

Global distribution and species richness of the genus *Promalactis* Meyrick, 1908 (Lepidoptera: Oecophoridae)Zhaohui Du & Shuxia Wang¹

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ABSTRACT

The global distribution and species richness of the genus *Promalactis* Meyrick is summarised. China has the highest species richness of *Promalactis*. A distribution map of the genus in China is given.

Key words: Lepidoptera, Oecophoridae, *Promalactis*, distribution, species richness.

DISTRIBUTION AND SPECIES RICHNESS

Promalactis Meyrick is a large Palearctic and Oriental genus with 227 valid species, distributed in Brunei, Burma, China, India, Indonesia, Japan, Korea, Malaysia, Nepal, Philippines, Russia (Far East), Sri Lanka, Thailand, Vietnam and South Africa (Table 1, Fig. 1). *Promalactis suzukiella* (Matsumura, 1931) has recently been introduced into the United States (Adamski *et al.*, 2009).

INTRODUCTION

The genus *Promalactis* was established by Meyrick (1908) with *P. holozona* Meyrick, 1908 from India as the type species. Adult *Promalactis* species can be easily identified by the smooth head with metallic luster and a pair of lanceolate forewings with various dark or white markings against yellow to dark ochreous brown ground colour.

The early taxonomic contributions to the genus were made by Meyrick from 1906 to 1937, who described 34 valid species. K. T. Park (Korea), A. L. Lvovsky (Russia) and S. X. Wang (China) have been engaged in the study of *Promalactis* in more recent years, with additional species identified and described. The aim of this paper is to summarise the distribution of *Promalactis* species worldwide.

The Chinese fauna, crossing both Palearctic and Oriental regions, has the highest number of *Promalactis* species, with 125 valid species recorded to date, distributed almost throughout the whole country except in Inner Mongolia, Ningxia Hui Autonomous Region, Xinjiang Uygur Autonomous Region and Macau (Fig. 2). Species richness of *Promalactis* Asia is also high in Southeast, with many species being recorded (Lvovsky, 2000; Kim *et al.*, 2010, 2012; Wang, Du and Li, 2013). Among these, 22 species were reported to occur in Indonesia, 17 in Vietnam and 15 in Malaysia; less than 10 were recorded in Brunei, Burma, Philippines and Thailand. Twenty-one species were recorded from India by Meyrick (1906, 1908a, 1908b, 1914, 1915, 1918, 1919, 1920, 1922, 1923, 1930, 1937), but since then no species has been recorded from that country. In East Asia, more than 10 species were recorded

Country	Number of species	References
Brunei	8	Wang, Du & Li, 2013 (in press)
Burma	2	Meyrick, 1908b; Wang, Du & Li, 2013 (in press)
China	125	Wang, 2006; Wang, Kendrick & Sterling, 2009; Du, Li & Wang, 2011; Du, Wang & Li, 2013 (in press); Du & Wang, 2013 (in press)
India	21	Meyrick, 1906, 1908a, 1914, 1915, 1918, 1919, 1920, 1922, 1923, 1930, Meyrick, 1937; Clarke, 1963
Indonesia	22	Lvovsky, 2000a, 2000b; Wang, Du & Li, 2013 (in press)
Japan	12	Fujisawa, 2002
Korea	13	Park, 1981; Park & Park, 1998
Malaysia	15	Lvovsky, 2000a; Wang, Du & Li, 2013 (in press)
Nepal	3	Lvovsky, 2000a; Wang, Du & Li, 2013 (in press)
Philippines	4	Lvovsky, 2000a; Wang, Du & Li, 2013 (in press)
Sri Lanka	5	Meyrick, 1906, 1908a, 1918; Clarke, 1963
Thailand	8	Wang, Du & Li, 2013 (in press)
Vietnam	17	Lvovsky, 1988, 1997, 2007; Kim <i>et al.</i> , 2010, 2012
Russia	10	Lvovsky, 1985, 1986
South Africa	5	Meyrick, 1913, 1914, 1918, 1937
USA	1	Adamski <i>et al.</i> , 2009

Table 1. Species richness of *Promalactis* in the world

in Japan (Fujisawa, 2002) and Korea (Park, 1981, 1998). Ten species have been recorded from Russia (Far East). In conclusion, the *Promalactis* species in the Oriental Region is richer than in the Eastern Palaearctic Region.

Promalactis species richness is the highest in China (Table 1). Some 105 species have been described based on the types collected from China, accounting for 47% of the known species worldwide. The species richness (Fig. 3) is higher in Zhejiang (35 species), Hubei (27 species), Henan (26 species), Fujian (24 species), Jiangxi (23 species), Hainan (21 species), Guizhou (21 species) and Sichuan (20 species). Our collection shows that there are still more *Promalactis* species awaiting description in China.

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FIGURES

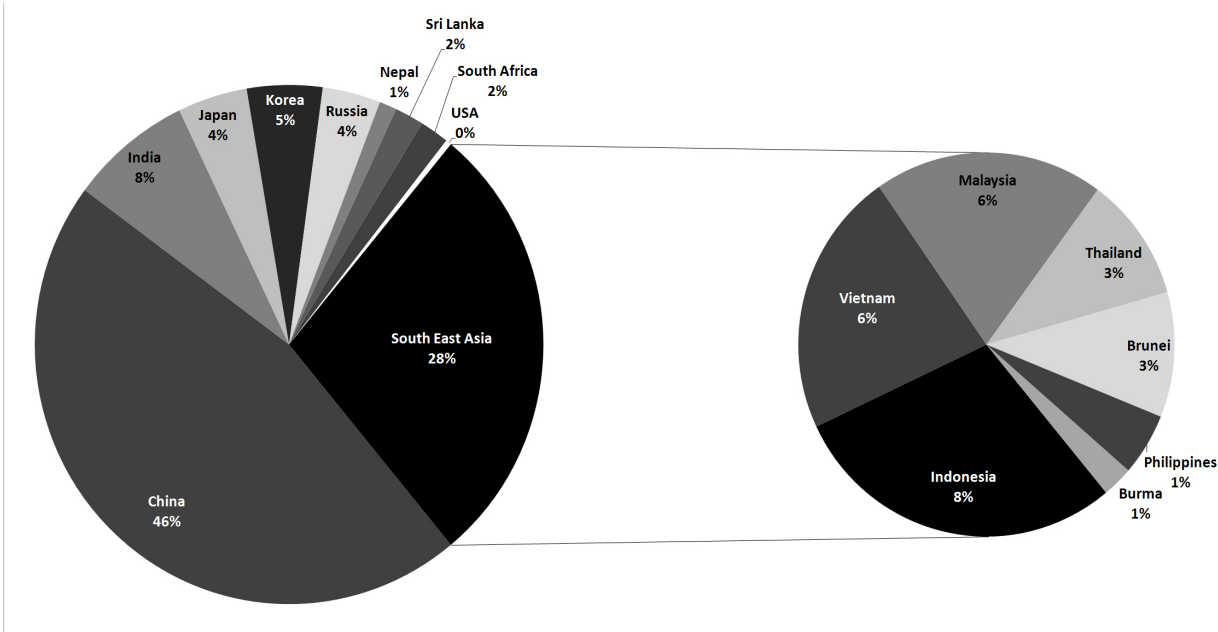


Fig. 1 World richness of *Promalactis* species

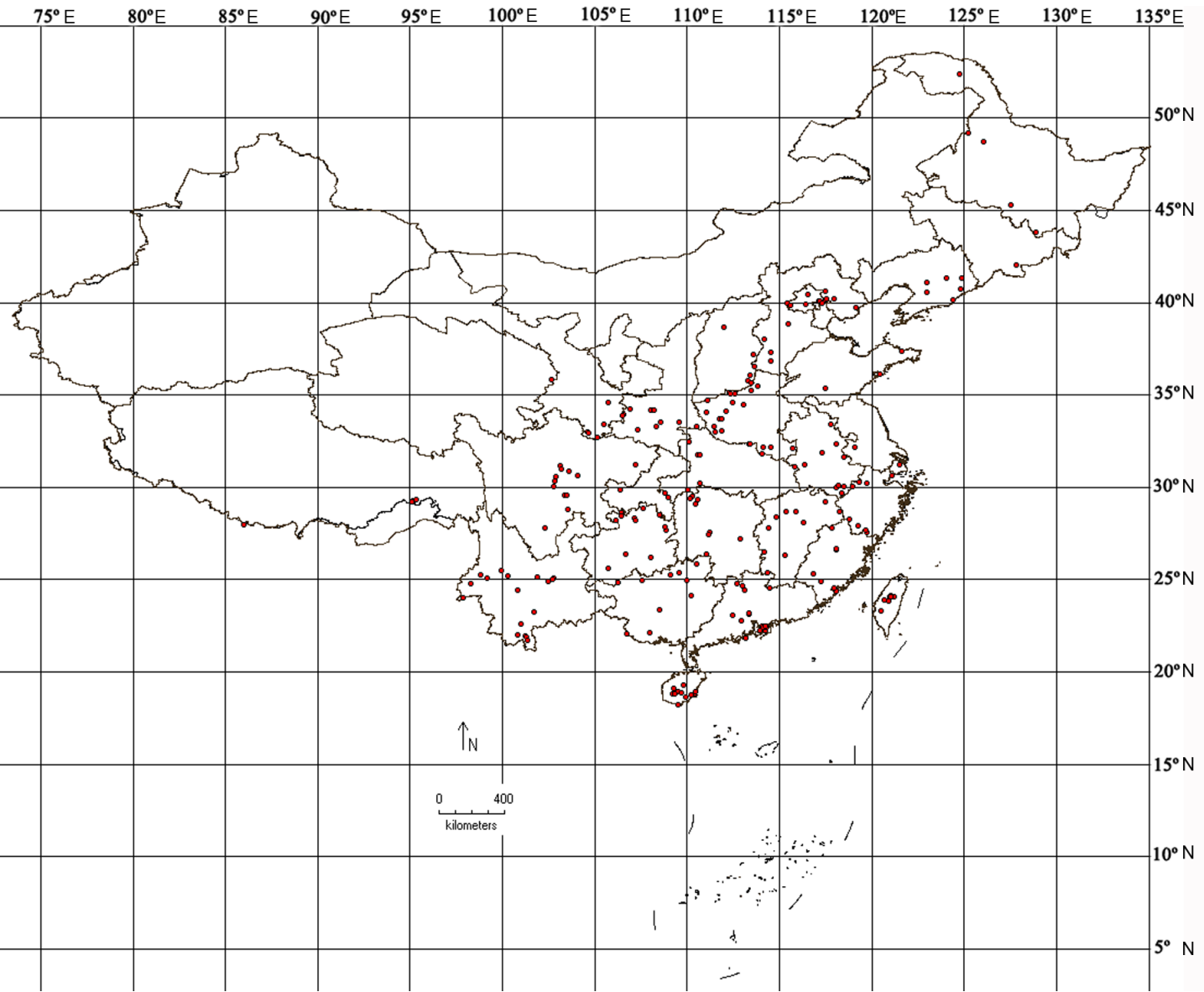


Fig. 2 Distribution of the genus *Promalactis* in China

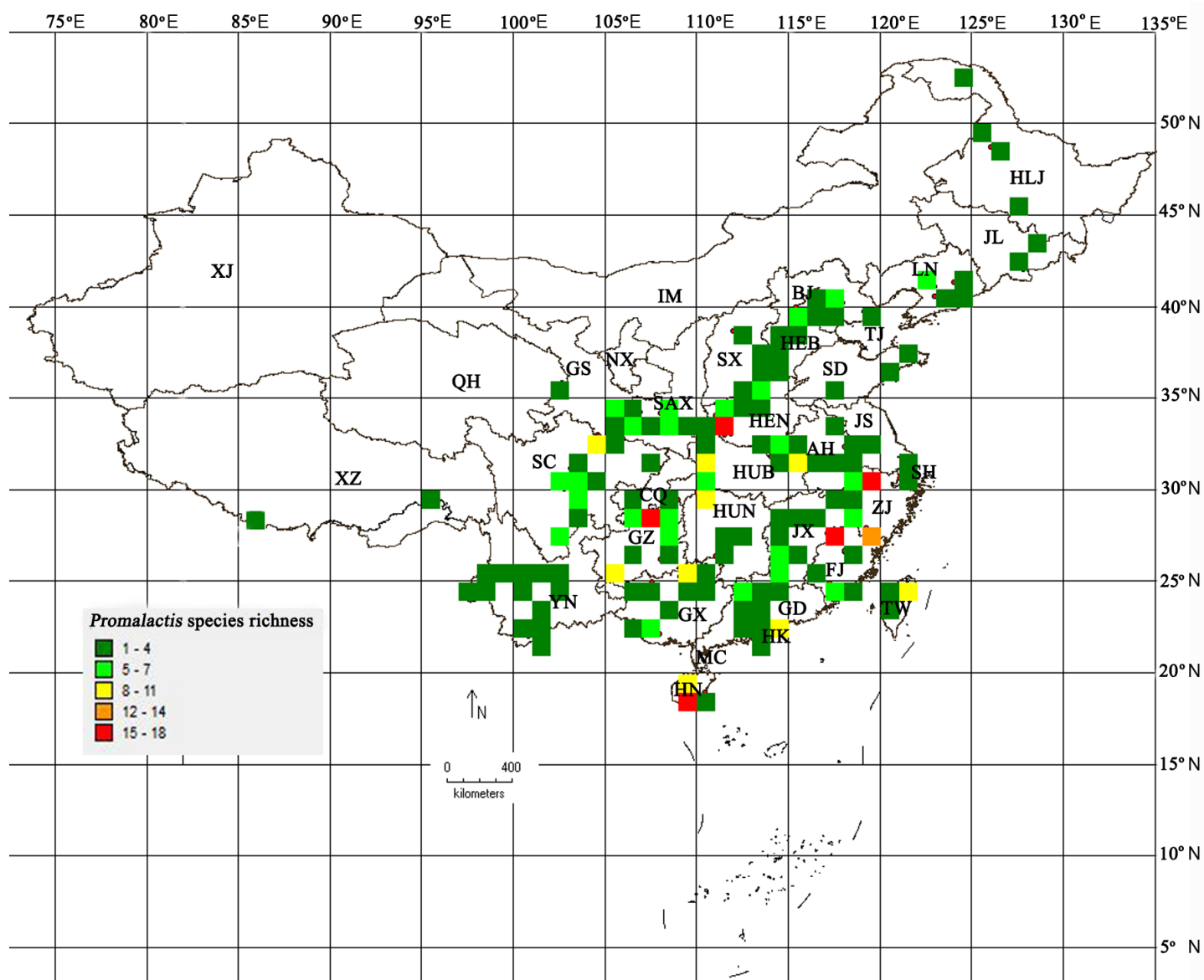


Fig. 3 *Promalactis* species richness in China

Notes: The geographic map was prepared using DIVA-GIS software. The Korean peninsula distribution of the genus follows Park (1981, 1998) and does not distinguish between North and South Korea.

Abbreviations of Provinces in China: BJ: Beijing; TJ: Tianjin; HEB: Hebei; SX: Shanxi; IM: Inner Mongolia; LN: Liaoning; JL: Jilin; HLJ: Heilongjiang; SH: Shanghai; JS: Jiangsu; ZJ: Zhejiang; AH: Anhui; FJ: Fujian; JX: Jiangxi; SD: Shandong; HEN: Henan; HUB: Hubei; HUN: Hunan; GD: Guangdong; GX: Guangxi; HN: Hainan; SC: Sichuan; GZ: Guizhou; YN: Yunnan; XZ: Xizang; SAX: Shaanxi; GS: Gansu; QH: Qinghai; NX: Ningxia; XJ: Xinjiang; TW: Taiwan; HK: Hong Kong; MC: Macau.