Supp. file 2. Habitat information & Biogeography

Here, we present detailed collection data and ecological details on the habitats of all locations where *A. kretschmanni* sp. nov.has been found. Description of nature conservation areas is based on information provided by Landesanstalt für Umwelt, Messungen und Naturschutz Baden-Württemberg (LUBW, [State Institute for the Environment, Survey and Nature Conservation Baden-Wuerttemberg]). Plant names are adopted from FloraWeb ([www.floraweb.de](http://www.floraweb.de), Bundesamt für Naturschutz, [Federal Agency for Nature Conservation]), accessed 11.03.2022).

**Locality 1**: Germany, Baden-Württemberg, Tübingen, Hirschau, Riedweingärten, plot number 4400; 48.504817° N, 8.985067° E; 375 m a.s.l.; Malaise trap: 1 ♀: 6–20 Jun. 2014; 1 ♀: 28 Aug.–11 Sep. 2014.

*Habitat*: The Spitzberg is a mountain comprising a protected landscape and surrounding lands. Localities 1 and 2 are just outside a conservation area with very well-monitored flora and fauna (Gottschalk 2019). Locality 1 is located in a meadow orchard with scattered trees on former vineyard grounds on the south-facing slope of Spitzberg. The malaise trap was located in a slight hollow and therefore somewhat sheltered from the wind in the middle to lower part of the slope. Locality 1 is not exposed to particularly high levels of sunlight. The undergrowth is a flower-rich meadow that can be classified as *Arrhenatherum elatius*-grassland with interspersed patches of dry calcareous grassland. The grassland has a high coverage of *Centaurea scabiosa* L. and accommodates remarkable species of the Orchid family (e.g. *Himantoglossum hircinum* (L.) Spreng., *Orchis militaris* L. and *Ophrys apifera* Huds.).

**Locality 2**: Germany, Baden-Württemberg, Tübingen, Hirschau, Oberes Tal, plot number 4244; 48.505033° N, 8.993467° E; 368 m a.s.l.; Malaise trap: 7 ♀: 17–31 Jul. 2014; 6 ♀: 29 Aug.–12 Sep. 2014; 2 ♀: 12–26 Sep. 2014; 1 ♀: 26 Sep.–9 Oct. 2014.

*Habitat*: very similar to locality 1 (plot number 4400) but less marginal vegetation (e.g. *Peucedanum cervaria* (L.) Lapeyr.).

**Locality 3**: Germany, Baden-Württemberg, Östringen, Apfelberg, plot number 9836; 49.167541° N, 8.790300° E; 181 m a.s.l.; Malaise trap: 1 ♀: 16–30 Jul. 2019; 1 ♀: 27 Aug.–10 Sep. 2019; 1 ♀: 10–24 Sep. 2019; 1 ♀: 24 Sep.–8 Oct. 2019; 2 ♀: 8–22 Oct. 2019.

*Habitat*: Nature conservation area (NSG # 2.217) that represents a characteristic landscape section with hedge areas, semi-arid grasslands and orchards. The area was placed under protection to safeguard and preserve endangered animal and plant species. The trap was located on the southern slope of the nature conservation area and was surrounded by arable land, woody plants, shrubs, vineyards and grasslands (mainly *Arrhenatherum elatius*-grassland interspersed with *Bromus erectus*-semidry grassland. The dominating species are *Helictotrichon pubescens* (Huds.) Pilg., *Salvia pratensis* L. and *Trifolium campestre* Schreb.

**Locality 4**: Germany, Baden-Württemberg, Königsbach-Stein, Beim Steiner Mittelberg, plot number 11498; 48.970371° N, 8.659000° E; 181 m a.s.l.; Malaise trap: 1 ♀: 22 May–5 Jun. 2019; 4♀: 3–17 Jul. 2019; 2 ♀: 17–31 Jul. 2019; 1♀: 28 Aug.–11 Sep. 2019.

*Habitat:* Nature conservation area (NSG # 2.119) characterised by partly open, partly wooded semi-dry grassland on sun-exposed steep slopes on Muschelkalk and meadows partly interspersed with fruit trees. The trap was located on a hay meadow (patchy semidry grassland and *Arrhenatherum elatius*-grassland. The dominating species are *Plantago media* L. and *Prunella vulgaris* L. and the nature conservation area is surrounded by a small deciduous forest and wheat fields.