

A new species of *Merrifieldia* Tutt from Slovenia (Pterophoridae)

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Abstract. *Merrifieldia renatae* sp. n., a new species of Pterophorinae (Pterophoridae) is described from Slovenia. The adult and its male and female genitalia are figured. Descriptions and illustrations of the larva, pupa, and habitat, including host plant, are provided. The new species is compared with both the similar and closely related *M. baliodactyla* (Zeller, 1841) and *M. tridactyla* (Linnaeus, 1758). *M. menthae* (Chrétien, 1925), recognized by some lepidopterists as a valid species, is also discussed.

Introduction

The genus *Merrifieldia* comprises eight rather similar, but mostly well recognized species in Europe (cf. Gielis 1996). Although individual variability of external characters as well as genitalia structures can sometimes make the identification of species difficult, the combination of all criteria enables reliable determination. In May 2000 the first author took a series of *Merrifieldia* specimens in Slovenia resembling the well-known *M. baliodactyla* (Zeller, 1841). However, the study of their male and female genitalia showed that another species was involved. As we found that it did not agree with any species in the recent comprehensive monographs on the Pterophoridae (Arenberger 1995; Gielis 1996), we are describing it here.

Abbreviations

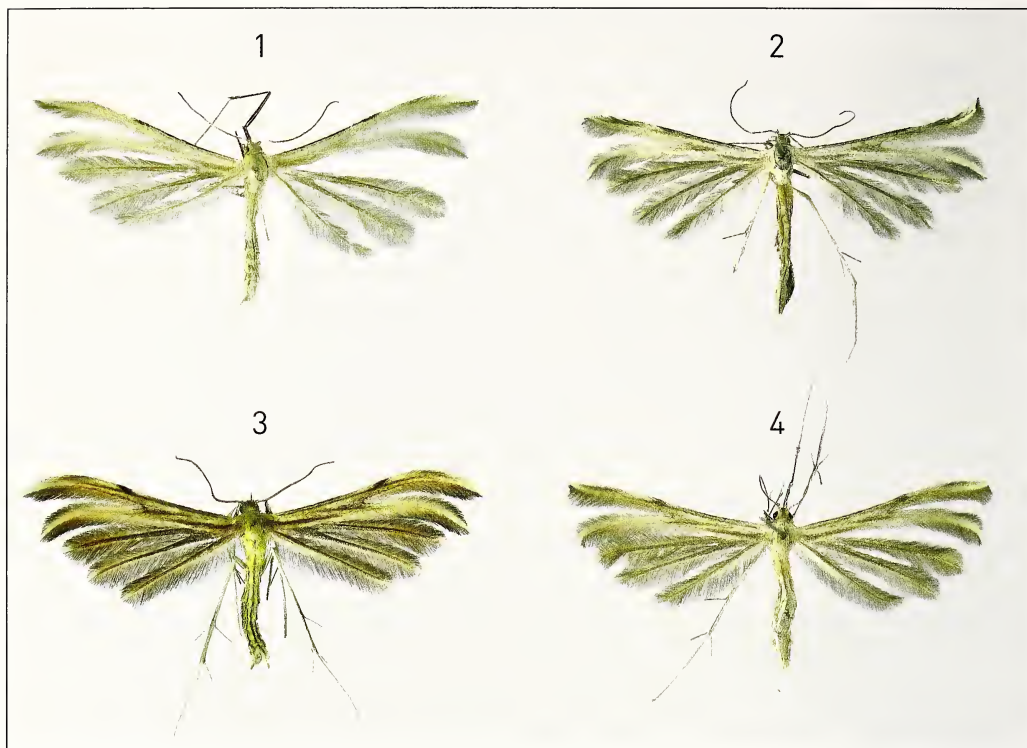
MTD	Germany, Dresden, Museum für Tierkunde
NMPC	Czech Republic, Prague, National Museum (Natural History)
PMSL	Slovenia, Ljubljana, Slovenian Museum of Natural History
ZSM	Germany, Munich, Zoologische Staatssammlung

Merrifieldia renatae sp. n.

(Figs 3–5, 7, 9–13)

Material. Holotype ♂, 'Slovenia, | Nanos, 500 m, | 28-31.v.2000, | J. Skyva leg.', 'Holotype | *Merrifieldia renatae* sp. n. ♂ | det. G. Elsner & J. Skyva', PMSL. – Paratypes: 3♂, 1♀ from type locality (2♂, 28.–31.v.2000, 1♂, 30.v.2003, 1♀, 24.vii.2004), leg. Skyva; 19♂, 2♀, Julian Alps, Soča, 500 m (7♂, 1♀ 25.vii.2000, 12♂, 1♀ 23.vii.2004), leg. Skyva; 3 larvae, same locality, 30.iv.2005 (3 ♂ emerged 21.–25.v.2005), M. Petrů & J. Skyva, leg. The holotype and a female paratype are deposited in the PMSL; the other paratypes are deposited in the collections of J. Skyva, G. Elsner, M. Petrů, and R. Sutter, as well as in the MTD, NMPC, ZSM.

Description. Adult (Figs 3–4). Fore wing length 10–11.3 mm; colour yellowish white, markings dark brown; narrow costal line not reaching distinct spot on costa beyond base of cleft; costa of first lobe darker in middle; fine dark brown line covering R_4 from base to centre of first lobe; dark brown strip from base along anal groove to $\frac{1}{3}$, another one along wing centre from $\frac{1}{4}$ to slightly beyond base of second lobe; lower edge of first lobe dark brown; cilia of second lobe bilaterally symmetric yellowish



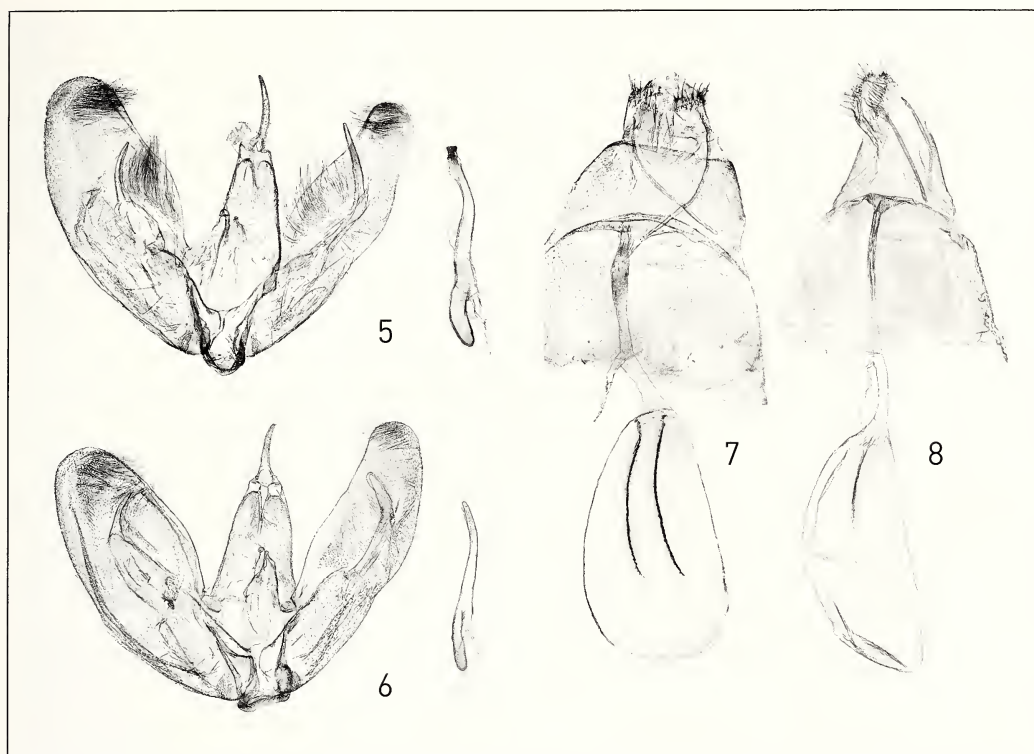
Figs 1–4. Adults of *Merrifieldia* spp. 1. *M. baliodactyla* ♂, Bohemia centr., Praha – Radotín, 7.vii.1973, coll. J. Skyva. 2. *M. baliodactyla* ♀, Moravia mer., Moravian karst, Vilémovice, 2.vii.1988, coll. J. Skyva. 3. *M. renatae* sp. n., ♂ paratype, Slovenia, Nanos, 500m, e.l. 25.v.2005, coll. G. Elsner. 4. *M. renatae* sp. n., ♀ paratype, Slovenia, Soča, 500m, 25.vii.2000, coll. J. Skyva.

white to $\frac{1}{2}$, then dark brown. Hind wing brown to dark brown including cilia, except lower edge of third lobe, straw-coloured to $\frac{1}{2}$. Abdomen in fresh specimens sulphurous with three narrow pale brown longitudinal lines.

Male genitalia (Fig. 5). Left valva broad, with dorsal edge gibbous medially; saccular process arising from centre, not reaching dorsal margin of valva. Right valva symmetrically constricted at $\frac{3}{4}$; long saccular process extending beyond dorsal edge of valva. Phallus sinuate, slightly swollen apically and with dense mat of microtrichia.

Female genitalia (Fig. 7). Ostium asymmetric, broadly funnel-shaped, with two parallel knife-shaped sclerites in antrum. Ductus bursae slightly shorter than corpus bursae; ductus seminalis arising at $\frac{1}{3}$. Signum consisting of two slightly arcuate narrow sclerotized ribs of $\frac{3}{4}$ length of corpus bursae.

Larva and pupa. Description based on the full grown larva which produced the male moth shown on Fig. 3. Head amber with indistinct, slightly darker, markings. Body green with long and stout setae arising from both dorsal and lateral pinacula (Figs 9–10), longest ringed brown at base. Tiny, short secondary setae each with bunch of filaments at apex (Fig. 11) and small dark brown granules (Fig. 10) cover some areas. Spiracles very small with brown rings and pale green marks. Thoracic legs pale greenish-yellow,



Figs 5–8. Genitalia of *Merrifieldia* spp. **5.** *M. renatae* sp. n., ♂, prep. 1748GE (in vial). Slovenia, Nanos, 500 m, 28.–31.v.2000, coll. J. Skyva. **6.** *M. tridactyla*, ♂, prep. 1757GE (in vial). France mer., Provence, Les Savoyons, 7.vi.2003, leg. GE, coll. J. Skyva. **7.** *M. renatae* sp. n., ♀, prep. 1746GE (in vial). Slovenia, Nanos, 700 m, 28.–31.v.2000, coll. J. Skyva. **8.** *M. tridactyla*, ♀, prep. 1756GE (in vial). Bohemia centr., Únětice, 16.vi.1980, leg. & coll. J. Skyva.

translucent, dark brown near claw. Prolegs translucent, yellowish with blackish brown crochets. Pupa (Fig. 12) green with spines and hairs around segments. Ventral side along sutures with 18 rows of short backward-curved spines.

Diagnosis. On external characters *M. renatae* sp. n. can only be confused with *M. baliodactyla* but the distinct differences in the genitalia of both sexes separate them without question. The somewhat similar genitalia of *M. tridactyla* (Linnaeus, 1758) differ in having a much shorter signum as well as a symmetric and much narrower antrum in the female (Fig. 8), whereas in the male the saccular process of the right valva, at the most, reaches, but does not exceed, the dorsal margin of the valva and there is no swelling at the top of phallus (Fig. 6).

Distribution. Known only from two localities in north- and south-western Slovenia.

Life history. *M. renatae* sp. n. is bivoltine; the first generation occurs from mid May to early June, and the second from mid July to early August. The moths are active at dusk and they do not stray from the locality. Both known sites are limy-subsoil ruderals with an abundance of common oregano, *Origanum vulgare* L. (Lamiaceae). The locality of Soča (500 m a.s.l.) in the Julian Alps is a former dump c. 1 km SWW from Soča village, used in the course of road reconstruction along the Soča river valley. The locality of



Figs 9–12. Preimaginal stages of *Merrifieldia renatae*. **9.** Larva, dorso-lateral view, Slovenia, Nanos, 500m, 15.v.2005, leg. J. Skyva. **10.** Larva, the granules in detail. **11.** Larva, a group of secondary setae. **12.** Pupa in lateral view.

Nanos is a derelict limestone quarry situated at 500m in one of the bends of the road between Podnanos village and the chalet on the south slope of Nanos Mountains. Three final instar larvae were found between 30 April and 1 May 2005 sitting openly on stems or leaves of common oregano.

Etymology. The species name (an adjective) is derived from the maiden name ‘Renata’.

Remarks. *M. tridactyla* and *M. renatae* sp. n. also show similar genitalia characters with *M. menthae* (Chrétien, 1925), currently considered to be a junior synonym of *M. tridactyla* (www.faunaeur.org, 2007). We have tested one female specimen from Corsica, France, showing excellent conformity with *M. menthae* sensu Nel (1991) and its wing markings clearly differed from those of *M. renatae* sp. n. Moreover, the narrow, discontinuous, but distinct sclerotised ring reinforcing the ostium bursae in *M. menthae* separates it clearly from both above-mentioned species, which have peculiar sclerotised processes instead.



Fig. 13. The type locality of *M. renatae* sp. n..

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References

- Arenberger, E. 1995. Pterophoridae. – In: H. G. Amsel, F. Gregor & H. Reisser (eds), *Microlepidoptera Palaearctica* Vol. 9. – George Fromme, Vienna. 258 pp., 153 pls.
- Gielis, C. 1996. Pterophoridae. – In: P. Huemer, O. Karsholt & L. Lyneborg (eds), *Microlepidoptera of Europe*, Vol. 1. – Apollo Books, Stenstrup. 222 pp., 14 colour pls.
- Nel, J. 1991. Deuxième note sur les Ptérophores de la Corse. *Stenoptilia cyrnea* n. sp. et *Merrifieldia moulignieri* n. sp.. Vingt et unième contribution à la connaissance de la biologie des Pterophoridae du sud de la France. – *Alexanor* 17 (3): 167–182.

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