Contribution to the Fauna of Longhorn Beetles in the Naban River Watershed National Nature Reserve

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Preface

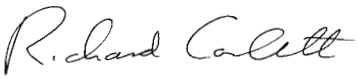
The accurate identification of organisms is the foundation of both ecological research and practical conservation management. Research scientists have access to museums, libraries and other resources for identification, but conservation managers usually do not. As a result, conservation management tends to be based on a narrow range of easily identifiable species, particularly plants, birds and mammals. Public support for conservation is based on an even narrower perception of 'biodiversity', focusing on the most well-known and charismatic species, such as Xishuangbanna's elephants.

The production of field guides, such as this one, can help bridge the 'research-implementation gap' by making the results of scientific research available to a much wider audience, including both managers and the general public. A guide to the longhorn beetles is particularly valuable because this is a group of organisms that is almost completely unknown to the general public, despite being large, attractive and relatively easy to identify in the field. Longhorn beetles deserve the kind of popularity and public recognition given to other attractive insects, such as butterflies and dragonflies, but this has been impossible without the means to ifentify them.

For visitors to the Naban River Watershed National Nature Reserve, the diversity and beauty of these beetles will be a revelation. For conservation managers, the availability of a 'beetle's eye view' of Reserve will broaden their own perspective on biodiversity beyond trees and vertebrates. Scientific research will also benefit, of course. Gaps in our current knowledge of the local longhorn beetles are clearly identified. Not only will this book facilitate future research in NRWNNR and surrounding areas, but it will also serve as a model for similar studies in other parts of the world.

This book is the culmination of 3 years work (2008−2010) in Naban River Watershed National Nature Reserve. It grew out of a PhD study (by the second author) of the influence of land-use change on insect distributions. The final book is the result of a cooperative effort between the Erfurt Natural History Museum in Germany, the Xishuangbanna Tropical Botanical Garden in Yunnan, and the Institute of Zoology, Chinese Academy of Sciences in Beijing. Carolus Holzschuh, of Villach, Austria, helped with the identification of many species. It records more than 450 species, including new records for Yunnan and China, each illustrated in colour. The accompanying text serves as an introduction to both the longhorn beetles and the Reserve.

With luck, the beautiful illustrations in this book will spark a lifetime obsession with beetles in some of its readers. The longhorns are one of the most spectacular groups of beetles, but there are many more. The evolutionary biologist J.B.S. Haldane is reported to have said that God must have an “inordinate fondness for beetles” to have created so many, while Charles Darwin observed that “a taste for collecting beetles is some indication of future success in life”. Even if neither of these statements is strictly true, an appreciation for beetles can enrich our experience of nature.



Richard T Corlett 2013-March-18

Abstract

This book is a contribution to the fauna of longhorn beetles (Coleoptera: Cerambycidae) in the Naban River Watershed National Nature Reserve (China: Yunnan, Xishuangbanna, NRWNNR). The geography, climate, vegetation and land use of NRWNNR are introduced, and study regions, material, methods and collecting sites and sampling areas are described. The study history of Cerambycidae in China and especially in Yunnan is briefly introduced. The main part of this book is the longhorn beetles fauna in the NRWNNR based on material collected under the support of a Sino-German cooperative project named "Living Landscape China" LILAC-project. 459 species belonging to 4 subfamilies of Cerambycidae and Disteniidae (1 species) were identified, including 96 species only identified into generic level. 53 species were recorded from China for the first time in Löbl & Smetana (2010)'s "Catalogue of Palaeartic Coleoptera: Vol. 6", based on specimens from our project from NRWNNR by A. Weigel. Another 60 species are recorded from China for the first time and 33 species are recorded from Yunnan Province for the first time in this book. Among them, 8 genera are newly recorded from China. They are: *Acapnolymma* Gressitt & Rondon, 1970; Cyphoscyla Thomson, 1868; *Diorthus* Gahan, 1891; *Elacomia* Heller, 1916; *Golsinda* Thomson, 1861; *Gyaritus* Pascoe, 1858; *Paradystus* Aurivillius, 1923; *Xenicotela* Bates, 1884. What's more, 4 species were described after 2009 based on material from our project. Systematical list and records, with one dorsal view picture of each species are presented.

Taxonomic acts including: 6 species with status resurrected, 2 species with new status, 2 new combinations and 12 new synonyms.

It is written in English, with Chinese abstract. Some place names are bilingually marked in case of confusing. And, in figures legends for plates, latin species names are marked with Chinese common names, for the convenient communication among Chinese readers.