

Phylogeny, morphology and pollen preferences of five Austrian species in the *Colletes succinctus* group (Hymenoptera: Apidae)

Katharina Zenz¹, Harald Krenn¹, Herbert Zettel² & Dominique Zimmermann²
katharina.zenz@gmx.net

MSc Student

¹ Department of Integrative Zoology, University of Vienna

² 2. Zoology, Burgen 7, Natural History Museum Vienna

Colletes Latreille, 1802 is a solitary bee genus with almost worldwide distribution (except Australia). The common name “polyester bees” derives from a characteristic cellophane nest lining produced by the Dufour gland and applied with the tongue (Westrich 1990). Noskiewicz divided the genus into 26 species groups. Especially the *Colletes succinctus* group, which consists of 14 species, demands some questions to be answered regarding taxonomy and phylogeny (Noskiewicz, 1936). In Austria five species of this group fly from late summer to autumn, with one generation per year. Regarding their pollen preferences, they are classified as either polylectic, pseudo-oligolectic, or oligolectic (Müller & Kuhlmann 2008, Teppner & Brosch 2015). The oligolectic behaviour and habitat preferences were sometimes used for identification of females, which are difficult to separate by morphology. Specimens collected in September and October 2017 in Vienna, Lower Austria and Burgenland as well as those from the collection of the Natural History Museum Vienna will be sorted to species level based on morphology and DNA-barcoding. Morphological studies (morphometry, analyses of genitalia and microstructures by scanning electron microscopy) will be performed to find so far unrecognized characteristics. In addition, the bee-collected pollen will be analysed to determine how plant-specific the species are within a small geographic range. The aim of this study is to develop a better understanding of phylogeny, morphology and pollen preferences of eastern-Austrian members of the *Colletes succinctus* group.

References

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