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## ***Pollenia margarita*, a new species of *Pollenia* ROBINEAU-DESVOIDY, 1830 from Austria (Diptera, Polleniidae)**

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**A b s t r a c t :** *Pollenia margarita* nov.sp. assigned to the *griseotomentosa* species-group (ROGNES 1988, 1992) in *Pollenia* ROBINEAU-DESVOIDY, 1830 is described on the basis of male specimens captured in the Danube Woods National Park (Nationalpark Donau-Auen) in Austria.

**K e y w o r d s :** Polleniidae, cluster flies, Austria

### **Introduction**

Collections of flies made by the first author (G.S.) in the early spring 2021 in the deciduous forests of the Austrian Danube National Park produced several specimens of a species of the *Pollenia griseotomentosa* group (ROGNES 1988, 1992), which was previously undescribed (ZUMPT 1956, ROGNES 1988, 1991, 1992, DRABER-MOŃKO 2004). The three sites are located within 25 km from each other. There are therefore several independent populations of this species, which is not rare along the Danube between Vienna and Hainburg. A description of the female of the species is anticipated, following the use of DNA barcoding to identify female specimens.

### ***Pollenia margarita* nov.sp. (Figs 1-18)**

**M a t e r i a l e x a m i n e d :** Holotype ♂, AUSTRIA: Lower Austria, Nationalpark Donau-Auen, Lobau, Mühlleiten E Vienna, 48.162N/16.564E, 150 m a.s.l., 30.03.2021, leg. & det. G. Schlüsslmayr. Holotype in Natural History Museum London. Paratypes: same locality and date as for holotype: 2♂♂, 1 Paratype in Biologiezentrum Linz (LI).

**A d d i t i o n a l m a t e r i a l :** AUSTRIA: Lower Austria, Nationalpark Donau-Auen, Orth an der Donau, 48.128N/16.708E, 150 m a.s.l., 30.03.2021, 1♂; Lower Austria, Nationalpark Donau-Auen, Stopfenreuth, 48.14N/16.90E, 145 m a.s.l., 30.03.2021, 2♂♂, leg. & det. G. Schlüsslmayr.

### **Methods**

The specimen was photographed, prior to full genitalia dissection, using a Canon 700D and MP-E 65 mm lens with a macro flash. Images were stacked using Helicon Focus software and processed with Adobe Photoshop CC 2019 and FastStone Image Viewer 7.5 (Figs 1-4, 7-9, 11-13). The abdomen was subsequently removed, placed in a warm 10% KOH solution until softened, dissected, neutralised in acetic acid then transferred into absolute ethanol. The terminalia and sternites were later transferred into glycerol while the

tergites were dried under a microscope lamp and preserved dry. The dissected parts were photographed using the same method as above except the terminalia and sternites were kept in glycerol (Fig. 5-6, 10, 14-18).

### Description

**Male:** Small, body length: 5.5 mm.

**Head.** Ground colour black with greyish-silver tomentum, except for facial ridge, and area below parafacial adjacent to facial ridge which have a reddish ground colour. Fronto-orbital plates and parafacials mostly silver, parts of parafacials and genal dilation with slightly yellow sheen. Frons at narrowest point 0.04 times head width, 1.5 width of front ocellus. Each fronto-orbital plate with 7 frontal setae and small irregular setulae in 2 rows outside of the main frontal setae. Lunule slightly reddish. Facial carina low and distinct only in the upper part of the face. Antenna mostly black, postpedicel 2 times longer than wide, reddish in proximal part; pedicel reddish distally. Occiput with black and yellow setulae. Inner vertical seta (i v s) slightly longer than postocular setae (pocl s). Gena with mostly black vestiture, numerous yellow hairs in posterior part. Palpi black.

**Thorax.** Black with cover of pollinosity, with 5 indistinct stripes when viewed from behind and numerous pale crinkly hairs. 3 strong basal postpronotal (humeral) setae and 2 weak anterior postpronotal setae; 1 inner posthumeral seta present, outer posthumeral seta absent; 2 presutural and 2 postsutural acrostichal setae; 2 presutural and 3 postsutural dorsocentral setae; 1 presutural and 2 postsutural intra-alar setae; 1 prealar, 2 supra-alar setae; 2 notopleural setae; 2 postalar setae, 1 presutural seta. Scutellum with 3 pairs of strong marginal setae and 1 pair of weak discal setae. Pleuron hairy. Both thoracic spiracles yellowish-brown. Coxopleural streak present. Halteres yellow.

**Legs.** Black. Hind tarsus shorter than hind tibia. Fore tibia with 1 posteroventral seta and a complete row of short anterodorsal setae, which become longer distally. Mid tibia with 1 anterodorsal seta, 1 ventral seta, 2 posterodorsal setae and 2 posterior setae. Hind tibia with 3 anteroventral setae, 4 posterodorsal setae and 4 strong anterodorsal setae in the middle part. Hind tibia with no erect setulae among the anteroventral setae. Hind legs without modified vestiture.

**Wings.** Front of wing slightly brownish. Wing veins brown. Costa with black hairs below to junction with subcosta; node at the junction of humeral vein and subcosta bare on ventral surface of the wing. Node at the base of  $R_{4+5}$  with a few black setulae on dorsal side and 1 setula on ventral side of the wing. Basicosta and tegula black. Cell  $r_{4+5}$  open at the wing margin. Calypters yellowish-white.

**Abdomen.** Short. Vestiture black, erect, finer and longer on ventral side of abdomen, on dorsal side shorter, denser and decumbent. Sternite 1 with some pale hairs in addition to black vestiture. Abdomen dorsally with a shifting tessellated pattern of silvery tomentum as in *Pollenia griseotomentosa*, with a black median stripe when viewed from behind.

**Terminalia.** Surstyli very narrow and long in dorsal view, with sparse hairs. Cerci narrow, slightly broader in proximal part, straight, narrowing in distal third. Cerci and surstyli only slightly bent downwards apically in lateral view. Pregonite with 4 long setae and few short ones, postgonite with a weak seta and numerous sensilla distally. Median hypophallic lobe sclerotised. Lateral hypophallic lobes triangular, broad, distally pointed, dentate along ventral edges, with a triangular central sclerotisation in distal part.

Paraphallic processes curved slightly inward distally, not thickened apically.

**D i a g n o s i s :** Separable from other species in the group by the shape of the male terminalia.

**D i s c u s s i o n o f s y s t e m a t i c p o s i t i o n :** The absence of an outer posthumeral seta, characteristic shifting pattern on the abdomen, inconspicuous facial carina, small body size, narrow cerci and the hind male tarsi being shorter than the tibia suggest that *P. margarita* nov.sp. belongs to the *Pollenia griseotomentosa* species group as defined by ROGNES (1988, 1992).

**B i o l o g y :** Specimens (6 males) were captured at 3 sites at an altitude of 145-150 m above sea level on March 30. The flies are on the wing in early spring and occur in basic, deciduous forests, where they settle on rotten foliage and sunny forest paths. They have been collected together with *Pollenia angustigena*, *P. hungarica*, *P. similis*, *P. pediculata* and the very frequent Tachinid *Gonia divisa*.

**D i s t r i b u t i o n :** All sites are located in Lower Austria. The easternmost locality is only 6 km from the Slovak border, hence the species is also likely to occur in Slovakia near Bratislava.

**E t y m o l o g y :** Margarita means pearl in Latin and is the first name of G.S.'s partner, the Russian mezzo-soprano Margarita Gritskova.

## Literature

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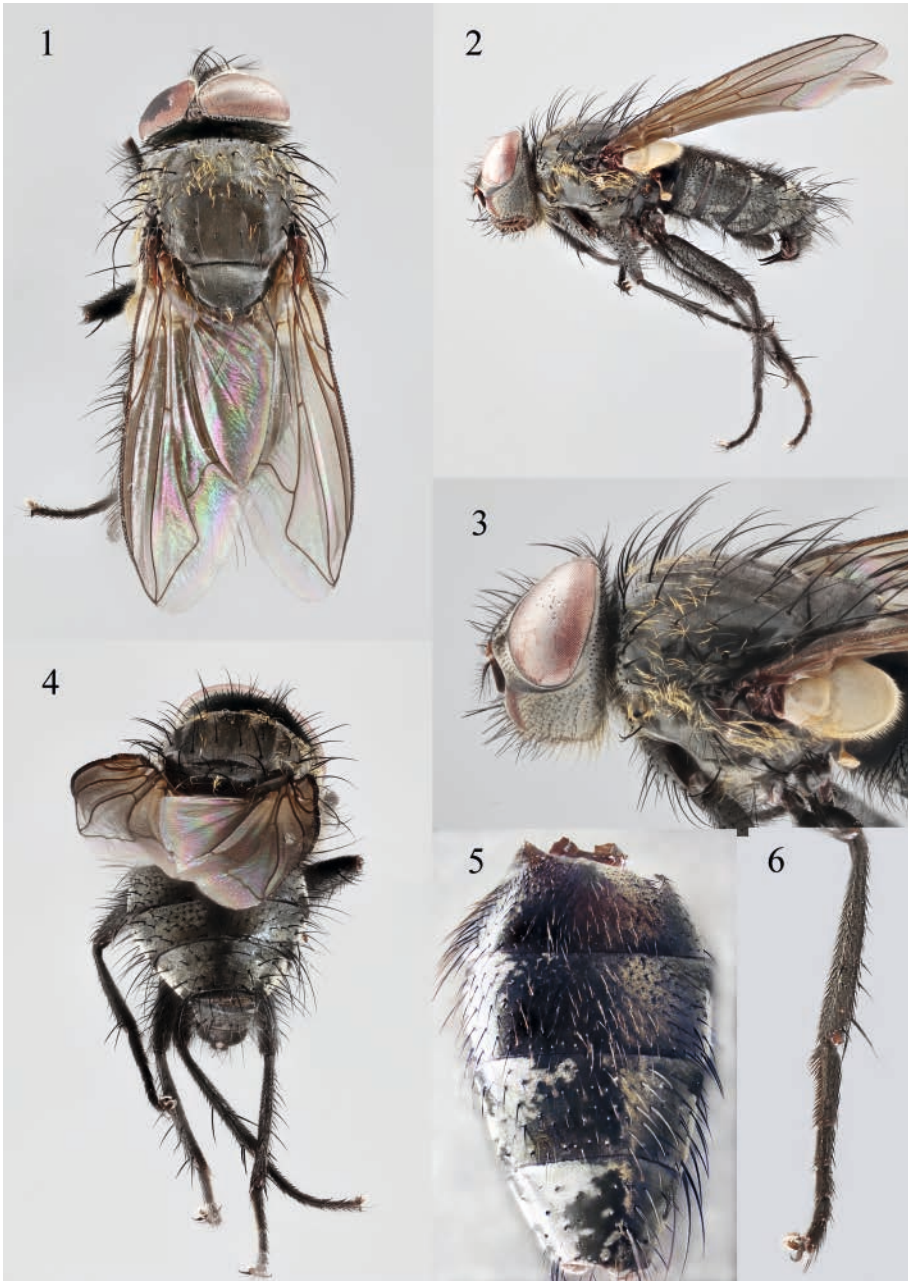
## Zusammenfassung

*Pollenia margarita* nov.sp. aus der *griseotomentosa*-Artengruppe (ROGNES 1988, 1992) in *Pollenia* ROBINEAU-DESVOIDY, 1830 wird anhand männlicher Exemplare beschrieben. Alle drei Fundorte der neuen Art liegen im Nationalpark Donau-Auen (Niederösterreich).

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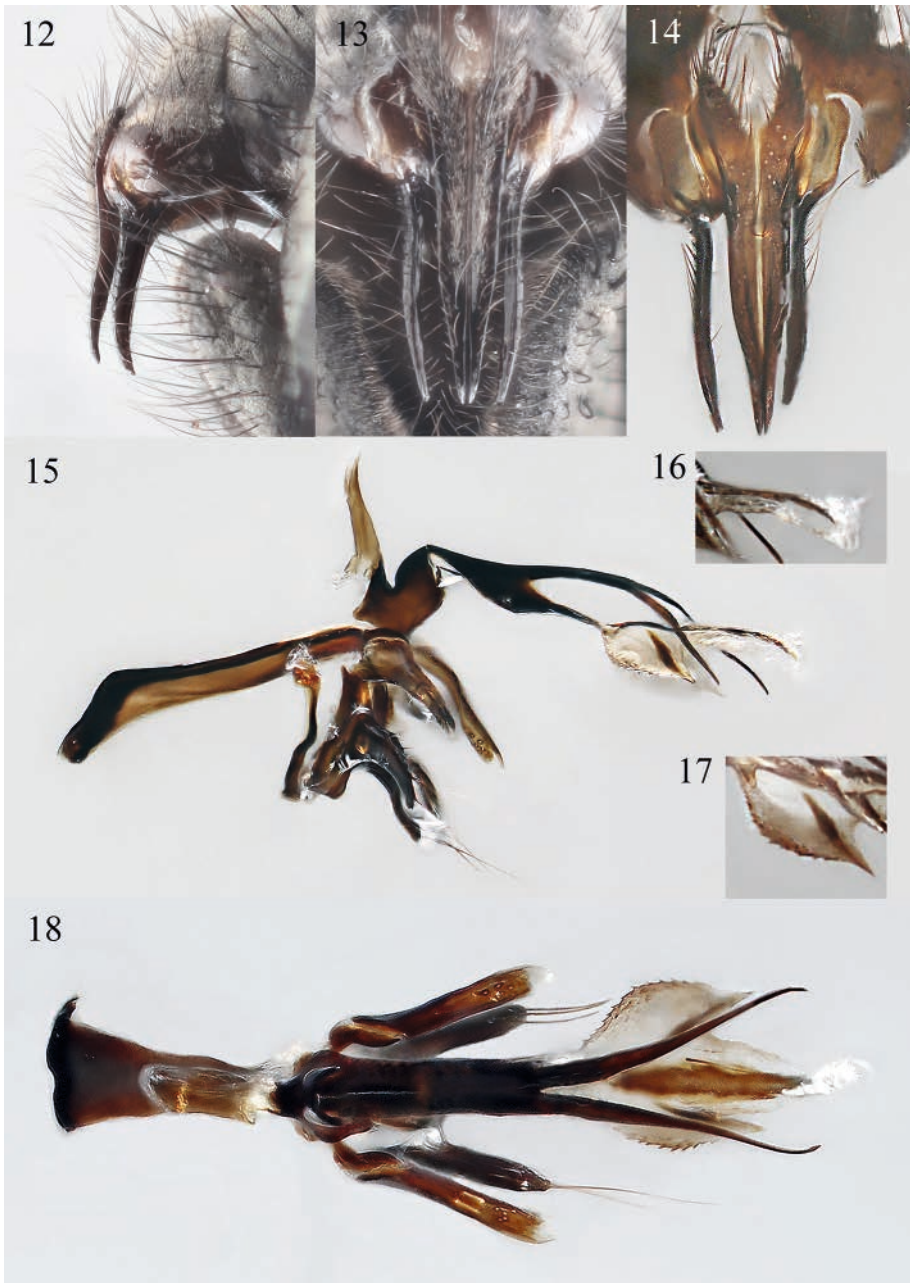


**Figs 1-6:** *Pollenia margarita* nov.sp., holotype ♂ (NHMUK), (1) Habitus, dorsal view; (2) Habitus, lateral view; (3) Head and thorax, lateral view; (4) Habitus, posterior view; (5) Abdomen, dorsal view; (6) Fore tibia, posteroventral view.



**Figs 7-11:** *Pollenia margarita* nov.sp., holotype ♂ (NHMUK), (7) Facial carina, anterior view; (8) Head, dorsal view; (9) Head, anterior view; (10) Sternites, ventral view; (11) Original specimen label.





**Figs 12-18:** *Pollenia margarita* nov.sp., holotype ♂ (NHMUK), (12) Cerci and surstyli, lateral view; (13) Cerci and surstyli, posterior view; (14) Cerci and surstyli, posterior view; (15) Terminalia, lateral view; (16) Acrophallus, lateral view; (17) Hypophallic lobe, lateral view; (18) Terminalia, dorsal view.





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