

## Chapter 5

### General Insects

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#### Summary

During the 2005 RAP survey in Ganzi Prefecture, Sichuan Province, China, we recorded 170 species of insects, belonging to 121 genera, 42 families, and 11 orders. Of these, 136 species were recorded from Kangding County, 36 species from Danba County, and 21 species from Yajiang County. Ten new species recorded during this survey are potentially new to science and will be described in future publications. Specimens of *Hepialus* sp., the host caterpillar for a fungus that is highly sought after and collected, were not observed during the RAP survey, although the species is known to be distributed in Ganzi Prefecture.

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#### Introduction

A RAP survey of the insect fauna of Ganzi Prefecture of Sichuan Province was conducted by five experts who studied primarily Formicidae (Hymenoptera), Silphidae (Coleoptera) and Orthoptera. This chapter focuses on collections of other Orders of Insecta. The species discussed in this chapter were identified according to specimens collected from Kangding, Danba and Yajiang counties. Geographically, Ganzi Prefecture is a part of the greater Hengduan Mountains. Chen (1992) reports the species of Insecta known from the Hengduan Mountain Region.

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#### Methods

This RAP survey utilized three methods, net-catching, lamp-luring and searching, described below.

**Net-catching method.** Insect nets (aerial nets) are an important collecting tool, most useful when swarms of insects are present. The net should be lightweight, made of soft, durable material like nylon yarn. The net-catching method was used during this survey to collect flying insects, leafhoppers, grasshoppers, dragonflies, sawflies and butterflies.

**Lamp-luring method (Light traps).** Light traps are the most common method of collecting nocturnal specimens. Many insects are strongly attracted to light at night, and collecting beside house lamps is excellent on warm evenings. We used a simple light trap, consisting of a suspended white sheet with a long wire in front of it. Insect groups obtained by this method consisted mainly of species not collected during daytime. Large numbers of insects and many species can be caught at night using this method, such as beetles and stone moths.

**Searching method.** A number of insects, such as carabid beetles and earwigs, were found under stones, plant leaves, remains, excrement and urine. The searching method was used to collect hiding or resting insects, such as Dermaptera, during the day.

Insect specimen identification was completed by more than 10 Chinese experts using many taxonomic references for China (Cai and He 1995, Cai and Shen 1999, Cai and Huang 1999, Canepari 1997, Chou 1998, Zhou Yao (Chou Io), Lu Jinsheng, Huang Ju, and Wang Sizheng 1985, Chen 1992, Chen and Ma 2004, DeLong 1948, Dieke 1947, Benson 1920, Hsiao 1977, Huang 1992, Kuoh 1966, Kuoh 1986, Li and Wang 1991, Li and Kuoh 1993, Li 1993, Li and Wang 1996, Malaise 1945, Matsumura 1912, Ren and Yu 1999, Schmid 1956, Schmid 1965, Sui and Sun 1984,

Ulmer 1935, Viraktamath 1979, Wei and Nie 1988, Wu 2001, Young 1986, Yuan and Chou 2002).