



Updated distribution records of the *Anopheles* (*Anopheles*) *hyrcanus* species-group (Diptera: Culicidae) in China

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Abstract

Mosquito collections were carried out during July–August 2005 in China. The known distribution of *Anopheles hyrcanus* species-group in China is updated based on published records and original observations. Twenty-one of about 30 known species of the Old World Hyrcanus group (*Anopheles* subgenus *Anopheles*), including *An. belenrae* Rueda, were recorded in 24 provinces and 2 cities. *Anopheles sinensis* Wiedemann, recorded in 21 provinces and 2 cities, is the most widely distributed species, followed by *An. pullus* Yamada and *An. kweiyangensis* Yao and Wu. The status of the type specimens of some Hyrcanus group species and their importance in disease transmission are also noted.

Key words: *Anopheles*, Hyrcanus group, Diptera, Culicidae, mosquitoes, malaria, China

Introduction

The Old World *Anopheles hyrcanus* group consists of about 30 species (Harbach 2004, Ramsdale 2001). The group contains about three quarters of the species belonging to the Myzorhynchus Series of the genus *Anopheles* subgenus *Anopheles* (Harbach 2004, Rueda 2005). Some species of this group are vectors of malarial parasites and other mosquito-borne diseases in the Oriental and Palearctic regions, in particular *An. sinensis* Wiedemann and *An. lesteri* Baisas and Hu in China and the Republic of Korea (Tanaka *et al.* 1979, Lu *et al.* 1997, Rueda *et al.* 2006).

In China, there are 21 known species of the Hyrcanus group: *An. argyropus* (Swellengrebel), *belenrae* Rueda, *changfus* Ma*, *crawfordi* Reid, *dazhailus* Ma*, *hailarensis* Xu and Luo*, *heiheensis* Ma*, *hyrcanus* (Pallas), *junlianensis* Lei*, *kiangsuensis* Xu and Feng*, *kunmingensis* Dong and Wang*, *kweiyangensis* Yao and Wu*, *lesteri* (junior synonym = *anthropophagus* Xu and Feng), *liangshanensis* Kang, Tan and Cao*, *nigerrimus* Giles, *nitidus* Harrison, Scanlon and Reid, *peditaeniatus* (Leicester), *pullus* Yamada, *sinensis**, *sineroides* Yamada, and *xiaokuanus* Ma*. The type localities of 11 species (with asterisks above) are in China (<http://www.mosquitocatalog.org/main.asp>).

Distribution records for Hyrcanus group in China are incomplete or unavailable, particularly data for specimens deposited in various museums. Rueda *et al.* (2005a) reported on the distribution of *An. sinensis* based on specimens deposited in the Chinese Academy of Science museum, Beijing, and on published