

Preface

Fujian is located in the southeast coast of China. It is mild and humid in climate due to the influence of monsoons. A quarter of the world's moso bamboo forests are found in Fujian. The moso bamboo forestry is a major growing industry in Fujian and plays a significant role in the increase of the total revenue of the province. The moso bamboo grows fast, is high in yield and can be harvested continuously for years. These excellent features ensure their beneficial roles in the regulation of local climate, conservation of soil and water, purification of the air, resistance to Typhoon and reduction of natural disasters.

With the increased development and use of bamboo forests in the late 1980s, the human interference of the natural ecosystem of bamboo forests has increased, resulting in the reduced biodiversity and loss of natural regulation in the bamboo ecosystem and emergence of such pests as mites, aphids and scale insects. In the early 1990s, mite injury with the loss of leaves was discovered in some bamboo forests in Fujian, but there was no study on mites and their damage. In 1994, mite outbreaks occurred in some forests in Sanming, Longyan and Jianou and the "burnt" forests attracted the attention of farmers, plant protection workers and government officials. During 1996-1999, a joint project on bamboo mites, staffed by experts from Fujian Academy of Agricultural Sciences, Fujian Forestry Bureau and Fujian Academy of Forestry Sciences, was funded by Fujian Science Council as a key project during the "Nine-Five" and "Ten-Five" periods. With the funding and assistance of State Administration of Foreign Expert Affairs and Fujian Personnel Bureau, I was honoured to have invited Dr Zhi-Qiang Zhang, a world renowned acarologist of the International Institute of Entomology (London, England), to join our project and advise us on our work. Since 1996, the team of this project has worked hard and made significant achievements. This book, with a collection of nine papers, presents the most recent results from our research.

Human intervention is the most active and destructive factor in modern agro-ecosystems. The occurrence and control of mite pests in bamboo forests are in fact the result of interaction and harmonization between human and nature. The purpose of the publication of this book is to provide a scientific base and reference for future workers to enrich research on mites of bamboo forests, to enhance the use of predatory mites in biocontrol, and to facilitate the restoration of bamboo forest ecosystems.

This book was initiated under the suggestion of Dr Zhi-Qiang Zhang and completed with the cooperation of Mr Jianzhen Lin and Dr Qinghai Fan. Dr Zhi-Qiang Zhang also wrote several chapters, helped to write the other chapters and page-set the book.

We are grateful to the following for their kind concern and support to this project: Deputy Director Zonghui Zhang of Fujian Forestry Bureau, Director Huan Xie and Deputy Director Yulan Feng of Fujian Academy of Agricultural Sciences, Director Kaiben Li of Plant Protection Institute of Fujian Academy of Agricultural Sciences, Deputy Director Zhihua Lu of Fujian Personnel Bureau, and Director Xuan Luo of International Cooperation Office of Fujian Science Council. We also acknowledge the financial support to this project by the State Administration of Foreign Expert Affairs, Fujian Personnel Bureau, Fujian Forestry Bureau and Fujian Academy of Agricultural Sciences.

Yanxuan Zhang
8 March 2000

Preface in Chinese

序

福建省位于中国东南沿海，东隔台湾海峡与台湾省隔海相望，东经 $115^{\circ}50' - 120^{\circ}43'$ ，北纬 $23^{\circ}33' - 28^{\circ}19'$ 。靠近北回归线，季风气候显著，温暖湿润，生态气候多样。这里生长着占世界栽培面积 25% 的毛竹林，面积与蓄积量居中国首位。毛竹是福建省重要的经济增长点，在增加国民经济收入中占举足轻重的地位。毛竹速生、产量高、永续利用等特点在调节区域气候、涵养水源、保持水土、净化空气、抗御台风、防灾减灾中起着极为重要的作用。

80 年代中后期，随着人们对毛竹林开发利用力度的增大，人为干扰自然生态系统强度也随之增大，使得毛竹林原有生物多样性受到破坏，病虫害组成也相应发生变化，一些次要的微小螨类、竹蚧、竹蚜逐年上升为重要的甚至是灾害性害虫。90 年代初在福建省一些毛竹产区发现螨害，使竹叶稀疏，秋季变成“光杆竹”，当时对此现象无人研究。1994 年南平、三明、龙岩、建瓯等主产区局部成灾，许多竹山似火烧状，引起人们的高度重视。1996-1999 年先后由福建省科委列为“九五”、“十五”期间重点资助的研究项目，联合福建省农科院、福建省林业厅、福建林学院的有关专家攻关研究，同时得到国家外国专家局、福建省人事厅的资助。我作为项目主持人很荣幸地邀请了世界著名的蜱螨学者，英国国际昆虫研究所的张智强教授合作研究并指导工

作。在课题组同仁历经数年的艰苦探索下，取得一定的成绩，掀开了毛竹林螨类研究领域的序幕，揭示害螨暴发成因及与人类相互协调的关系。本书收入 9 篇本项研究最新结果，是系列研究中的一个重要组成部分，我们将陆续发表这方面论文与著作。现代农业生态系统中最活跃的因素是人，最强烈的破坏因素也是人，毛竹害螨的发生与防治的实质是人与自然相互作用、相互协调的工作。本书出版的目的是丰富竹林螨类研究、益螨利用和竹林修复工作，提供科学依据与借鉴。本书在张智强教授建议、撰写、排版及林坚贞副研究员、范青海副教授通力合作下完成。

研究过程中得到福建省林业厅张宗辉副厅长，福建省农科院谢华安院长、冯玉兰副院长、植保所李开本所长，人事厅陆志华副厅长，省科委罗旋处长的亲切关怀与指导，得到福建省科委、国家外专局、省人事厅、省林业厅、省农科院经费资助，特此表示深深的敬意与谢意。

张艳璇

2000 年 3 月 8 日