘制，陈一心、方承来、宋士美、薛大勇等同志鉴定种类，谨此表示衷心的感谢。

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编著者

1991年5月1日

Introduction

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There are a lot of species of moths and butterflies in Mount Tai, which were not well-known before. Since it is difficult to compile a book including all of the insect species in a short time, we plan to publish 3 volumes consecutively. This is the second volume of "Moths and Butterflies in Mount Tai", which includes a collection of 221 species belonging to 27 families. Among these; microlepidoptera 14 families, 82 species; macrolepidoptera families, 113 species and butterflies 7 families, 26 species. To make it convenient for the readers to identify the insects, we provide figures of genitalia of both male and female for each species of microlepidoptera as well as the adult figure for all the species.

In this volume, Pyralidae, Zygaenidae, Limacodidae were written by Lu Xiuxin & Liu Shiru, the rest of the microlepidoptera by Liu Youqiao and macrolepidoptera by Sun Yujia & Lu Xiuxin and rhopalocera by Mu Jiyuan. Liu Jing, Pang Xianwei, Liu Zhirong, etc. for their contribution of collecting specimens, to Liu youqiao and Liu Jing for their contribution of making slides and drawing figures of both male and female genitalia.

Fanilly, We are grateful to show our acknowledgement to president of china Entomological society professor Zhu hongfu for he contribution of Topic; to Chen Yixin, Fang Chenlai, Song Shimei and Xue Dayong for their contribution of idenlification of species; to Wei Mei for her contribution of drawing adult figures.

Since time is short for the preparations of this volume, shortcomings and mistakes are unavoidable, so your suggestions and comments are welcome.

The Authors

Ist, May, 1991

前 言

泰山地处古北区与东洋区交界,海拔 1545 米,面积 426 平方公里,生物资源十分丰富,已知植物种类达 1136 种。建国以来,泰山曾发生过多处虫害,其中以松毛虫、油松巢蛾、白头松针巢蛾、松实小卷蛾、侧柏银蛾等尤为严重,造成光枝秃干,形同火焚一般,使一些古树也难逃幸免,甚至死亡。这些害虫大多属鳞翅目昆虫。为确保泰山林木的完好,使其始终保持青山翠岭的美丽景观,维护好祖国和全世界的这一自然文化遗产,我们编著了《泰山蝶蛾志》一书。

泰山蝶蛾的种类繁多,过去知道的很少,短时间全部搞完难度较大。为此计划分三集陆续出版。1989 年出了上集,1991 年出了中集,本书为下集,收入蝶蛾 31 科 188 种。其中,小蛾类 8 科 50 种;大蛾类 10 科 130 种;蝶类 3 科 8 种。至此,全书上、中、下三集,共收入蝶蛾 40 科 592 种。其中有小蛾类 21 科 230 种;大蛾类 12 科 298 种;蝶类 7 科 64 种。为了便于读者识别种类,除每种都有成虫图外,小蛾类每种增绘雌、雄外生殖器或翅脉图。

目前工作已告一段落,但尚有相当数量的泰山蝶蛾种类有待进一步鉴定描述。本书最后章节由卢秀新、牟吉元介绍泰山的自然概况和蝶蛾代表性种类的垂直分布与区系分析。卢秀新负责编写螟蛾科、刺蛾科;刘友樵编写其他小蛾类;孙渔稼、卢秀新编写大蛾类;牟吉元编写蝶类。编写中刘静、庞献伟、刘志荣负责采集标本,刘友樵、刘静负责解剖制片并绘制特征图。

编委刘士儒同志不幸于 1992 年 2 月 26 日因病逝世。他是本志创始人之一,为本志付出了许多心血。谨以本集寄托我们对他的无限哀思。

本志蒙业师中国昆虫学会上届理事长、80 岁高龄的朱弘复教授题名,魏梅、李广武、刘小鹏绘制成虫图,陈一心、方承莱、宋士美、王林瑶、薛大勇等同志协助鉴定种类,谨此表示谢忱。

书中讹误、不足之处在所难免,恳请读者批评指正。

编著者

1993 年 6 月 15 日

INTRODUCTION

Mountain Tai is located in between the palaeartic and Oriental Realm with an altitude of 1545 m, an area of 426 km². It has plenty of biological resources, having a plant variety 1136 known species. However, since the founding of New China, there have been many insect outbreaks, the worst of which are outbreaks of *Dendrolimus spectabilis*, *Ocnerostoma piniariellum*, *Cedestis gysselinella*, *Retinia cris tata* and *Argyresthia sabinae*. The trees were defoliated seriously, leaving only bare branches and trunks, just like those burned by fire, even the ancient trees could not escape the fate, some of which even died. Most of the injurious insects belong to Lepidoptera. For the purpose of keeping the trees there in a perfect condition, maintaining the beauty of the green mountains so as to preserve well the natural heredity for the world as well as our motherland, we compiled the book "Moths and Butterflies of Mount Tai".

There are a lot of species of moths and butterflies in Mount Tai, which were not well-known before. Since it is difficult to compile a book including all the insect species in a short time, we plan to publish 3 volumes consecutively. The first volume was published in 1989 and the second in 1991. This third volume includes a collection of 188 species belonging to 31 families. Among these, micro-lepidoptera 8 families, 50 species; macro-lepidoptera 10 families, 130 species and butterflies 3 families, 8 species. So far, the 3 volumes of this book have had a total collection of 40 families and 592 species of moths and butterflies. Among these, micro-lepidoptera 21 families, 230 species; macrolepidoptera 12 families, 298 species and butterflies 7 families, 64 species. To make it convenient for the readers to identify the insects, we provide figures of genitalia of both male and female for each species of microlepidoptera as well as the adult figure for all the species.

At present, the first phase of our work has been completed, yet still remain quite a certain number of other moths and butterflies of Mount Tai for further description and identification.

The final chapter of this volume on natural condition of Mount Tai, the vertical distribution and fauna analysis of representative species of moths and butterflies of Mount Tai were written by Lu Xiuxin and Mu Jiyuan, Pyralidae and limacodidae were written by Lu Xiuxin, the rest families of microlepidoptera by Liu Youqiao, macrolepidoptera by Sun Yujia and Lu Xiuxin, butterflies by Mu Jiyuan. Liu Jing, Pang Xianwei, Liu Zhirong, etc. for their contribution of collecting specimens, to Liu Youqiao and Liu Jing for their contribution of making slides and drawing figures of both

male and female genitalia.

Liu Shiru, founder member of the editorial committee, unfortunately died of disease on February 26th, 1992. We take this volume to express our deep mourning in memory of his contribution.

Finally, we are grateful to our 80 years old instructor Prof. H. F. Zhu, President of the last session of the Entomological Society of China, for his writing of the book title, thanks to Wei Mei, Li Guanwu and Liu Xiaopang for drawing the adult figures, to Chen Yixin, Fang Chenlai, Song Shimei and Xue Dayong for their identification of some species.

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The Authors

June 15th, 1993