IDENTIFICATION OF NORTH EUROPEAN MELOGONA FEMALES, AND THE FIRST RECORD OF M. GALLICA (LATZEL, 1884) FROM DENMARK (DIPLOPODA, CHORDEUMATIDA, CHORDEUMATIDAE)

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Three species of the genus Melogona Cook, 1895, have been found in northern Europe. M. gallica (Latzel, 1884), is known from Belgium, Switzerland, the Czech Republic, Germany, Denmark, France, UK, Ireland, Luxembourg, the Netherlands and Norway; M. voigtii (Verhoeff, 1899) from Austria, Belgium, Switzerland, the Czech Republic, Germany, Denmark, UK, the Netherlands, Poland and Sweden; M. scutellaris (Ribaut, 1913) from Belgium, Switzerland, France, UK, Ireland and Italy (Enghoff & Kime 2009). Whereas males of these species have distinctive gonopods (Brolemann 1935, Blower 1985, Andersson et al. 2005), and adults of both sexes of M. scutellaris may be recognized on the lower number of body ‘segments’ (28 vs. 30 in the two other species) females of M. gallica and M. voigtii have remained indistinguishable (www.bmig.org.uk/species/melogona-voigtii, accessed 7 June, 2016).

The vulvae of Melogona species are remarkable in being fused in the midline. When viewed from a caudal point of view, the fused vulval bursae thus appear as one large sclerite. While checking some Danish Melogona females identified as M. voigtii I found that there were two distinct shapes of the bursal sclerite, and by comparison with British specimens of M. gallica it became clear that one of the morphotypes represent this species while the other represents M. voigtii.

In M. gallica (Fig. 1) the bursal sclerite is trapezoid, broader than long, with straight edges and broadest distally. In M. voigtii (Fig. 2) the sclerite is slightly longer than broad, broadest basally and with rounded lateral edges. In M. scutellaris (Fig. 3) the sclerite is also broadest basally and with rounded lateral edges, but in contrast to M. voigtii it is broader than long. The sclerite can easily be seen if the specimen is slightly ‘opened’ between the second and third pairs of legs.

Brolemann (1935: figs 698-699) illustrated the vulvae of M. gallica and (ibid.: figs 714-715) M. scutellare. Kurnik (1987: figs 12, 14, 15) gave drawings of vulvae of all three species and (ibid.: figs 37-38) scanning electron micrographs of vulvae of M. voigtii. Although most of these illustrations are somewhat difficult to interpret they are consistent with Figs 1-3.

M. gallica was found for the first time in Denmark in Fredensborg Slotspark, NE Zealand (55°59’N, 12°24’E), 10.iv.1984, Ole Martin leg. Four females were collected which I originally identified as M. voigtii, then the only known Danish species of the genus. Thirty-two years later (14.iv.2016), a male and two females of M. gallica were collected at the same site by Ruttapon Srisonchai and Henrik Enghoff. Both samples are kept in the Natural History Museum of Denmark. All Danish Melogona specimens in the museum were re-examined, but apart from the above mentioned sample, and a few unidentifiable juveniles, all are M. voigtii.
FIGURES 1-3: Melogona spp. vulvae, oblique ventral view.

1) *M. gallica*, showing also the head and the second pair of legs, specimen from England, Cheshire, Delamere Forest ca. 60 km SW of Manchester, 3.iv.1986, H. Enghoff leg.; 2) *M. voigtii*, specimen from Denmark, Århus, 7.xi.2015, L. Bronдум leg.; 3) *M. scutellaris*, specimen from England, Cheshire, Kerridge ca. 20 km SSE of Manchester, 4.iv.1986, H. Enghoff leg.

Scale bars = 0.1 mm. The fractures seen on the bursal sclerites in Figs. 1 and 3 are artificial.

REFERENCES


