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NEW GENUS OF THE FAMILY RATARDIDAE (LEPIDOPTERA: COSSOIDEA) FROM NEW GUINEA

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Summary. *Praesaturnia roepkei* Yakovlev, de Vos et Hulsbosch, **gen. et sp. n.** is described from Papua Province of Indonesia. The new genus clearly differs from the known genera of Ratardidae in the very primitive wing pattern (wide dark portions on the light background and large round discal spots on all wings); the very deep cup-like ostium and the special sclerite of the lamina postvaginalis shaped as an elongated frustum, basally wide and apically forked into two small distinct lobes. The general distribution of representatives of the family Ratardidae is also discussed.

Key words: Parnassian moths, fauna, taxonomy, biodiversity, Indonesia.

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Резюме. Из индонезийской провинции Папуа описан *Praesaturnia roepkei* Yakovlev, de Vos et Hulsbosch, **gen. et sp. n.** Новый род хорошо отличается от известных родов Ratardidae очень примитивным рисунком крыльев (в виде

широких темных полей на светлом поле и крупных округлых дискальных пятен на обоих крыльях); очень глубоким чашевидным остиумом и специфическим склеритом поствагинальной пластинки в виде вытянутого усеченного конуса, с широким основанием и с разветвленным окончанием в виде двух небольших отчетливых лопастей. Также обсуждается общее распространение представителей семейства Ratardidae.

INTRODUCTION

The family Ratardidae or Parnassian-Moths (Lepidoptera, Cossoidea) are very rare moths distributed in the south-east of Eurasia (including island territories). Currently, we know eight described species from three genera: *Ratarda* Moore, 1879 (type species *Ratarda marmorata* Moore, 1879), *Callosiope* Hering, 1925 (type species *Callosiope banghaasi* Hering, 1925), and *Sumatratarda* Kobes & Ronkay, 1990 (type species *Sumatratarda diehlii* Kobes et Ronkay, 1990) (Holloway, 1986; Owada, 1993; Kobes & Ronkay, 1990; Heynderycx, 2003; Kishida, 2016; Yakovlev, 2018a, b). Examining the materials deposited in Naturalis Biodiversity Center (Leiden) we found a series of three Ratardidae females from New Guinea, marked by Roepke in 1959 as “*Praesaturnia primitiva*”. The specimens were collected during the famous Star Mountains Expedition held in 1959, in fact the last Dutch expedition in Dutch New Guinea before the area became part of Indonesia (Brongersma & Venema, 1960; van Zanten, 2014; van den Gronden, 2015). This taxon was not described. We have studied these specimens and provide the description of this interesting moth.

MATERIAL AND METHODS

To prepare the article, we used the specimens from the Naturalis Biodiversity Center (Leiden). The female genitalia were mounted in euparal on slides following Lafontaine (2004). Digital photographs of the genitalia were made with a motorized Zeiss V20 binocular microscope and a digital Axio MRc5 camera controlled by AxioManager M2 software. The specimens were photographed with a Nikon D600 with AF Micro-Nikkor 60mm f/2.8D lens, mounted on a Kaiser RSX Copy Stand with RTX camera arm and using a 32 watt circular lamp mounted on a light box (Fritz Weber). The map was made using the open soft Simple Mappr (<https://www.simplemappr.net/>). The images were processed using CorelDraw software.

DESCRIPTION OF NEW TAXA

Genus *Praesaturnia* Yakovlev, de Vos et Hulsbosch, gen. n.

<http://zoobank.org/NomenclaturalActs/30185B65-9CD4-48BB-B697-AF7188DBBDF2>

Type species: *Praesaturnia roepkei* Yakovlev, de Vos et Hulsbosch, sp. n., there designated.

DESCRIPTION. Female. Antennae short, bipectinate, setae rare, processes 1.5 times longer than antenna rod diameter. Moths big, with wide rounded light wings with primitive pattern of wide dark portions and big round discal spots on all wings. Female genitalia. Ovipositor short; papillae anales short, tapered; apophyses posteriores short, twice longer than apophyses anteriores; ostium very deep, cup-like; ductus of medium length; sclerite of lamina postvaginalis shaped as elongated frustum, basally wide and apically forked into two small distinct lobes; sternum VIII frames it with clearly expressed sclerotized semi-ring; bursa copulatrix bag-like, without signa.

Male unknown.

DIAGNOSIS. The new genus clearly differs from the known Ratardidae genera in the very primitive wing pattern (wide dark portions on the light background and large round discal spots on all wings); the very deep cup-like ostium and the special sclerite of the lamina postvaginalis shaped as an elongated frustum, basally wide and apically forked into two small distinct lobes.

COMPOSITION. The new genus is monotypic.

DISTRIBUTION. New Guinea.

ETYMOLOGY. We used the name "*Praesaturnia*" suggested by Roepke.

***Praesaturnia roepkei* Yakovlev, de Vos et Hulsbosch, sp. n.**

<http://zoobank.org/NomenclaturalActs/C774F665-3D80-4C5B-BF91-6DDDBF44A649>

Figs 1–4

TYPE MATERIAL. Holotype – female, **Indonesia**: Nieuw Guinea [Indonesia, Papua Province], Ned. Exp. 1959, Sterren Gebergte [now Pegunungan Bintang], OK Sibil [now Mabilabol, 4°49' S, 140°36' E], 1260 m, 1–31.V [1959], individual number RMNH 130494. Paratypes: 1 female, same locality, 27.IV.1959, individual number RMNH 1283356; 1 female, same data, IV.1959, individual number RMNH 1300495. All specimens are deposited in the Naturalis Biodiversity Center, Leiden.

DESCRIPTION. Female. Length of fore wing 25–27 mm (in holotype, 26 mm). Antennae short, bipectinate, setae rare, processes 1.5 times longer than antenna rod diameter. Fore wing wide, apically semicircular, milky-white with wide grey medial-basal portion, grey costal edge and wide grey submarginal area with serrated inner edge and big round discal spot. Hind wing milky-white with small grey basal portion, wide grey submarginal area with serrated inner edge and big round discal spot.

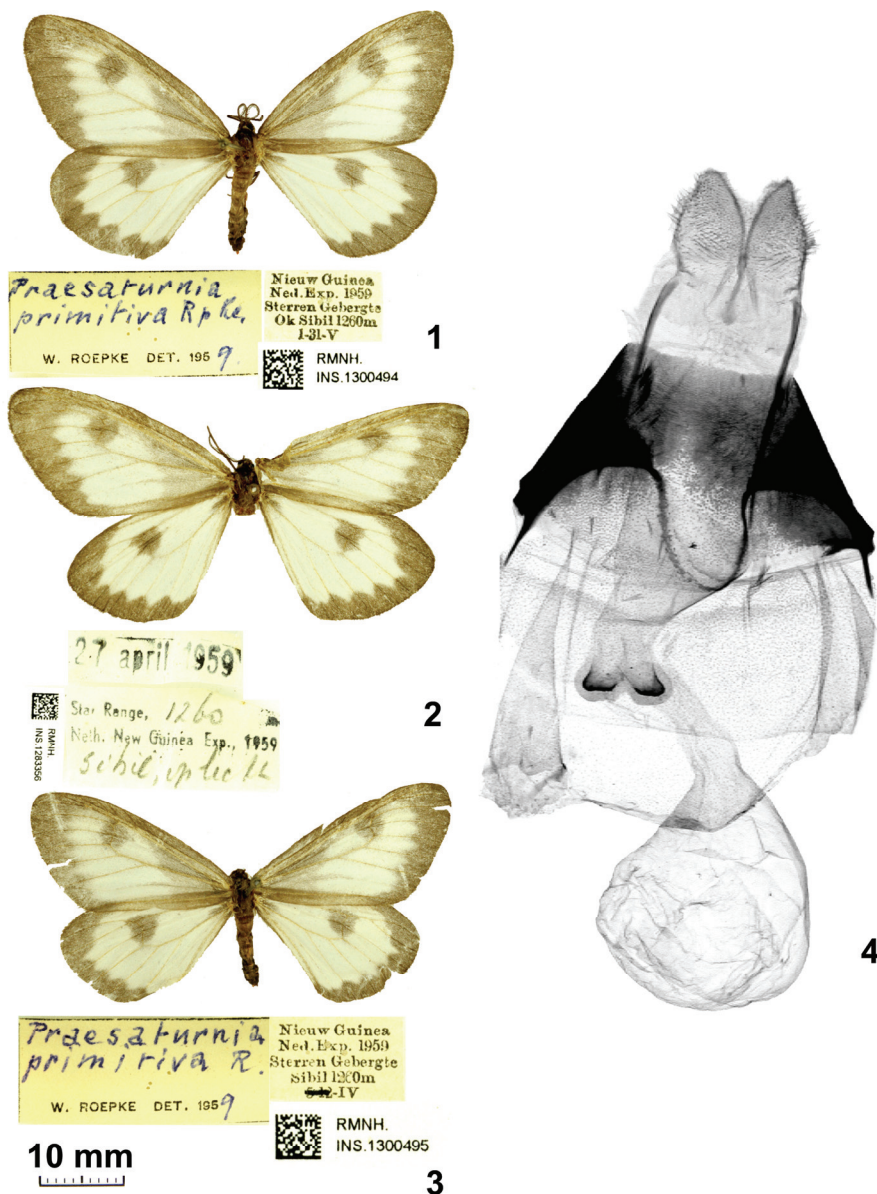
Female genitalia. See the generic description.

Male unknown.

DISTRIBUTION. Indonesia, Province Papua.

ETYMOLOGY. The new species is named after Professor Walter Karl Johann Roepke (1882–1961), a prominent Dutch entomologist, who indicated this interesting new species and did a great research in Lepidoptera of South-Eastern Asia including Cossioidea. Roepke was the Director of The Central Java Experiment Station and then Entomologist at the Institute of Plant Diseases and Pests of Buitenzorg; later served as the Professor at the Agricultural College, Wageningen, where he arrived

in 1919 to teach Tropical agriculture till 1925, and from 1925 till his retirement in 1953 – Applied entomology (Kalshoven & Diakonoff, 1961).



Figs 1–4. *Praesaturnia roepkei* Yakovlev, de Vos et Hulsbosch, sp. n., adult females with labels (1–3) and female genitalia (4). 1 – holotype; 2–4 – paratypes.

CONCLUSION

Thus, currently the family includes 4 genera (two of which, *Sumatratarda* and *Praesaturnia*, are monotypic), uniting the nine described species. The new finding significantly enlarges the area of the family Ratardidae in the east to New Guinea Island. It was previously considered that the family representatives inhabit East India, Indochina (Myanmar, Thailand), Taiwan, the Philippines (Palawan Island), Malaysia and Indonesia to the east to the Moluccas (Halmahera Island) (Yakovlev, 2018 a, b). The general distribution of the species of this little studied family is presented in Fig. 5.

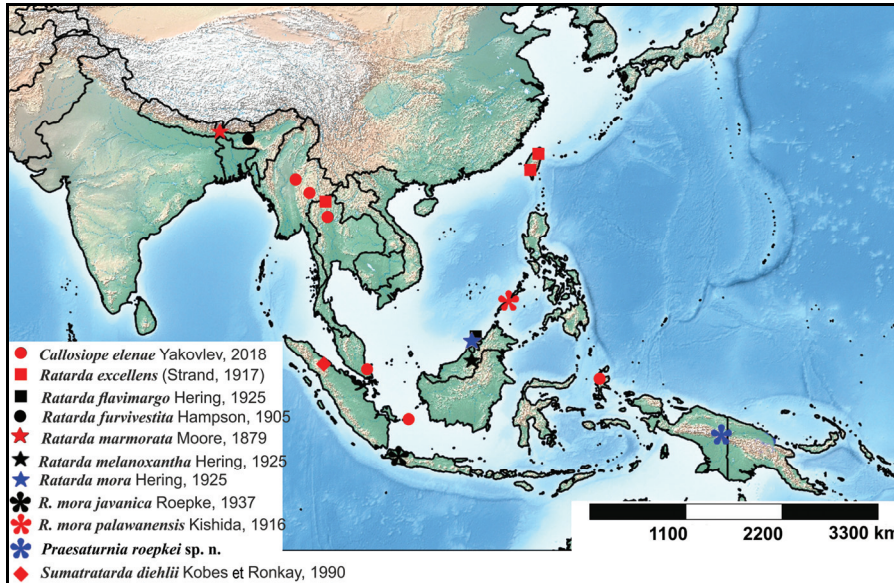


Fig. 5. Distribution-map of representatives of the family Ratardidae.

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