

Key to species of *Issus*

- 1 Frons below with a broad pale transverse band occupying lower 1/3. Fore wings with two indistinctly limited fuscous transverse bands (Plate-fig. 23). Longitudinal veins of fore wings usually distinct throughout 87. *muscaeformis* (Schrank)
 – Frons without a distinct pale transverse band. Fore wings dirty whitish with partly fuscous veins and one or two dark spots 1/3 from apex, in apical third often with many irregular veinlets making longitudinal veins partly indistinct. In England, France, Germany etc. *coleopratus* (Fabricius)

87. *Issus muscaeformis* (Schrank, 1781)
 Plate-fig. 23, text-figs. 720-725.

Cicada muscaeformis Schrank, 1781: 253.
Issus frontalis Fieber, 1876: 264.

Greyish yellow, sometimes more greenish, colour pattern much varying. Frons laterally black with yellowish granules, lower 1/3 pale. Genae pale, postclypeus fuscous, laterally darker. Deflexed lateral part of pronotum pale below. Femora partly fuscous, fore and median tibiae basally and apically dark and with a broad dark zone proximally of middle. Veins of fore wings largely fuscous, except in an irregular transverse light band somewhat proximally of middle. Apex of male abdomen as in Text-figs. 720, 721, genital style as in Text-fig. 722, aedeagus as in Text-figs. 723, 724. Apex of female abdomen as in Text-fig. 725. Length with wings 5.5-7 mm.

Distribution. Denmark: scarce in central Jutland (EJ, WJ), also found in B: Helligdomsklipperne 6.XI.1972 (L. Trolle). – Scarce in the south of Sweden: Sk., Bl., Hall., Sm., Öl., Sdm. – In Norway found in AAy: Risør (Warloe); VE: Sandar, Årø 29.VII.1969 (L. Greve); HOI: Strandebarm Bakke, "Eikenes" 1.VII.1970 (L. Greve). – So far not found in East Fennoscandia. – Austria, Bulgaria, Czechoslovakia, France, German F.R., Greece, Hungary, Italy, Netherlands, Poland, Romania, Armenia, Georgia, Ukraine, Yugoslavia.

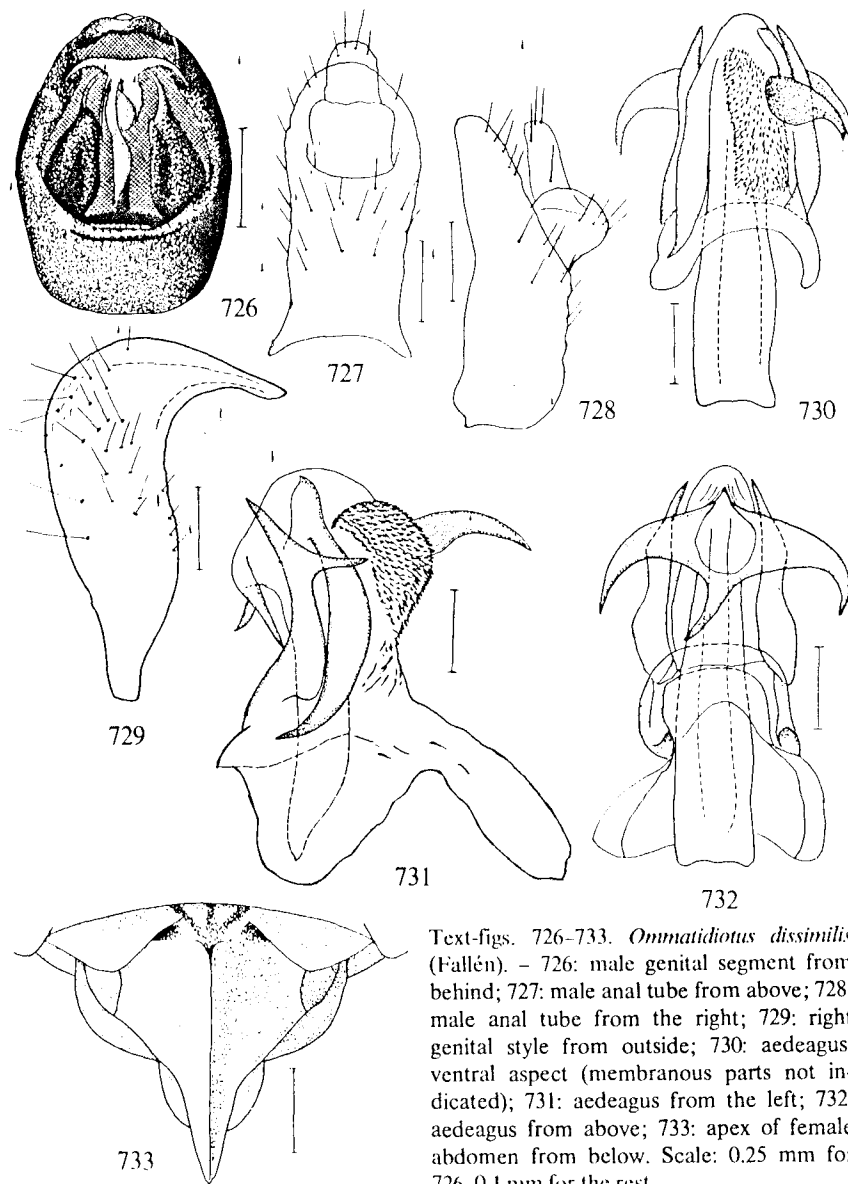
Biology. On *Quercus* in sun-exposed sites. Adults in June and July. I found larvae in April and in August, so hibernation probably takes place in larval stages.

Genus *Ommatidiotus* Spinola, 1839

Ommatidiotus Spinola, 1839: 365.

Type-species: *Issus dissimilis* Fallén, 1806, by monotypy.

Vertex pentagonal, anteriorly angular or rounded. Eyes large. Frons about as long as broad, sides convex, with 3 carinae, lateral carinae parallel with lateral margins. Clypeus with a median carina. Pronotum trapezoidal, shorter than vertex. Mesonotum large, with 3 straight carinae, the median one indistinct. Hind tibiae on outside with one



Text-figs. 726-733. *Ommatidiotus dissimilis* (Fallén). – 726: male genital segment from behind; 727: male anal tube from above; 728: male anal tube from the right; 729: right genital style from outside; 730: aedeagus, ventral aspect (membranous parts not indicated); 731: aedeagus from the left; 732: aedeagus from above; 733: apex of female abdomen from below. Scale: 0.25 mm for 726, 0.1 mm for the rest.

strong spine. Wing polymorphous species. Fore wings of brachypters a little longer, those of macropters much longer than abdomen. 1st and 2nd segments of hind tarsi thickened. In Denmark and Fennoscandia one species.

88. *Ommatidiotus dissimilis* (Fallén, 1806)

Plate-figs. 24, 35, 36, text-figs. 726–733.

Issus dissimilis Fallén, 1806: 123.

Body largely black, with a fine erect pilosity. Wing polymorphous. Fore wings of brachypters (both sexes) leathery, just longer than abdomen. Frons of brachypterous male entirely black, that of brachypterous female black with yellowish carinae. Dorsum straw-coloured. Claval commissure orange-coloured, an orange-coloured longitudinal band continuing forwards on thorax and head. This band is often bordered by a darker line and is sometimes entirely dark brownish. In the male (Plate-fig. 35), about half surface of the fore wing is occupied by a broad black longitudinal band along costal border, rest of fore wing whitish with orange-coloured longitudinal bands in the cells. In the brachypterous female (Plate-fig. 36), as well as in a rare male variety, the wing is entirely whitish with orange longitudinal bands in the cells. Macropters (Plate-fig. 24) have hind wings fully developed, fore wings extending behind apex of abdomen by about 1/3 of their length. Specimens intermediary in wing length do also exist. The fore wings of macropterous and intermediary individuals are in major part colourless and transparent, basally dark-shaded, with venation in apical part irregularly ramified. Male pygofer as in Text-fig. 726, male anal tube as in Text-figs. 727, 728, genital style as in Text-fig. 729, aedeagus as in Text-figs. 730–732. Apex of female abdomen as in Text-fig. 733. Overall length of brachypters 2.7–4.75, of macropters 4.8–5.6 mm.

Distribution. Denmark: common in Jutland (SJ, EJ, WJ, NWJ, NEJ). – Comparatively common, locally abundant in the south of Sweden, Sk. – Dlr. (not in Öl., Gtl. and G. Sand.). – Norway: Ø: Øymark, Vinsknatten 18.VIII.1960 (Holgersen), Ø: Holon, Degernes 25.VIII.1960 (Holgersen). – Comparatively rare in East Fennoscandia, found in Ab, N, St. Sa, and Kb; Vib and Kr. – Not in Great Britain, nor in Mediterranean countries except n. Italy, otherwise widespread in Europe, also in Altai, Kazakhstan, Kirghizia, w. and n. Siberia, and Mongolia.

Biology. In bogs, on *Eriophorum vaginatum* (Kuntze, 1937). Hibernation takes place in the egg stage (Müller, 1957, Remane, 1958). Adults in July–September.