



## ***Thalassodes* and related taxa of emerald moths in China (Geometridae, Geometrinae)**

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### **Abstract**

The Chinese group of *Thalassodes* and related taxa, including four genera and eighteen species is reviewed. Four new species are described: *Pelagodes paraveraria* **sp. nov.**, *Pelagodes bellula* **sp. nov.**, *Pelagodes simplvalvae* **sp. nov.**, *Pelagodes sinuspinae* **sp. nov.** The genus *Remiformvalva*, the species *Remiformvalva viridicaput*, *Orothalassodes floccosa* and *Pelagodes clarifimbria* are recorded for the first time from China. Descriptions and diagnoses of the genera and diagnoses for the species are provided. The female genitalia of *R. viridicaput* are described for the first time. Moths of all species are illustrated in colour and figures of the genitalia and the male eighth segment are provided.

**Key words:** *Thalassodes*, *Orothalassodes*, *Pelagodes*, *Remiformvalva*, new species

### **Introduction**

Most members of the genera *Thalassodes* Guenée, 1858, *Orothalassodes* Holloway, 1996, *Pelagodes* Holloway, 1996 and *Remiformvalva* Inoue, 2006 have the following features: the wing colour is sea-green and semi-transparent; white transverse lines on both wings are weak to distinct but very narrow; the postmedial line is usually straight on the forewing, but angled on the hind wing; the outer margin of the hind wing is usually protruding on the M<sub>3</sub> end; the antenna is bipectinate and the rami are adpressed. However, it is very difficult to identify specimens to genera and species on these external similarities, without examining the genitalia. Additionally there is often problems with matching males and females, for often several almost identical species, of the genera are collected at the same locality in the same season.

These four genera are the members of the tribe Hemitheini (= Hemitheiti Holloway, 1996), and were formerly treated as only one, traditionally accepted genus, *Thalassodes*. Inoue (1961) established the tribe Thalassodini based on the genus *Thalassodes* and was followed by Hausmann (1996). Holloway (1996) studied the Bornean fauna of this group and subordinated Thalassodini with the Hemitheini together with the Thalerini, Comostolini, Hemistolini and Jodini. He removed many species from *Thalassodes* mainly based on the structures of the male genitalia and the eighth segment, and erected two new genera, *Orothalassodes* and *Pelagodes*. Afterwards, Inoue (2006) erected the fourth genus of the group, *Remiformvalva*. These four genera are widely distributed in the Indo-Pacific tropics, with a few species extending to Africa, Japan and North China.

Although no worldwide study of this group has yet been published, many species have been described in this group. For example, Guenée (1858) described four new species, Walker (1861) named six species from south-east Asia and Warren (1897a, 1897b, 1898, 1899, 1901, 1902, 1903, 1905, 1906, 1912) established 15 new species and one subspecies from south-west Pacific and Africa in the late nineteenth to early twentieth. Prout (1911, 1912, 1916a, 1916b, 1917a, 1917b, 1919, 1922, 1925a, 1925b, 1926, 1928, 1933, 1934, 1937) described 23 species and one subspecies from south-east Asia, south-west Pacific and African regions in the early twentieth century. The following researchers have made most of the recent additions. Herbulot (1958, 1963, 1972, 1986) described five new species from Africa. Robinson (1968, 1975) added two new species from Fiji. Holloway (1977, 1979, 1996) estab-