



A taxonomic review of *Pachyodes* Guenée, 1858, with descriptions of two new species (Lepidoptera: Geometridae, Geometrinae)

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Abstract

The genus *Pachyodes* Guenée, 1858 is reviewed, and two new species are described: *P. novata*, **sp. nov.**, from South China and *P. jianfengensis*, **sp. nov.**, from Hainan Province, China. The six previously known species are redescribed, and a lectotype is designated for *P. pratti* (Prout, 1927). Illustrations of adults and genitalia are presented. The holotype and paratypes of the new species are deposited in the Institute of Zoology, Chinese Academy of Sciences, Beijing, China.

Key words: Geometrinae, *Pachyodes*, new species, taxonomy, China

Introduction

The genus *Pachyodes* was erected by Guenée, 1858 based on *Pachyodes almaria* Guenée, 1858, which is a junior synonym of *Pachyodes haemataria* (Herrich-Schäffer, 1854). *Pachyodes* is the oldest available name for species previously referred to the genus *Terpna* Herrich-Schäffer (Holloway 1996). Prout's (1912, 1927) concept of *Pachyodes* was very broad and included seven subgenera under its previous name *Terpna*: *Calleremites* Warren, *Psilotagma* Warren, *Absala* Swinhoe, *Pachyodes* Guenée, *Pachista* Prout, *Lophophelma* Prout and *Dindicodes* Prout. Holloway (1996) treated *Pachyodes* as a member of Pseudoterpnini Warren and re-examined the entire group based on genitalic characters. He separated the subgenera from *Pachyodes* and elevated them to genera. Holloway (1996) retained five species in *Pachyodes*: *pratti*, *subtrita*, *ornataria*, *leucomelanaria*, and *amplificata*. Scoble (1999) listed seven species in *Pachyodes*: *albodavidaria*, *amplificata*, *davidaria*, *haemataria*, *leucomelanaria*, *pratti*, and *subtrita*. Pitkin *et al.* (2007) included *Pachyodes* in Pseudoterpnini and described external features and provided a detailed diagnosis of the genus. They included the following: *amplificata*, *haemataria*, *leucomelanaria*, *pratti*, *subtrita*, and *ornataria* (the generic position of the last was considered uncertain by Scoble (1999)), and assigned *albodavidaria* and *davidaria* to the genus *Dindicodes*. In the present work, the concept of *Pachyodes* follows Pitkin *et al.* (2007). On the basis of wing pattern, *Pachyodes* can be distinguished by the following characters: longitudinal reddish-brown striations on the forewing and often a longitudinal bar between CuA₁ and CuA₂ on the hindwing.

Based on material in the collections of various museums worldwide and specimens obtained during recent expeditions (2005–2006) to Fujian Province, two new species of *Pachyodes* are recognized. The purposes of this paper are to describe two new species and redescribe all the known species, designate a lectotype for *P. pratti*, and provide illustrations of external features and genitalia.