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Review of the Holarctic *Corynoptera* Winnertz, 1867, s. str. (Diptera, Sciaridae)

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Abstract

Corynoptera Winnertz, s. str., is defined. In the Holarctic region it includes 123 species. The species are diagnosed and keyed, and distribution data are given. The following 50 new species are described: *Corynoptera adustula* (Nepal), *C. aequispina* (Canada: Quebec), *C. alneti* (Europe, Canada: British Columbia), *C. andalusica* (Spain, Greece), *C. angustior* (W Europe), *C. anodon* (Japan), *C. badia* (Italy), *C. caesula* (Spain), *C. collicola* (Japan), *C. condyloma* (Japan), *C. controversa* (Russia: Primorsk region), *C. curvapex* (Japan), *C. decepta* (Russia: Primorsk region), *C. digemina* (Japan), *C. dioon* (Nepal), *C. distenta* (Japan), *C. exerta* (Russia: Primorsk region), *C. fimbriata* (Japan), *C. flava* (Germany, Sweden), *C. gemellata* (Czech Republic), *C. iberica* (Spain), *C. inclinata* (Morocco), *C. latibula* (Spain), *C. lobata* (Japan), *C. micula* (Japan), *C. minax* (Japan), *C. ninae* (Finland), *C. pacifica* (USA: California), *C. paracantha* (Japan), *C. patula* (W Europe, Sri Lanka), *C. phili* (Canada: Ontario, Quebec), *C. plusiochaeta* (Finland, Sweden, USA: Alaska), *C. primoriensis* (Russia: Primorsk region), *C. redunca* (Canada: Quebec), *C. romana* (Italy), *C. serotina* (Spain), *C. sinedens* (Japan), *C. sphaerula* (Japan), *C. spiciceps* (Morocco), *C. spicigera* (Nepal), *C. stellaris* (Austria, Germany), *C. subclinochaeta* (Germany, Greece, Russia: Krasnodar region), *C. tarda* (Russia: Altay region), *C. trichistylis* (Canada: British Columbia), *C. truncatula* (Spain), *C. tumidula* (Finland, Sweden), *C. umbrata* (Greece, Spain), *C. uncinula* (Canada, Russia: Yamal Peninsula), *C. undulosa* (Italy, Portugal, Spain), and *C. vulcani* (Spain: Canary Islands). The status of *C. consumpta* (Freeman, 1987), *C. defecta* (Frey, 1948), *C. dubitata* Tuomikoski, 1960 and *C. arboris* Fritz, 1982, is restored as valid species, whereas the following species are regarded as junior synonyms: *C. bisulca* Mohrig & Mamaev, 1987 = *C. bipartita* Mohrig & Krivosheina, 1985, *C. fritzi* Mohrig & Rulik, 2001 = *C. triacantha* Tuomikoski, 1960, *C. praepiniphila* Mohrig & Dimitrova, 1992 = *C. alticola* (Kieffer, 1919), *C. simonae* Rudzinski, 1992 = *C. macricula* Mohrig & Krivosheina, 1986 and *C. spungisi* Mohrig & Krivosheina, 1985 = *C. irmgardis* (Lengersdorf, 1930). Lectotypes are designated for *C. dubitata* Tuomikoski, 1960, *C. gymnops* Tuomikoski, 1960, *C. inexspectata* Tuomikoski, 1960, *C. levis* Tuomikoski, 1960, *C. saccata* Tuomikoski, *C. sphenoptera* Tuomikoski, 1960, *C. tetrachaeta* Tuomikoski, 1960, and *Bradysia pachycerca* Frey, 1948.

Key words: Diptera, Sciaridae, *Corynoptera*, taxonomy, new species, new combinations, synonyms, identification key, Holarctic region

Introduction

The genus *Corynoptera* was founded by Winnertz (1867) for four new species, of which *C. perpusilla* was later designated as the type species by Enderlein (1911). Of the other species, *C. gracilis* and *C. pumila* were later transferred to *Epidapus* Haliday (see Menzel & Mohrig 2000), whereas the identity of *C. minutula* has remained unclear because the type material is lost and the description itself is insufficient for classification. Winnertz (1867) recognized only six genera for the Central European fauna he studied and his characterization of *Corynoptera* was extremely meagre, based mainly on the small size and type of setosity of some parts of the body.

Lengersdorf (1930) did not recognize *Corynoptera* at all but included *C. perpusilla* and many of the species currently understood as related, into *Lycoria* Meigen, *Psilosciara* Kieffer, and *Geosciara* Kieffer (see Menzel & Mohrig 2000). Edwards (1925) and Frey (1948) neglected *Corynoptera* as well, and the genus was not acknowledged until Tuomikoski (1960). Tuomikoski's new idea of the genus, with a plentitude of species, made it one of the crucial elements among the European sciarid fauna. Curiously, Tuomikoski (1960) did not specifically define the genus, but gave its characters only in the key for genera of Finnish Sciaridae. Tuomikoski (1960) recognized six species groups in *Corynoptera* and characterized them fairly superficially. His wide concept of *Corynoptera*, as well as that of other genera of Sciaridae, was followed by subsequent authors, who described new species, mainly from the Palaearctic region (see Menzel & Mohrig 2000). The supraspecific classification of Sciaridae is extremely difficult. Some important genera in the Holarctic fauna, among them *Corynoptera*, were vaguely delimited by Tuomikoski (1960). They served later more like dumping grounds where new species could be placed, sometimes without a careful analysis of their characters (see Freeman 1983a, Vilkamaa *et al*. 2004).

Corynoptera s. l. is predominantly Holarctic in distribution, with the Palaearctic region having a greater species richness than the Nearctic, although this is probably due to limited knowledge of the Nearctic region. Eight species are known from Baltic amber (Mohrig & Röschmann 1994) and three species (strikingly similar to the type species) are known from Dominican amber (Mohrig & Röschmann 2005). The extant species are predominantly forest-living.

The aim of the present paper is primarily to increase the knowledge of *Corynoptera* at the species level, focusing on the species groups which, in our view, are so close to the type species in many of their characters, and lack the apomorphic modifications of others, that they in any classification must be included in *Corynoptera*. Further studies into the exact systematic position of the genus and phylogenetic relationships among the species groups are not covered in this paper and need to be undertaken.

Material and methods

Part of the material studied was slide-mounted in Canada balsam or "Euparal", part was kept in alcohol (ethanol), and a few specimens were dry and pinned. The material in alcohol was usually slide-mounted directly in "Euparal" after desiccation in absolute alcohol. Some of the alcohol preserved specimens and all the dry ones prior to desiccation were treated with potassium hydroxide (KOH). Some specimens, mounted in glycerol by Tuomikoski, were re-mounted in a mixture of glycerol and lactic acid. Much of the material from northern Europe and Germany was identified under stereomicroscope from specimens in alcohol in which they are still preserved.

Most of the relevant type material has been studied. The type material of some species is lost (Menzel & Mohrig 2000), but some other types previously described as lost have been refound. Type material of the recently described Taiwanese species (Rudzinski 2008) has not been studied by us. Generally, only new species are described, the earlier known species are only diagnosed, and formally described only in some cases.

The hypopygium of all species, with a few exceptions, is illustrated. The antennal flagellomere 4 and the apical part of front tibia is generally illustrated in the new species only. The illustrations were made with the help of a drawing tube attached to a Leitz Diaplan or Leitz Laborlux compound microscope. In the drawings of hypopygia, the genital rod is not shown in all cases even if it is always present in *Corynoptera*. Concerning the drawings of the apical part of front tibia, the setae are sometimes indicated by black, the trichia being white, in other cases no difference is made. Also the modified vestiture of the tibial organ is expressed in varying ways in order to get the details better observable. The colour of setae in the drawings should not be taken as indicative for the real colour in the specimens. In the drawings of the hypopygium, the microtrichia are omitted except for Fig. 74 F.

The terminology used follows mainly Hippa and Vilkamaa (1991, 1994) and is also indicated in Figs. 1, 2, 3, 11 and 45. The area of specialized vestiture subapically on the prolateral side of front tibia is here called *front tibial organ* (Blaschke-Berthold 1994).

The study is based on the males only because the species concepts are based on them and generally the females are not identifiable. Occasional females are listed in materials of some species based on the assumption that they are conspecific with the accompanying males in the samples. Therefore, *C. serena* (Winnertz) and *C. laureti* (Frey), known only from female type material (see Menzel & Mohrig 2000), have not been treated here.

The species in the descriptive part are arranged according to their similarity, mostly regarding the hypopygial characters.

The limit between the Palaearctic and Oriental regions was based upon Thompson (1997) and Menzel and Mohrig (2000). For practical reasons, three species from Nepal at the transition zone between the two regions have been included.

For the Federal States of Germany and Austria and the cantons of Switzerland, the abbreviations used in the "Material studied" sections of the species are as follows: Germany: BW = Baden-Württemberg, BY = Bavaria (Bayern), BE = Berlin, BB = Brandenburg, HB = Bremen, HH = Hamburg, HE = Hesse (Hessen), MV = Mecklenburg-Vorpommern, NI = Lower Saxony (Niedersachsen), NW = North Rhine-Westphalia (Nordrhein-Westfalen), RP = Rhineland-Palatinate (Rheinland-Pfalz), SL = Saarland, SN = Saxony (Sachsen), ST = Saxony-Anhalt (Sachsen-Anhalt), SH = Schleswig-Holstein and TH = Thuringia (Thüringen). Austria: K = Carinthia (Kärnten), NÖ = Lower Austria (Niederösterreich), S = Salzburg, St = Styria (Steiermark), T = Tyrol (Tirol), V = Vorarlberg. Switzerland: BE = Bern, GR = Grisons (Graubünden), ZH = Zürich. In the same context, the abbreviations of the Finnish biogeographical regions follow Heikinheimo and Raatikainen (1981) and those of Sweden follow Heller *et al.* (2009).

The material studied is kept in the following collections (later referred to by their acronyms in parentheses): Museo Zoologica, Barcelona (MZBS), Private collection of Miguel Carles-Tolra, Barcelona (PCTB), Private collection of Lyudmila Komarova, Biysk (PLKB), Zoologisches Forschungsinstitut und Museum "Alexander Koenig", Bonn (ZFMK), Staatliches Naturhistorisches Museum, Braunschweig (SNMB), Collections Nationales Belges D'Insectes et Arachnides, Brussels (ISNB), Private collection of Ralph Sipple, Ehingen (PRSE), Entomological Laboratory, Faculty of Agriculture, Kyushu University, Fukuoka (KUEC), Private collection of Dieter Doczkal, Gaggenau (PDDG), Private collection of Kai Heller, Heikendorf (PKHH), Private collection of Gordon Ramel, Kerkini (PGRK), Museo Nacional de Ciencias Naturales, Madrid (MNCM), Senckenberg Deutsches Entomologisches Institut, Müncheberg (including Private collection of Frank Menzel, Eberswalde) (SDEI), Zoological Museum, Finnish Museum of Natural History, Helsinki (MZH), The Natural History Museum, London (BMNH), Zoological Museum of University of Lund (MZLU), Zoological Museum, Moscow University, Moscow (ZMUM), Zoologische Staatssammlung, Munich (ZSMC), Slezke Zemske Museum, Opava (SMOC), Canadian National Collection of Insects, Ottawa (CNC), Private collection of Werner Mohrig, Puddemin (PWMP), Private collection of Aliya Sataeva, Semipalatinsk (PASS), Swedish Museum of Natural History, Stockholm (SMNH), Noordbrabants Natuurmuseum, Tilburg (NNKN), Collection of Tomsk University, Tomsk (CTU), Royal British Columbia Museum, Victoria (RBCM), and National Museum of Natural History, Washington, D.C. (NMNH).

Notes on the classification of *Corynoptera*

Tuomikoski (1960) recognized six species groups in *Corynoptera* and characterized them fairly superficially. Menzel and Mohrig (2000) in their revision of Palaearctic Sciaridae followed Tuomikoski's (1960) concept of the genus but recognized 16 more precisely delimited species groups. The difficulties in defining the genus as well as many of its species groups as monophyletic units was well recognized and discussed by Menzel and Mohrig (2000), who at the species level made a meticulous effort to solve the nomenclatural chaos regarding the included species.

That *Corynoptera* did not form a natural group was already implied by Tuomikoski (1960). Some of the species groups proposed by him and Menzel and Mohrig (2000) were, using cladistic analyses, shown to be monophyletic units, and were then described as new genera. In addition to *Camptochaeta* Hippa & Vilkamaa, described as the first of them (Hippa & Vilkamaa 1994), there were *Claustropyga* Hippa, Vilkamaa & Mohrig, 2003 for the *C. clausa* group, *Dichopygina* Vilkamaa, Hippa & Komarova, 2004 for the *C. nigrohalteralis* group and the *C. crassistylata* group was transferred to *Peyerimhoffia* Kieffer by Vilkamaa and Hippa (2005). The status of the *C.*

parvula and *C. spinifera* groups of Menzel and Mohrig (2000) (included in *Camptochaeta* by Hippa & Vilkamaa 1994), as well as the composition and status of *Peyerimhoffia* sensu Vilkamaa and Hippa (2005) is currently under reconsideration (Vilkamaa, Menzel, Heller & Hippa).

The species in six of the groups by Menzel and Mohrig (2000), *C. dumosa* group, *C. acantharia* group, *C. blanda* group, *C. acerrima* group, *C. concinna* group and *C. forcipata* group, differ from the type species of the genus (*C. perpusilla* Winnertz) and from the species supposedly more closely related to it by having a proximally bordered tibial organ (apomorphy) and by lacking any sign of the comb-like arrangement of the vestiture on the tibial organ (plesiomorphy). The status of these groups is not yet clarified, but in our view they do not belong to *Corynoptera* s. str., but should have a subgeneric rank within *Corynoptera* or even a generic rank (Vilkamaa, Hippa, Heller, Menzel under revision), and they are left out of the present review. The species similar to *C. vagula* which have recently been revised, may also not belong to *Corynoptera* (Vilkamaa & Hippa 2006).

The *C. boletiphaga* group by Menzel and Mohrig (2000) is a collection of "*Corynoptera*-like" species which lack a comb-like arrangement of the vestiture and a proximal horse-shoe shaped border on the tibial organ (plesiomorphies) and is quite evidently paraphyletic. Some of the species in the *C. boletiphaga* group are very similar to the species placed by Menzel and Mohrig (2000) in the *C. subtilis* or *C. membranigera* groups except for the vestiture of the tibial organ, others are more unique (*C. curvispinosa, C. minima*).

The species in four of the groups by Menzel and Mohrig (2000), *C. subtilis* group (including the type species), *C. membranigera* group, *C. tridentata* group and *C. flavicauda* group have at least part of the vestiture on the tibial organ arranged in a transverse comb-like row (apomorphy) and a large overall similarity and we believe they form a monophyletic group and should all be included in *Corynoptera*.

Menzel and Mohrig (2000) postulated *Camptochaeta* + *Keilbachia* Mohrig to be the sister group of *Corynoptera* as defined by them. The computer-assisted cladistic analyses, with differing sets of ingroup taxa, have yielded different hypotheses of the sister group relationships (Hippa *et al.* 2003, Hippa & Vilkamaa 2004, Vilkamaa & Hippa 2004, 2005). The closely related genera, above all *Epidapus* and *Cratyna* Winnertz, both with several subgenera, and *Keilbachia* with rather greatly differing species groups have not been adequately studied regarding their monophyly and the relationships with the groups currently placed in *Corynoptera.*

Concept of *Corynoptera* s. str.

Delimitation of *Corynoptera* in any meaning is difficult and unambiguous synapomorphies have not been demonstrated. In different cladistic analyses (Hippa *et al.* 2003, Hippa & Vilkamaa 2004, Vilkamaa & Hippa 2005) elements of *Corynoptera* have been widely and variously dispersed among other sciarid taxa indicating that the current wide scope of the genus is polyphyletic. In our *Corynoptera* s. str., all species that have the vestiture of the tibial organ at least partly arranged in a transverse comb-like row (apomorphy) and lack the horseshoe-shaped proximal border on the tibial organ (plesiomorphy) are included. This group of species may be monophyletic. Mainly for practical reasons some species that lack the comb-like row of vestiture on the tibial organ were also included. These are species whose characters of the hypopygium are very similar to one or more species with the comb. Our *Corynoptera* s. str. is in agreement with Tuomikoski's (1960) *C. longicornis* group (including the type species) except that it includes many more species. It is also in agreement with the *C. subtilis* group (a new name for *C. longicornis* group) + *C. membranigera* group + *C. tridentata* group + *C. flavicauda* group of Menzel and Mohrig (2000) except for the inclusion of many species from their *C. boletiphaga* group.

We do not recognize any species groups until the phylogeny is known. Whether there are elements among the extra-Holarctic sciarid fauna belonging to *Corynoptera* s. str., remains to be studied.

Characters of *Corynoptera* s. str.

Small to medium-sized Sciaridae with variable colouration. **Head**. Maxillary palpus usually with three, rarely with two palpomeres, in the latter cases often polymorphic; palpomere 1 usually with one, rarely with two or three setae, in latter cases often asymmetrical; hyalinous sensilla on palpomere 1 in a more or less wide patch on the dorsal surface, not in a pit. Antennal flagellomeres sub-cylindrical, 1.4–3.7 times as long as broad, flagellomeral necks shorter than the width of the flagellomeral body, in a few species slightly longer that the width of the body (Figs. 9

A, 49 A); the vestiture evenly scattered, similar throughout, the long seta-like elements slightly longer (rarely much longer) than the flagellomeral width. Face setose. Clypeus setose or non-setose. Eye bridge complete, 2–4 facets wide. **Thorax**. Scutum with the setosity strong, a few to many lateral and dorsocentral setae conspicuously stronger than the others, the colour of setae usually dark, rarely pale. Scutellum with a few to many short setae and one to two conspicuously stronger setae at the posterior margin on each side. Posterior pronotum non-setose, but occasional setae have been observed in a few species, in the latter usually only on one side. Mesothoracic katepisternum normal, high, subtriangular. **Wing** normal, length 0.8–2.3 mm, 2.0–2.8 times as long as broad, anal lobe small (Figs. 1 A–C), in a few cases almost absent (Fig. 2 A); R1 variable in length, R1/R 0.30–1.05; c/w usually near

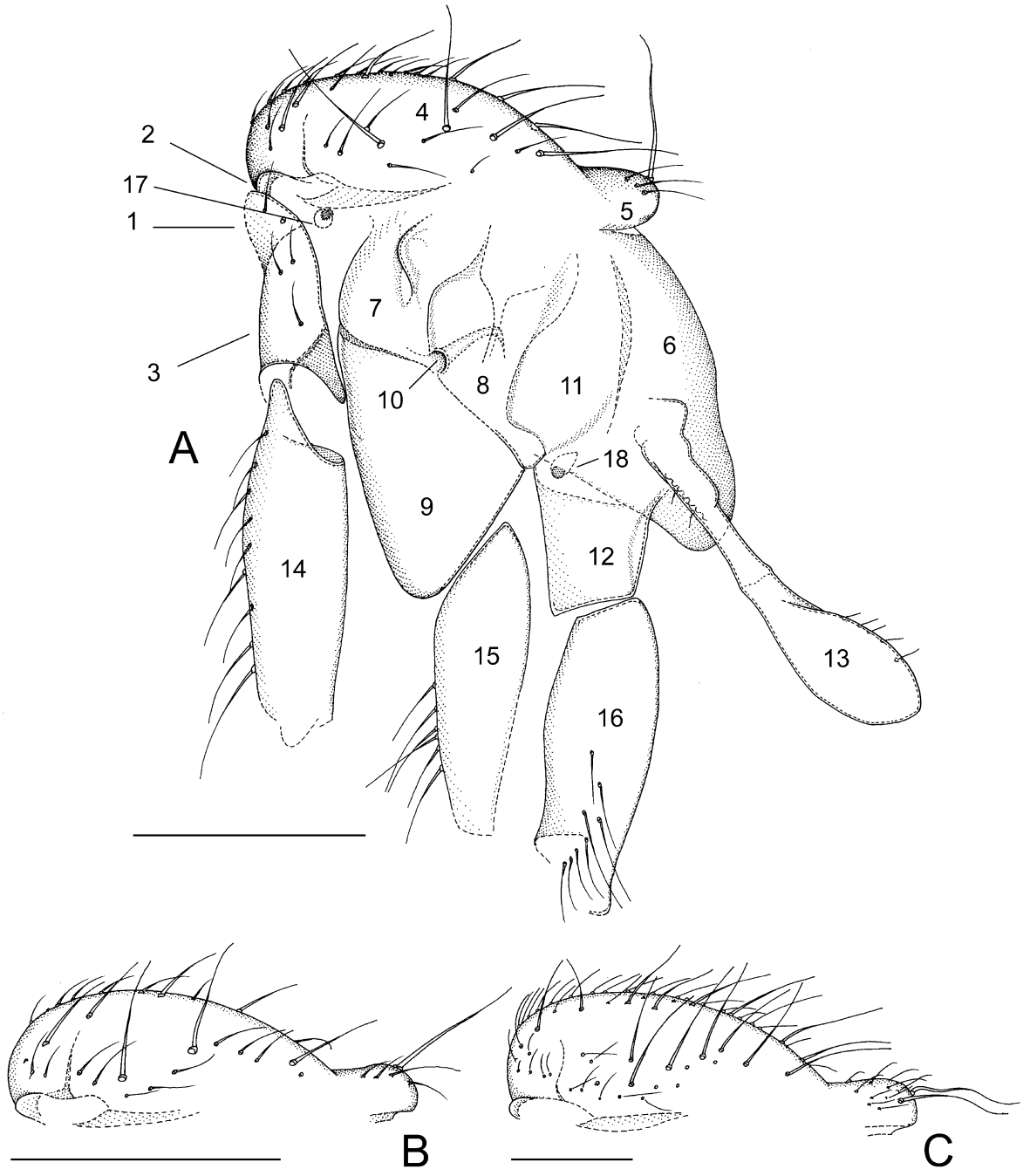

FIGURE 1. Thorax (A) and the dorsal part of thorax (B, C), lateral view. **A.** *Corynoptera irmgardis* (Lengersdorf) (from Sweden). **B.** *C. sphenoptera* Tuomikoski (from Sweden). **C.** *C. flavicauda* (Zetterstedt) (from Sweden). Scale 0.2 mm. 1 = anterior pronotum, 2 = posterior pronotum, 3 = prothoracic episternum, 4 = scutum, 5 = scutellum, 6 = metanotum, 7 = anterior anepisternum, 8 = mesothoracic epimeron, 9 = katepisternum (preepisternum 2, mesothoracic preepisternum), 10 = pleural pit, 11 = laterotergite, 12 = metathoracic episternum, 13 = haltere, 14 = front coxa, 15 = middle coxa, 16 = hind coxa, 17 = anterior spiracle, 18 = posterior spiracle.

0.60, varying from 0.50–0.85; wing membrane non-setose; veins bM, stM, M1, M2, CuA1 and CuA2 non-setose, vein r-m non-setose or with a few setae apically (Fig. 2 C). Haltere normal, about one third the length of thorax, in a few species longer, up to ca. one half of the length of thorax (Fig. 1 A). **Legs.** Femora slender, unmodified. Tibiae slender, unmodified; hind tibia with a dorsal row of strong setae, ventrally with some shorter strong setae; middle and hind tibia with the two spurs subequal; front tibial organ well developed, proximally not delimited by a semicircular crest, the vestiture seta-like (with a socket) or trichia-like (without socket) or intermediate, arranged in a comb-like row or irregular patch, often in a patch in which the distalmost elements form a transverse row. Basitarsomere normal in length, ca. one half of front tibia. Tarsal claws normal, without teeth or other modifications. **Abdomen**. The setosity of tergites and sternites variable, fine to rough, dark, rarely pale. **Hypopygium** without an intercoxal lobe (sternite 9). Gonocoxa simple, ventrally with one very long seta at the apicomesial corner; with or without elongated setae at the ventral mesial margin. Gonostylus variable in shape, with a well-developed basolateral apophysis, baso-mesially with a strong sclerotized transverse armature for reflexor muscle attachment, appearing as a compact (not Y-shaped) dark patch in dorsal or ventral view; the mesial side (in transverse section) convex or impressed/concave, without prominent lobes except for a few species in which the attachment of the megasetae may be lobe-like (Figs. 49, 79, 80, 81); apical tooth absent or present, in latter case varying from quite inconspicuous (e.g. Figs. 69 A, B, 104 E, 108 C) to about as long as the width of gonostylus (e.g. Figs. 35 B, 36 D), always simple, not enveloping setae or seta-like structures, placed at gonostylar apex or variously shifted basal (e.g. Figs. 64 C, D, 65 A, B, 116 A–D, 117 A, B); megasetae always present, with or without prominent basal bodies, the number varying from 2–6 and placed mesially on the apical half of gonostylus; the setosity variable, apically not conspicuously tightly placed, flagellate mesial setae lacking. Tegmen dorsomedially with (e.g. Figs. 11 A, C) or without a finger-like process, in a few cases with prominent lateral lobes (Figs. 36, 37, 44, 53). Aedeagal teeth few to many; aedeagal apodeme always present but varying greatly in size; aedeagal margin (usually visible posterior to the aedeagal teeth) thin and inconspicuous, in a few species thick and conspicuous (e.g. Figs. 45, 46).

Diagnostic characters

For distinguishing *Corynoptera* s. l. among the genera of Holarctic Sciaridae we refer to Menzel and Mohrig (2000). The *C. nigrohalteralis* group of Menzel and Mohrig (2000) was included in *Dichopygina* by Vilkamaa *et al.* (2004). *Dichopygina* differ from *Corynoptera* str. by having megasetae on the basal half of gonostylus, the front tibial organ in a proximally bordered depression, a sclerotized medial stripe in the ventral intercoxal area of hypopygium, and a large anal lobe on the wing. The *C. crassistylata* group of Menzel and Mohrig (2000) was transferred to *Peyerimhoffia* Kieffer by Vilkamaa and Hippa (2005). It is distinguished by the apical tooth of the gonostylus, which envelopes setae or seta-like structures. The *C. clausa* group of Menzel and Mohrig (2000) was included in the genus *Claustropyga* (Hippa *et al.* 2003). It is distinguished by the lack of any sclerotized basomesial structures for the reflexor muscle attachment on the gonostylus, but also by having the intercoxal area of hypopygium sclerotized, usually produced as a large intercoxal lobe (sternite 9). *Claustropyga refrigerata* (Lengersdorf) is an exception and may be misplaced; it differs from *Corynoptera* s. str. by having a group of outstanding megasetae on the lateral side of the apical tooth of gonostylus. The *C. spinifera* and *C. parvula* groups of Menzel and Mohrig (2000), included in *Camptochaeta* by Hippa and Vilkamaa (1994), differ by lacking a compact transverse sclerotization for reflexor muscle attachment on the gonostylus and by having the front tibial organ in a proximally bordered depression except for a few small-sized species; all of the latter have the dorsal mesial margin of the gonostylus produced as a wing-like lobe. The species resembling *C. vagula*, placed in the *C. clausa* group by Tuomikoski (1960) and the *C. boletiphaga* group by Menzel and Mohrig (2000), are distinguished from *Corynoptera* s. str. by having gonostylar megasetae coarse and at least one of them is placed on the lateral side of the toothless gonostylar apex (see Vilkamaa & Hippa 2006). The proximally unbordered front tibial organ distinguishes *Corynoptera* s. str. from the members of all the other groups by Menzel and Mohrig (2000): *C. acantharia, C. acerrima, C. blanda, C. concinna, C. dumosa*, and *C. forcipata* groups.

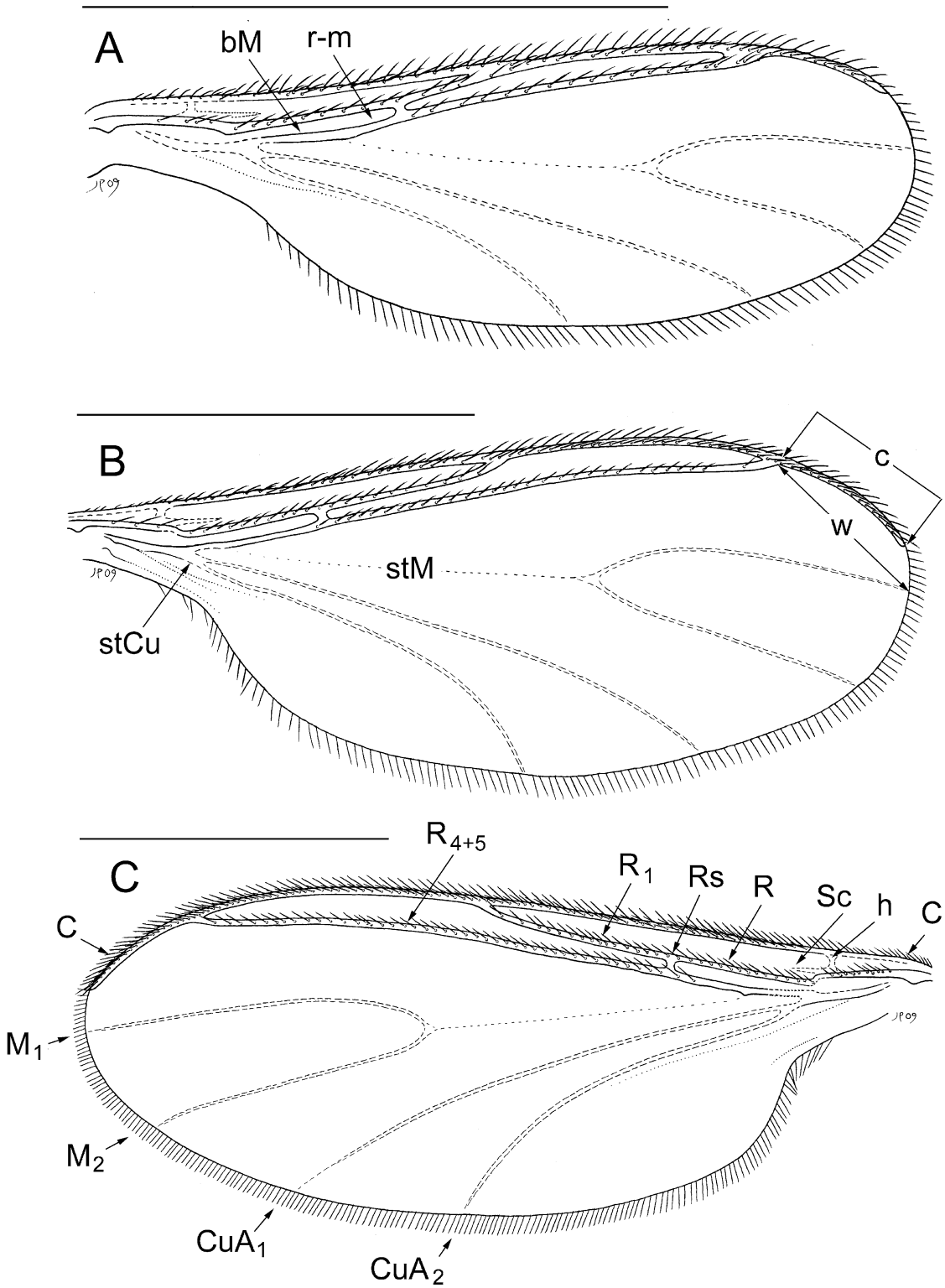

FIGURE 2. Wing, dorsal view. **A**. *Corynoptera bicuspidata* (Lengersdorf) (from Germany), **B**. *C. saetistyla* Mohrig & Krivosheina (from Sweden). **C**. *C. flavicauda* (Zetterstedt) (from Sweden). Scale 1.0 mm.

Review and description of the species

Species included

abducera Mohrig & Rulik, 1999 (Turkey)
adustula sp. n. (Nepal)
aequispina sp. n. (Canada: Quebec)
alneti sp. n. (Europe, Canada: British Columbia)
alticola (Kieffer, 1919) (Algeria, S and C Europe)
anae Mohrig & Heller, 1992 (C and N Europe)
andalusica sp. n. (Spain, Greece)
angustior sp. n. (W Europe)
anodon sp. n. (Japan)
applanata Mohrig & Dimitrova, 1992 (Bulgaria, Greece)
arboris Fritz, 1982 (Germany)
badia sp. n. (Italy)
bernardoensis Mohrig & Röschmann, 1993 (Italy)
bicuspidata (Lengersdorf, 1926) (Europe, Morocco, Russia: Kamchatka
bipartita Mohrig & Krivosheina, 1985 (C and N Europe, Siberia, Russian Far East, Japan)
bistrispina (Bukowski & Lengersdorf, 1936) (C and W Europe)
boletiphaga (Lengersdorf, 1940) (Europe)
breviformis Mohrig & Krivosheina, 1983 (Europe)
caustica Mohrig & Röschmann, 1996 (Greece)
caesula Hippa & Menzel sp. n. (Spain)
chaetospina Mohrig & Röschmann, 1996 (Greece)
cincinnata Mohrig & Blasco-Zumeta, 1996 (Morocco, S Europe, Germany)
collicola sp. n. (Japan)
condyloma sp. n. (Japan)
confirmata Mohrig, 1985 (Austria, Russia: Primorsk region)
consumpta (Freeman,1987) (C and W Europe)
controversa sp. n. (Russia: Primorsk region)
contusa Mohrig, 1994 (Spain)
curvapex sp. n. (Japan)
curvispinosa Freeman, 1983 (C and W Europe)
decepta sp. n. (Russia: Primorsk region)
defecta (Frey, 1948) (Europe, Russia: Krasnodar region, Tuva)
digemina sp. n. (Japan)
diligenta Rudzinski, 2008 (Japan, Taiwan)
dioon sp. n. (Nepal)
distenta sp. n. (Japan)
dubitata Tuomikoski, 1960 (N Europe, Russia: Krasnodar region)
exerta sp. n. (Russia: Primorsk region)
fimbriata sp. n. (Japan)
flava sp. n. (Germany, Sweden)
flavicauda (Zetterstedt, 1855) (Europe)
flavosignata Menzel & Heller, 2006 (Czech Republic, Germany, Great Britain)
francescae Mohrig & Kauschke, 1994 (Germany, Italy, Greece)
furcifera Mohrig & Mamaev, 1987 (Europe, Russia)
gemellata sp. n. (Czech Republic)
grothae Mohrig & Menzel, 1990 (C and W Europe, Russia: Altay region)
hemiacantha Mohrig & Mamaev, 1992 (Bulgaria, Greece, Hungary)
hypopygialis (Lengersdorf, 1926) (Europe)

iberica sp. n. (Spain)
inclinata sp. n. (Morocco)
inexspectata Tuomikoski, 1960 (Europe)
irmgardis (Lengersdorf, 1930) (Europe, Russia: Altay region, Morocco)
karlkulbei Mohrig & Röschmann, 1996 (Greece)
levis Tuomikoski, 1960 (Europe)
latibula Hippa & Menzel sp. n. (Spain)
lobata sp. n. (Japan)
luteofusca (Lengersdorf & Bukowski, 1936) (C and W Europe, Canada: British Columbia)
macricula Mohrig & Krivosheina, 1986 (W and S Europe, Turkmenistan)
marinae Mohrig & Mamaev, 1986 (Finland, Russia: Primorsk region, Taiwan)
mediana Mohrig & Mamaev, 1982 (Russia: Kunashir, Japan)
melanochaeta Mohrig & Menzel, 1992 (Europe, Canada: Nova Scotia)
membranigera (Kieffer, 1903) (Europe)
micula sp. n. (Japan)
minax sp. n. (Japan)
minima (Meigen, 1818) (Europe)
montana (Winnertz, 1869) (C and N Europe)
nigrocauda Mohrig & Menzel, 1990 (Germany, Greece)
ninae sp. n. (Finland)
pacifica sp. n. (Canada: British Columbia)
paracantha sp. n. (Japan)
parcitata Mohrig & Mamaev, 1986 (Russia: Altay region)
patula sp. n. (W Europe, Sri Lanka)
perornata Mohrig & Röschmann, 1993 (Europe)
perpusilla Winnertz, 1867 (Europe, Spain: Canary Islands, Siberia)
phili sp. n. (Canada: Ontario, Quebec)
plusiochaeta sp. n. (N Europe, USA: Alaska)
polana Rudzinski, 2009 (E and N Europe)
praefurcifera Mohrig, 1994 (Spain)
praevia (Mohrig & Menzel, 1992) (Spain: Canary Islands)
primoriensis sp. n. (Russia: Primorsk region)
redunca sp. n. (Canada: Quebec)
romana sp. n. (Italy)
roeschmanni Mohrig & Rulik, 2001 (Greece)
saccata Tuomikoski, 1960 (Europe)
saetistyla Mohrig & Krivosheina, 1985 (Europe, Russia: Amur region)
sedula Mohrig & Krivosheina, 1985 (N Russia)
semipedestris Mohrig & Blasco-Zumeta, 1996 (Spain)
semisaccata Mohrig & Mamaev, 1987 (C and S Europe, Siberia)
serotina sp. n. (Spain)
setosa Freeman, 1983 (Europe)
sinedens sp. n. (Japan)
sphaerula sp. n. (Japan)
sphenoptera Tuomikoski, 1960 (Europe, Canada: British Columbia, Ontario)
spiciceps sp. n. (Morocco)
spicigera sp. n. (Nepal)
stellaris sp. n. (Austria, Germany)
stipidaria Mohrig, 1994 (Morocco, Spain)
subclinochaeta sp. n. (Germany, Greece, Russia: Krasnodar region)
subfurcifera Mohrig & Hövemeyer, 1992 (Europe)
subpiniphila Mohrig & Mamaev, 1992 (S Europe)

subsaccata Mohrig & Krivosheina, 1982 (Russia: Primorsk region)
subsedula Mohrig & Mamaev, 1987 (Finland, Russia: Tuva, Canada: Ontario)
subtetrachaeta Komarova, 1995 (Finland, Italy, Russia, Altay & Moscow regions, Tuva)
subtilis (Lengersdorf, 1929) (Europe)
syriaca (Lengersdorf, 1934) (Middle East)
tarda sp. n. (Russia: Altay region)
tetrachaeta Tuomikoski, 1960 (Europe)
tiliacea Komarova (Russia: Altay region)
trepida (Winnertz, 1867) (Europe, Russia: Altay region, USA: Alaska)
triacantha Tuomikoski, 1960 (N Europe, Germany, Great Britain)
trichistylis sp. n. (Canada: British Columbia)
tridentata Hondru, 1968 (C and S Europe, Turkmenistan)
truncatula sp. n. (Spain)
tumidula sp. n. (N Europe)
turkmenica Antonova, 1995 (Turkmenistan)
umbrata Hippa & Menzel sp. n. (Spain)
uncata Menzel & Smith, 2006 (Great Britain)
uncinula sp. n. (Canada, Russia: Yamal Peninsula)
undulosa Hippa & Menzel sp. n. (Spain)
vulcani sp. n. (Spain: Canary Islands)
voluptuosa Mohrig & Mamaev, 1987 (Finland, Russia: Tuva)
waltraudis Mohrig & Mamaev, 1987 (Europe, Russia: Yamal Peninsula, Tuva)
warnckei Rudzinski, 2006 (Germany, Sweden)

Key to the species

Some species are variable concerning the used characters and they appear in more than one place in the key. Concerning the number of gonostylar megasetae, we have observed cases in which there is an extra megaseta when compared with the usual number. Such cases are usually asymmetrical and are not specially dealt with in the key. When using the key the lower number of the megasetae should be followed. The species in which only asymmetrical specimens have been found are keyed according to both the lower and the higher number of megasetae.

1. Gonostylus with apical tooth 2
- Gonostylus without apical tooth 83
2. Apical tooth of gonostylus long, as long as or longer than nearby megasetae 3
- Apical tooth of gonostylus short, about one half or shorter than length of nearby megasetae 55
3. Number of gonostylar megasetae 2 4
- Number of gonostylar megasetae 3 or more 7
4. Gonostylar megasetae close to each other, at base of apical tooth 5
- Gonostylar megasetae widely separated, distance between them equal to length of megasetae or more 6
5. Tegmen with subapical lateral lobe, without dorsal finger-like process . . . . . *C. condyloma* sp. n.
- Tegmen without subapical lateral lobe, with dorsal finger-like process . . . . . *C. sphenoptera* Tuomikoski
6. Apical tooth of gonostylus and the more basal one of its megasetae convergent, the setae at ventral mesial margin of gonocoxa short, the longest ones shorter than width of tegmen . . . . . *C. boletiphaga* (Lengersdorf)
- Apical tooth of gonostylus and the more basal one of gonostylar megasetae parallel, setae at ventral mesial margin of gonocoxa long, longest ones as long as width of tegmen . . . . . *C. flava* sp. n.
7. Number of gonostylar megasetae 6, wing length 2.0–2.2 mm . . . . . *C. plusiochaeta* sp. n.
- Number of gonostylar megasetae 3–5 8
8. Number of gonostylar megasetae 5 . . . . . *C. uncata* Menzel & Smith
- Number of gonostylar megasetae 3 or 4 9
9. Number of gonostylar megasetae 4 10
- Number of gonostylar megasetae 3 19
10. All gonostylar megasetae close to apical tooth, sockets of most basal and most distal ones separated by distance

which is shorter than length of megaseta, gonostylus not impressed on mesial side 11
- Gonostylar megasetae dispersed on wide apical area, distance between most basal and most distal one greater than length of megaseta, gonostylus impressed on mesial side 15
11. Apical part of gonostylus straight, not excavated/concave on mesial side . . . . . *C. umbrata* Hippa & Menzel sp. n.
- Apical part of gonostylus curved, excavated/concave on mesial side 12
12. Setae at ventral mesial margin of gonocoxa short, all much shorter than width of tegmen 13
- Setae at ventral mesial margin of gonocoxa long, longest ones as long as width of tegmen 14
13. Gonostylar megasetae stout, lateral side of gonostylus evenly curved . . . . . *C. consumpta* (Freeman)
- Gonostylar megasetae slender, lateral side of gonostylus angularly curved at apical third . . . . . *C. dubitata* Tuomikoski
14. Gonostylar megasetae slender, straight . . . . . *C. uncata* Menzel & Smith
- Gonostylar megasetae stout, arcuate . . . . . *C. uncinula* sp. n.
15. Gonostylar megasetae arising from conspicuous basal bodies, tegmen with lateral tooth-like lobe. . . . . *C. digemina* sp. n.
- Gonostylar megasetae without conspicuous basal bodies, lateral margin of tegmen simple 16
16. Setae at ventral mesial margin of gonocoxa short, longest ones at most one third of width of tegmen . . . . . *C. inclinata* sp. n.
- Setae at ventral mesial margin of gonocoxa long, longest ones exceeding width of tegmen 17
17. Aedeagal margin prominent, tegmen with small tooth-like lobe at lateral margin . . . . *C. subtetrachaeta* Komarova
- Aedeagal margin indistinct, tegmen with lateral margin simple 18
18. Apical part of gonostylus curved mesiad, apicalmost megaseta at same level as apical tooth or more basal in position. . . . . *C. tetrachaeta* Tuomikoski
- Apical part of gonostylus straight, apicalmost megaseta on lateral side of apical tooth . . . . . *C. applanata* Mohrig & Dimitrova
19. Mesial side of gonostylus impressed on apical third 20
- Mesial side of gonostylus not impressed on apical third 24
20. Two basalmost megasetae of gonostylus close to each other, separated from apicalmost one by long gap, two basalmost megasetae arising from basal bodies protruding mesiad . . . . . *C. mediana* Mohrig & Mamaev
- Two basalmost megasetae not separated from apicalmost one by gap, without prominent basal bodies 21
21. Gonostylar megasetae very strong, their length more than half of greatest width of gonostylus, basalmost one near middle of gonostylus . . . . . *C. aequispina* sp. n.
- Gonostylar megasetae slender, their length less than half of greatest width of gonostylus, basalmost megaseta at apical third–fourth of gonostylus 22
22. Maxillary palpus with two palpomeres . . . . . *C. chaetospina* Mohrig & Röschmann
- Maxillary palpus with three palpomeres 23
23. The aedeagal margin prominent, tegmen without a finger-like process dorsally . . . . . *C. subtetrachaeta* Komarova
- The aedeagal margin indistinct, tegmen with a finger-like process dorsally. . . *C. macricula* Mohrig & Krivosheina
24. Apical tooth of gonostylus very long, ca. 6 times as long as basally broad 25
- Apical tooth of gonostylus short, ca. 4–5 times as long as basally broad 29
25. Gonostylus slender, more than twice as long as broad . . . . . *C. confirmata* Mohrig
- Gonostylus tumid, about 1.5 times as long as broad 26
26. Gonostylus angularly widened mid-mesially . . . . . *C. levis* Tuomikoski
- Gonostylus straight or evenly convex mesially 27
27. Gonostylus apically attenuated, with two unusually long subapical setae . . . *C. breviformis* Mohrig & Krivosheina
- Gonostylus apically broad, with at most slightly elongated subapical setae 28
28. Tegmen with sclerotized subapical lateral shoulder, without dorsal finger-like process. . . . . *C. luteofusca* (Bukowski & Lengersdorf)
- Tegmen without sclerotized subapical lateral shoulder, with dorsal finger-like process. . . . . *C. pacifica* sp. n.
29. Wing length ca. 1.8 mm or more 30
- Wing length ca. 1.5 mm or less 31
30. Gonostylus apically curved, it mesial margin strongly concave . . . . . *C. stipidaria* Mohrig & Blasco-Zumeta
- Gonostylus apically nearly straight, its mesial margin shallowly concave . . . . . *C. montana* (Winnertz)
31. Vestiture of the front tibial organ in non-arranged patch. 32
- At least part of vestiture of front tibial organ arranged in transverse comb-like row 33
32. Apical part of gonostylus curved almost 90 degrees mesiad. . . . . *C. karlkulbei* Mohrig & Röschmann
- Apical part of gonostylus not curved mesiad. . . . . *C. caustica* Mohrig & Röschmann
33. Tegmen with dorsal finger-like process. 34
- Tegmen without dorsal finger-like process 36

34. Gonostylus tumid, ca 1.5 times as long as broad . . . . . *C. micula* sp. n.
- Gonostylus slender, at least 2 times as long as broad 35
35 Gonostylar megasetae strong, closely together, their sockets almost touching each other . . . . . *C. serotina* sp. n.
- Gonostylar megasetae weak, in row, separated from each other by gap equalling ca. two socket widths . . . . . *C. caesula* Hippa & Menzel sp. n.
36. Setae at ventral mesial margin of gonocoxa of two types, some being very long, almost as long as width of tegmen, some being short, only about one third of longer ones or still shorter 37
- Setae at ventral mesial margin shorter than half width of tegmen, not conspicuously different in length 39
37. Gonostylar megasetae strong, curved towards apex of gonostylus 38
- Gonostylar megasetae weak, curved towards base of gonostylus 40
38. Apical part of gonostylus narrow, its subapical width less than length of a megaseta, strongly curved . . . . . *C. subsedula* Mohrig & Mamaev
- Apical part of gonostylus broad, its width greater than length of a megaseta, more weakly curved 38
39. Gonostylus tumid, length/width ca.1.5 . . . . . *C. tumidula* sp. n.
- Gonostylus slender, length/width ca. 2.5 . . . . . *C. redunca* sp. n.
40. Gonostylus attenuating at apex, apicalmost megaseta at base of apical tooth. . . . . *C. iberica* sp. n.
- Gonostylus broad at apex, apicalmost megaseta well basal from base of apical tooth . . . . . *C. truncatula* sp. n.
41. Gonostylus narrow, more than 3 times as long as broad, apical tooth as long as width of gonostylus . . . . . *C. perornata* Mohrig & Röschmann
- Gonostylus broad, less than 3 times as long as broad, apical tooth shorter than width of gonostylus 42
42. Apical tooth of gonostylus slightly removed basad from actual apex, not contiguous with lateral curvature of gonostylus, basalmost gonostylar megaseta at about apical third of gonostylus. . . . . *C. contusa* Mohrig & Blasco-Zumeta
- Apical tooth of gonostylus strictly apical, contiguous with lateral curvature of gonostylus, basalmost megaseta at about apical fourth of gonostylus or still more apical in position 43
43. Gonostylus narrow, about 2.8 times as long as broad, length of apical tooth more than half width of gonostylus 44
- Gonostylus broad, at most 2.5 times as long as broad, length of apical tooth less than half width of gonostylus 45
44. Necks of antennal flagellomeres more than twice as long as broad, lateral margin of tegmen simple . . . . . *C. diligenta* Rudzinski
- Necks of antennal flagellomeres as long as broad, tegmen with rounded lateral lob . . . . . *C. nigrocauda* Mohrig & Menzel
45. Tegmen with small lateral subapical lobe and large lateral subbasal lobe . . . . . *C. lobata* sp. n.
- Tegmen without lateral lobes. 46
46. Apical part of gonostylus curved ca. 90 degrees 47
- Apex of gonostylus curved at most 45 degrees 49
47. Curved apical part of gonostylus narrow, its width less than length of a megaseta with its socket, gonostylar megasetae not very thick (Figs. 17 B, D) . . . . . *C. subsedula* Mohrig & Mamaev
- Curved apical part of gonostylus broad, its width more than length of megaseta with its socket, gonostylar megasetae very thick (Figs. 14 C, 15 D, E) 48
48. Vestiture of front tibial organ and abdominal tergites black . . . . . *C. sedula* Mohrig & Krivosheina
- Vestiture of front tibial organ and abdominal tergites pale . . . . . *C. consumpta* (Freeman)
49. Apical tooth of gonostylus very broad at base, usually slightly bent at apical part or flame-shaped, gonostylar megasetae curved towards apex of gonostylus . . . . . *C. alneti* sp. n.
- Apical tooth of gonostylus of usual shape, gonostylar megasetae straight or curved towards base of gonostylus. 50
50. Gonostylus impressed/flattened ventrally on its apical fourth. . . . . *C. vulcani* sp. n.
- Gonostylus usual, not impressed/flattened apico-ventrally 51
51. Gonostylus rather evenly broad, narrowed only near apex, its mesial margin straight . . . . . *C. undulosa* Hippa & Menzel sp. n.
- Gonostylus narrowed towards apex all along apical half, its mesial margin concave or at least slightly sigmoid 52
52. Lateral side of gonostylus angularly curved at apical third. . . . . *C. dubitata* Tuomikoski
- Lateral side of gonostylus evenly curved 53
53. Number of palpomeres 2, front coxa brown, only slightly paler than adjacent pleural sclerites, coxal setae dark. . . . . *C. praevia* (Mohrig & Menzel)
- Number of palpomeres 3, front coxa yellow, much paper than adjacent pleural sclerites, coxal setae pale 54

54. Gonostylar megasetae long, their length ca. one half of width of gonostylus, two basalmost parallel, tegmen shorter than wide . . . . . *C. ninae* sp. n.
- Gonostylar megasetae short, their length ca. one third of width of gonostylus, two basalmost megasetae divergent, tegmen as long as wide . . . . . *C. perpusilla* Winnertz
55. Gonostylus with four megasetae 54
- Gonostylus with three megasetae 61
56. Gonostylus with apico-ventral impression, three of apicalmost megasetae in row along apical margin of gonostylus . . . . . *C. primoriensis* sp. n.
- Gonostylus without apico-ventral depression, three apicalmost megasetae not in row but wide apart or in group 57
57. Only one megaseta on basal side of apical tooth, apicomesial setae of gonostylus not conspicuously long, tegmen without finger-like process dorsally . . . . . *C. anae* Mohrig & Heller
- At least two megasetae on basal side of apical tooth, apicomesial setae of gonostylus unusually long, tegmen with finger-like process dorsally 58
58. Gonostylus oval, broadest at middle, with its mesial side convex, base of gonocoxa very richly setose . . . . . *C. saetistyla* Mohrig & Krivosheina
- Gonostylus narrowed towards apex, broadest sub-basally, base of gonocoxa not especially richly setose 59
59. At least one megaseta on apical side of apical tooth, tibial organ with fine vestiture . . . . . *C. grothae* Mohrig & Menzel
- All gonostylar megasetae on basal side of apical tooth, vestiture of tibial organ rough 60
60. Gonostylus broadest on apical half, richly setose with ca. 50 setae visible in ventral view . . . . . *C. trichistylis* sp. n.
- Gonostylus broadest at middle, sparsely setose with ca. 30 setae visible in ventral view . . . . . *C. inexspectata* Tuomikoski
61. All setae at ventral mesial margin of gonocoxa short, their length less than half width of tegmen 62
- Part of setae at ventral mesial margin of gonocoxa very long, as long as width of tegmen or nearly so 68
62. Tegmen with broad lobe dorsally. . . . . *C. bernardoensis* Mohrig & Röschmann
- Tegmen dorsally simple 63
63. Vestiture of tibial organ evenly distributed 64
- Vestiture of tibial organ or part of vestiture, arranged into transverse row 66
64. Two basalmost megasetae of gonostylus divergent, apicalmost megaseta more apical than apical tooth . . . . . *C. latibula* Hippa & Menzel sp. n.
- Two basalmost megasetae of gonostylus parallel, all megasetae on basal side of apical tooth or apicalmost megaseta at same level with tooth 65
65. Apical tooth of gonostylus ca. half length of megaseta, antennal scapus and pedicellus brown . . . . . *C. semisaccata* Mohrig & Mamaev
- Apical tooth of gonostylus tiny, often difficult to observe, scarcely longer than width of megaseta, antennal scapus and pedicellus yellow . . . . . *C. furcifera* Mohrig & Mamaev
66. Gonostylus slender, more than twice as long as broad . . . . . *C. arboris* Fritz
- Gonostylus tumid, less than twice as long as broad 67
67. Two basalmost megasetae close together, separated from apicalmost one by gap, arising from distinct basal bodies protruding mesiad . . . . . *C. mediana* Mohrig & Mamaev
- Two basalmost megasetae wide apart, separated by gap which is equal or larger than gap between two apicalmost ones, two basalmost megasetae arising from common oblique plate . . . . . *C. stellaris* sp. n.
68. Tegmen with dorsal finger-like process (the character must be carefully studied because the process may be difficult to observe if the musculature is left) 69
- Tegmen without dorsal finger-like process 73
69. Basalmost megaseta of gonostylus conspicuously more inclined towards base of gonostylus than other megasetae, almost parallel with long axis of gonostylus 70
- All gonostylar megasetae with almost the same inclination, projecting mesiad 71
70. Gonostylar megasetae stout (Fig. 59 D), apical tooth of gonostylus strong, two thirds of length of nearest megaseta . . . . . *C. subclinochaeta* sp. n.
- Gonostylar megasetae slender (Fig. 58 B), apical tooth of gonostylus short, at most one fourth of length of nearest megaseta. . . . . *C. trepida* (Winnertz)
71. Basalmost megaseta at apical third of gonostylus, megasetae separated from each other by gaps which are ca. three times width of sockets of megasetae . . . . . *C. subtilis* (Lengersdorf)
- Basalmost megaseta at apical fifth of gonostylus, separated by gaps equalling width of their sockets 72
72. Gonostylar megasetae very slender, at least 17 times as long as basally thick, apical tooth ca. one fourth of length of megasetae. . . . . *C. waltraudis* Mohrig & Mamaev

- Gonostylar megasetae stouter, at most 14 times as long as basally thick, apical tooth ca. one half of length of megasetae or longer . . . . . *C. melanochaeta* Mohrig & Menzel

73. Apical tooth of gonostylus not strictly apical but subapical, shifted to ca. apical fourth . . . . . *C. subsaccata* Mohrig & Krivosheina
- Apical tooth of gonostylus not shifted conspicuously basad 74

74. Gonostylar megasetae unequal in size, two more ventral ones conspicuously smaller than more dorsal one . . . . . *C. irmgardis* (Lengersdorf)
Gonostylar megasetae equal in size 75

75. Gonostylus with bulge on mesial margin 76
- Mesial margin of gonostylus straight or very shallowly convex 80

76. Basalmost megaseta at apical third of gonostylus, gonostylar megasetae with strong basal bodies, tegmen with lateral lobe . . . . . *C. phili* sp. n.
- Basalmost megaseta near the actual apex of gonostylus, gonostylar megasetae without strong basal bodies, lateral part of tegmen simple 77

77. Gonostylus with strong subapical mesio-ventral depression, proximally delimited by strong mesial bulge 78
- Gonostylus without conspicuous subapical mesio-ventral depression, with less distinct mesial bulge 79

78. Wing length 2.3–2.5 mm, curvature of lateral margin of gonostylus ca. 180 degrees, margin apically not recurrent . . . . . *C. flavicauda* (Zetterstedt)
- Wing length 1.6–2.2 mm, curvature of lateral margin of gonostylus more than 180 degrees, margin apically recurrent . . . . . *C. hypopygialis* (Lengersdorf)

79. Gonostylar megasetae on basal side of apical tooth, apical tooth broad, ca. twice as long as broad (Figs. 77 A–D) . . . . . *C. subpiniphila* Mohrig & Mamaev
- Gonostylar megasetae at apical tooth, apical tooth narrow, several times as long as broad (Figs. 76 D–H) . . . . . *C. alticola* (Kieffer)

80. Gonostylus with apico-ventral depression, proximally delimited by distinct margin, with one more ventral and two more dorsal megasetae, tegmen with rounded lateral subbasal lobe . . . . . *C. decepta* sp. n.
- Gonostylus without apico-ventral depression, with two more ventral and one more dorsal megasetae, tegmen without lateral subbasal lobe 81

81. Apical part of gonostylus attenuating to apex, not lobe-like (Figs. 55 C, D) . . . . . *C. phili* sp. n.
- Apical part of gonostylus broad, mesially produced as small lobe which bears all megasetae (Figs. 18 C, D, 19 C, D) 82

82. Tegmen trapezoidal, lateral margin straight. . . . . *C. curvapex* sp. n.
- Tegmen semicircular . . . . . *C. exerta* sp. n.

83. Number of gonostylar megasetae 5–6 83
- Number of gonostylar megasetae 2–4 89

84. Gonostylus tumid, ca 1.5 times as long as broad, gonostylar megasetae with large basal bodies, some of setae at ventral mesial margin of gonocoxa very long, nearly as long as width of tegmen . . . . . *C. dioon* sp. n.
- Gonostylus slender, more than twice as long as broad, gonostylar megasetae without basal bodies, setae at ventral mesial margin of gonocoxa short, shorter than half width of tegmen 85

85. Number of gonostylar megasetae 5 86
- Number of gonostylar megasetae 6 88

86. Gonostylar megasetae in two groups, three in apical group, two in submedial group . . . . . *C. abducera* Mohrig & Rulik
- All gonostylar megasetae in one group at apical part 87

87. Gonostylar megasetae large, their length ca. one half of medial width of gonostylus . . . . . *C. turkmenica* Antonova
- Gonostylar megasetae small, their length ca. one fourth of medial width of gonostylus . . . . . *C. spiciceps* sp. n.

88. Gonostylar megasetae large, their length more than medial width of gonostylus (Figs. 113 A, B) . . . . . *C. defecta* (Frey)
- Gonostylar megasetae small, their length less than medial width of gonostylus (Figs. 113 C, D) . . . . . *C. bistrispina* (Bukowski & Lengersdorf)

89. Number of gonostylar megasetae 4 90
- Number of gonostylar megasetae 2–3 99

90. Tibial organ with all or part of its vestiture arranged in transverse row 91
- Tibial organ with all its vestiture in unarranged patch. 95

91. Gonostylus unusual, with subapical dorso-mesial lobe bearing two megasetae . . . . . *C. minax* sp. n.
- Gonostylus usual, without subapical dorsomesial lobe 92

92. Gonostylar megasetae divided into widely separated apical and subapical groups 93
- Gonostylar megasetae in one apical group 94

93. Gonostylus with one apical megaseta and subapical group with 3 megasetae, megasetae very strong (Figs. 81 C, D) . . . . . *C. roeschmanni* Mohrig & Rulik
- Gonostylus with apical and subapical groups each with 2 megasetae, megasetae weak (Figs. 80 A, B) . . . . . *C. warnckei* Rudzinski
94. Gonostylus slender, more than twice as long as broad . . . . . *C. sinedens* sp. n.
- Gonostylus tumid, less than twice as long as than broad. 95
95. Gonostylus ovoid, ca. 1.8 times as long as broad . . . . . *C. fimbriata* sp. n.
- Gonostylus sub-spherical, ca. 1.3 times as long as broad . . . . . *C. sphaerula* sp. n.
96. Tegmen with broad dorsal finger-like process, gonostylar megasetae long, longer than half of medial width of gonostylus . . . . . *C. curvispinosa* Freeman
- Tegmen without dorsal finger-like process, gonostylar megasetae short, about one third of medial width of gonostylus 97
97. Three of gonostylar megasetae apical, one subapical, widely separated from apical ones . . . . . *C. francescae* Mohrig & Kauschke
- All gonostylar megasetae in one apical group 98
98. Apex of gonostylus broad, its lateral margin making nearly 90 degrees abrupt curvature subapically . . . . . *C. praefurcifera* Mohrig
- Apex of gonostylus narrow, its lateral margin evenly curved through all apical half of gonostylus. . . . . *C. spiciceps* sp. n.
99. Number of gonostylar megasetae 3 100
- Number of gonostylar megasetae 2 133
100. Tibial organ with all or part of vestiture arranged in transverse row 101
- Tibial organ with all vestiture in unarranged patch 127
101. Gonostylar megasetae arising from basal bodies almost as long as megasetae. . . . . *C. spicigera* sp. n.
- Gonostylar megasetae without basal bodies or basal bodies not longer than sockets 102
102. Tegmen with dorsal finger-like process 103
- Tegmen without dorsal finger-like process 110
103. Gonostylus with its basalmost megaseta at middle . . . . . *C. distenta* sp. n.
- Gonostylus with all megasetae well on apical half 105
105. Gonostylus sub-spherical, ca. 1.3 times as long as broad . . . . . *C. sphaerula* sp. n.
- Gonostylus ovoid, at least 1.5 times as long as broad 106
106. Antennal flagellomere 4 short, its body less than 1.5 times as long as broad, tegmen with strong sclerotized lateral shoulders . . . . . *C. paracantha* sp. n.
- Antennal flagellomere 4 long, its body more than 2 times as long as broad, tegmen without sclerotized lateral shoulders 1 07
107. Gonostylar megasetae subequal in size or basalmost one a little weaker than others . . . . . *C. tumidula* sp. n.
- Gonostylar megasetae unequal in size, apicalmost one or one of two apicalmost ones being conspicuously weaker than others 108
108. Gonostylar megasetae short, two longer ones ca. one third of width of gonostylus, tegmen with pair of pocket-like structures at apical margin . . . . . *C. marinae* Mohrig & Krivosheina
- Gonostylar megasetae long, their length more than half with of gonostylus, tegmen simple at apical margin 109
109. Two basalmost megasetae of gonostylus side-by-side at apex, partly covering each other . . . . . *anodon* sp. n.
- Two basalmost megasetae of gonostylus separated by long gap, one megaseta at apex, other subapical. . . . . *C. bipartita* Mohrig & Krivosheina
110. Part of setae at ventral mesial margin of gonocoxa very long, as long as width of tegmen at its middle 111
- Setae at ventral mesial margin short, not longer than ca. half width of tegmen at its middle 112
111. Gonostylus very tumid, ca 1.5 times as long as broad, straight. . . . . *C. voluptuosa* Mohrig & Mamaev
- Gonostylus less tumid, ca. 1.8 times as long as broad, apical part curved mesiad . . . . . *C. tarda* sp. n.
112. Mesial side of gonostylus impressed at least on its apical third, (in *C. tridentata* the impression is more apico-ventral but the species is included here) 113
- Mesial side of gonostylus not impressed 119
113. Basalmost gonostylar megaseta arcuate, curved towards apex of gonostylus, other megasetae straight . . . . . *C. adustula* sp. n.
- All gonostylar megasetae curved towards base of gonostylus 114
114. Gonostylus with one apical megaseta and two subapical megasetae separated from the former by wide gap . . . 115
- Gonostylar megasetae in one group or row, megasetae separated from each other by not longer distance than width of socket of megaseta. 116

115. Gonostylar megasetae long, ca. half width of gonostylus, gap between apical megaseta and two more basal megasetae smaller than length of megaseta . . . . . *C. triacantha* Tuomikoski
- Gonostylar megasetae short, ca. one fourth of width of gonostylus, gap between apical megaseta and two more basal megasetae longer than length of a megaseta . . . . . *C. tridentata* Hondru
116. Gonostylar megasetae very strong, all in the same level in subapical row (Figs. 99 A, B) . . . . . *C. membranigera* (Kieffer)
- Gonostylar megasetae usual in size, arranged in group with two more ventral and one more dorsal megaseta (e.g. Figs. 86 A, B). 117
117. Gonostylus ca. 2.2 times as long as broad . . . . . *C. angustior* sp. n.
- Gonostylus ca. 1.8 times as broad as long or broader 118
118. Antennal scapus and pedicellus bright yellow. . . . . *C. flavosignata* Menzel & Heller
- Antennal scapus and pedicellus pale brown . . . . . *C. patula* sp. n.
119. Gonostylus with broad basal part and narrowed apical part, with a subapical concavity at mesial margin 120
- Gonostylus evenly broad, without distinctly narrowed apical part or subapical concavity at mesial margin. . . . 125
120. Gonostylar megasetae short, one third or less of width of gonostylus. 121
- Gonostylar megasetae long, longer than one third of width of gonostylus 122
121. Wing length ca. 1.8 mm, length of gonostylus over 0.15 mm. . . . . *C. syriaca* (Lengersdorf)
- Wing length ca. 1.5 mm, length of gonostylus ca. 0.10 mm . . . . . *C. bicuspidata* (Lengersdorf)
122. Gonocoxa and gonostylus richly setose (Fig. 90 C), antennal vestiture longer than width of flagellomere . . . . . *C. semipedestris* Mohrig & Blasco-Zumeta
- Gonocoxa and gonostylus sparsely setose (e.g. Fig. 86 A) antennal vestiture shorter than width of flagellomere 123
123. Gonostylar megasetae long, mesial margin of gonostylus strongly impressed subapically (Fig. 86 A). . . . . *C. gemellata* sp. n.
- Gonostylar megasetae short, mesial margin of gonostylus slightly impressed subapically (Figs. 85 C, D, 87 A, B) 124
124. Tegmen sub-quadrangular, without finger-like process dorsally, gonocoxa basally broad (Fig. 85 C, D), tergite 9 with 12–16 setae . . . . . *C. andalusica* sp. n.
- Tegmen subtriangular, with short finger-like process dorsally, gonocoxa basally narrow (Fig. 87 A, B), tergite 9 with ca. 7 setae. . . . . *C. hemiacantha* Mohrig & Mamaev
125. Gonostylar megasetae very sharp. . . . . *C. cincinnata* Mohrig & Blasco-Zumeta
- Gonostylar megasetae blunt. 126
126. Gonostylar megasetae close together, their sockets touching each other . . . . . *C. parcitata* Mohrig & Mamaev
- Gonostylar megasetae apart, two more ventral ones separated from each other by gap equalling socket's width or more . . . . . *C. saccata* Tuomikoski
127. Gonocoxa with ventral, mesial, subbasal aggregation of setae, gonostylar megasetae unusually slender, well removed basad from gonostylar apex . . . . . *setosa* Freeman
- Gonocoxa without ventral, mesial subbasal aggregation of setae, gonostylar megasetae usual, at least one of megasetae at gonostylar apex 128
128. Gonocoxae baso-ventrally fused, apical part of gonostylus abruptly narrowed by subapical mesial incision . . . . . *C. minima* (Meigen)
- Gonocoxae baso-ventrally separated by membranous area, gonostylus apically not abruptly narrowed by subapical mesial incision 129
129. Gonostylar megasetae close together, their sockets touching each other, number of palpomeres 2 . . . . . *C. romana* sp. n.
- Gonostylar megasetae apart, gap between two more ventral ones at least two sockets wide, number of palpomeres 3 130
130. Basalmost megaseta well removed basad from apex of gonostylus, approximately at its apical fourth. . . . . *C. subfurcifera* Mohrig & Hövemeyer
- Basalmost megaseta close to apex of gonostylus 131
131. Gonostylus with apico-ventral oblique impression, basalmost gonostylar megaseta separated from the two more apical ones with gap (Figs. 122 A, B), large coxal setae pale . . . . . *C. badia* sp. n.
- Gonostylus without apico-ventral oblique impression, gonostylar megasetae close to each other, with equal distances (Figs. 108 B, C, D, E), large coxal setae dark (of *C. tiliacea* not known) 132
132. Antennal scapus and pedicellus yellow, much paler than flagellum . . . . . *C. furcifera* Mohrig & Mamaev
- Antennal scapus and pedicellus brown, concolorous with flagellum . . . . . *C. tiliacea* Komarova
133. Gonostylar megasetae wide apart, one at apex, other almost submedial, vestiture of tibial organ unusually rough (Fig. 96 B) . . . . . *C. collicola* sp. n.

- Gonostylar megasetae close to each other, subapical in position, vestiture of tibial organ fine 134

134. Gonostylus elongate, at least 1.7 times as long as broad, with conspicuous curved seta at base of more dorsal megaseta. . . . . *C. polana* Rudzinski
- Gonostylus sub-spherical, ca. 1.4 times as long as broad, without conspicuous curved seta at base of more dorsal megaseta. . . . . *C. controversa* sp. n.

The species

Corynoptera perpusilla Winnertz, 1867

Figs. 3 A–E

Corynoptera perpusilla Winnertz, 1867: 177.
Lycoria (*Neosciara*) *bicornis* Lengersdorf, 1943: 5. Synonymy by Menzel and Mohrig (2000: 223).
nec *Corynoptera dubitata* Tuomikoski, 1960. Unjustified synonymy by Menzel and Mohrig (2000: 223).

Material studied. 1 male, **AUSTRIA**, NÖ, Obere Lobau Nature Reserve NE of Vienna, 152 m, rye field, photoeclector, 20.v.1992, Idinger (in SDEI); 1 male, same data but 17.v.1993 (in SDEI); 1 male, same data as previous but rye field with mixed manure without fertilizer (in SDEI); 1 male, **BELGIUM**, Liège, 28.vii.1942, Leclercq (holotype of *Lycoria bicornis*, no. 18054 in ISNB); 3 males, **CZECH REPUBLIC**, Bohemia, Bílina Kaňkov, dump restoration, 330 m, near pond, YPWT 50º32'39''N 13°44'08''E 23–30.iv.1997, Barták (in SDEI); 1 male, small pond near Lom, 2 km NE of Libkovice, 280 m, 50˚35'10''N 13°41'30''E, Malaise trap, 30.iv–14.v.1998, Barták (in SDEI); 2 males, **DENMARK**, Ho, dunes, 29/30.iv.2000, Heller (in PKHH); 1 male, **GERMANY**, NW, Krefeld, At window, J. Winnertz (lectotype, des. Menzel, in Menzel & Mohrig 2000, no. 178 in ZFMK); 1 male, BB, district Barnim, Grumsin, Grosser Grumsinsee, photoeclector at vertical root plate, 28.vi.1999, Schulz & Taeger (in SDEI); 1 male, BW, Oberweier, Edelbach, floodplain forest, Malaise trap, 23.v.1995, D. Doczkal (no. 4883 in PKHH); 1 male, BW, Ravensburg, grassland with fruit trees, 16.v.1991, J. Drissner (no. 386 in PKHH); 1 male, BY, Lindau, forest at shore of Lake Constance, 27.v.2004, K. Heller (no. 4204 in PKHH); 1 male, MV, Greifswald, salt marsh, 1994 (no. 5377 in PKHH); 1 male, SH, Seeben, yellow dish, 24.v.1994, Stark (in SDEI); 2 males, SH, Dannau, field, photoeclector, 2–16.vi.1989, K. Heller, (no. 143 and 144 in PKHH); SH, Heikendorf, garden, sweep-net, 15.v.1993, K. Heller (no. 316 in PKHH); 1 male, SH, Kiel, district Suchsdorf, hedgerow, pitfall trap, 18.viii–1.ix.1993, K. Heller, (no. 411 in PKHH); 1 male, SH, Kiel University, garden, Malaise trap, 28.iv–5.v.1995, K. Heller (no. 947 in PKHH); 1 male, data as previous but 19–26.v.1995 (no. 981 in PKHH); 1 male, data as previous but 28.vii–4.viii.1995 (no. 1103 in PKHH); 1 male, data as previous but 20–28.vi.1996 (no. 1533 in PKHH); 1 male, data as previous but 19–26.v.1995 (no. 981 in PKHH); 4 males, data as previous but 12–19.vii.1996 (no. 1610–1612 in PKHH); same data as previous but light trap, 23.viii.1996, D. Kolligs, (no. 2565 in PKHH); 1 male, SH, Schönkirchen, Großholz, beech forest, sweep-net, 29.v.2003, K. Heller, (no. 3998 in PKHH); 2 males, 2 females, SH., Speicherkoog, embankment area, photoeclector, 30.vi–14.vii.1995, T. Tischler (no. 7036 in PKHH); 2 males, same data as previous but 16–31.vii.1995 (no. 7040, 7041 in PKHH); 1 male, SH, Stolpe lake, meadow, photoeclector, 1–14.v.1991, J. Grabow (no. 448 in PKHH); 1 male, TH, Apfelstädter Ried Nature Reserve, pitfall trap, 21.vii.1984, Weipert (In SDEI); 1 male, same data but 31.vii.1984 (in SDEI); 1 male, same data as previous but *Cirsium oleracea* meadow, 26.ix.1985 (in SDEI); 2 males, same data but sweet grass meadow, 20 m SW of small pond (in SDEI); 1 male, TH, Kleiner See near Apfelstädt, 27.v.1989, Hartmann (in SDEI); 1 male, TH, Bothenheiligen, Herzberg, dry grassland, 26.vi.1988, Bellstedt (in SDEI); 2 males, **GREAT BRITAIN**, Coventry, West Midlands, Brandon Marsh Nature Reserve by Ryton-on-Dunsmore (SE of Coventry), floodplain forest (willow, birch, maple), sweep-net, 22.viii.2002, F. Menzel (in SDEI); 1 male, Warwickshire, Leamington (E of Warwick), Newbold Comyn Park, Willes meadow, bank of river Leam (willow, hawthorn, ivy), sweep-net, 27.viii.2002, F. Menzel (in SDEI); 1 male, Hertfordshire., Letchworth, vii.1917, F.W. Edwards (B.M.1919-63 in BMNH); 1 male, same data as previous but vii.1918 (in BMNH); 1 male, again same data but x.1917 (in BMNH); 1 male, again same data but v.1918 (in BMNH); 1 male, again same data but 25.vi.1923 (in BMNH); 1 male, again same data but ix.1936 (B.M. 1936-469 in BMNH); 1 male, Oxfordshire, Ditchley, v.1937, F.W. Edwards (B.M. 1937-343 in BMNH); 1 male, **GREECE**, Kerkini marsh, Malaise trap, 21–27.iii.2007, G. Ramel (no. 6093 in PKHH); 1 male, Kerkini, Lithotopos, ecotourism site, Malaise trap, 2–5.v.2006, G. Ramel (no. 5759 in PKHH); Kerkini mountains,

Procom, riverine forest along river Styrmon, Malaise trap, 12–19.ix.2007, G. Ramel (no. 5 in PGRK); 1 male, **ITALY**, Rome, Villa Borghese, 25.iii.1988, H. Hippa (in MZH); 7 males, **PORTUGAL**, Azores, São Miguel, Ponta Delgada, 50 m, meadow on University area, yellow dish, vi.1996, Kehlmeyer (in SDEI); 2 males, **RUSSIA**, **Altay region**, Biysk, 21.i.1991, L. Komarova (in PLKB); 1 male, **Primorsk region**, Krounovka, river Medveditsa, 40 km SW Ussuriysk, 43°03'N 131°15'E, 250 m, 2–6.viii.1992, C. Kutzscher & E. Groll (in SDEI); 1 male, **Moscow region**, Izmaylovo, vii.1992, M. Krivosheina (no. 2970 in PWMP); 1 male, **Adygeya Republic**, Kamennomostskiy, camp 'Romantika', sweep-net, 3.viii.1994, W. Mohrig (no. 2969 in PWMP); 1 male, **SLOVENIA**, Lesce, meadow near Šobec camping area, sweep-net, 30.vii.2009, K. Heller (no. 7262 in PKHH); 1 male, **SPAIN**, Majorca, Alcudia, swimming pool, 26.iv.1995, K. Heller (no. 1577 in PKHH); 1 male, **SWEDEN**, Go, Gotland, Roleks, border between wood and open pasture, grazed calcareous pine forest, Malaise trap, 2–19.viii.2004, Swedish Malaise Trap Project (no. 6851 in PKHH); 1 male, Up, Lövstabruk, Malaise trap, 19–23.vi.1992, H. Hippa & B. Gustavsson (no. 172 in SMNH); Up, Stockholm, N. Djurgården, mixed forest, pitfall trap, 29.vi–13.vii.1992, T. Kronestedt & B. Viklund (no. 559 in SMNH); 5 males, Ög, Omberg, Stocklycke äng, lime meadow, Malaise trap, 12–20.vii.2005, Swedish Malaise Trap Project (no. 6030, 6031 in PKHH, no. 1174–1176 in SMNH); 3 males, **SWITZERLAND**, ZH, Sihlwald near Zurich, photoeclector, 24.v–19.vi.1996, K. Schiegg; 1 male, BE, Limpach valley, north of Wengi to Messen, rich meadow, window trap, 14.v.1987, P. Duelli (in SDEI); 1 male, same data but 28.v.1987 (in SDEI).

Description. See Menzel and Mohrig (2000: 224); for antennal flagellomere 4, apical part of front tibia, hypopygium and gonostylus, see Figs. 3 A–E.

Discussion. The identity of *Corynoptera perpusilla* has been problematic due to the fact that the type materials of it and some of the related species have been lost until recently. We have studied the lectotype (des. Menzel, in Menzel & Mohrig 2000), and the holotype of *Lycoria (Neosciara) bicornis* Lengersdorf (1943), stated as a junior synonym. We have also studied the now available type material of *C. dubitata* (Tuomikoski 1960), considered a junior synonym, too by Menzel and Mohrig (2000) but now we regard it as a distinct species (see under *C. dubitata*).

Corynoptera perpusilla belongs to a group of several species of *Corynoptera* that have at least part of the vestiture of the front tibial organ arranged in a transverse row, a slender gonostylus more than two times as long as broad, with an apical tooth subequal in length with three subapically placed slender gonostylar megasetae and approximately one half of the gonostylar width, and which do not have the mesial side of the gonostylus impressed, and which are small in size with the wing length under 1.5 mm. *Corynoptera perpusilla* is greatly similar to *C. alneti, C. nigrocauda, C. ninae,* and *C. praevia*. It is distinguished from *C. alneti* by a narrower and more perpendicular apical tooth of the gonostylus, less apically curved and less towards the apex of gonostylus inclined gonostylar megasetae, and usually fewer, less elongated setae at the ventral mesial margin of the gonocoxa; from *C. nigrocauda* by lacking a rounded lobe at the lateral margin of tegmen and by having a denser setosity at the ventral mesial margin of the gonocoxa, from *C. ninae* by having shorter, stouter and less parallel gonostylar megasetae and by a less curved apical part of the gonostylus; and from *C. praevia* by a three-segmented, not two-segmented maxillary palpus. See also under the three latter species. *Corynoptera perpusilla* is also very similar to *C. diligenta* and *C. perornata* but differs from both by a shorter gonostylus with a relatively shorter apical tooth; from *C. diligenta* also by normal, not unusually elongated necks on the antennal flagellomeres. See also under the two latter species. Also *C. montana* greatly resembles *C. perpusilla,* but is larger in size (wing length 1.8–2.3 mm versus 1.2–1.4 mm) and has a more setose gonostylus and gonocoxa. *Corynoptera sphenoptera* is likewise similar to *C. perpusilla* but has only two gonostylar megasetae and has a finger-like process dorsally on the tegmen, and sometimes a two-segmented palpus. There are a large number of species (from *C. serotina* to *C. stipidaria* in the present paper) which have a fairly similar basic structure of the hypopygium to *C. perpusilla* and the other discussed species, but differ by one or several of the following characters: the gonostylus is more tumid, shorter or at most twice as long as broad, the gonostylar megasetae are robust, sharp, curved, and are four or higher in number. With the borderline cases between a slender and tumid gonostylus the characters of the megasetae imply.

Distribution. **Austria** (Franz 1989, Lengersdorf 1926a, Menzel 2001, Rudzinski 1994d), **Belgium** (Collart 1936, Lengersdorf 1943: type specimen of *Sciara bicornis*), **Bulgaria** (Dimitrova & Mohrig 1993), **Czech Republic** (Menzel *et al.* 2000, Rudzinski 1994b), **Denmark** (Heller & Menzel 2004), **France** (Frank *et al.* 2005), **Germany** (Fritz 1993, Heller 1996, 1999, 2000a, 2002a, 2002b, Heller & Büchs 2003, Hennicke *et al.* 1997, Hövemeyer 1996b, 1997, Menzel 2006, Menzel & Mohrig 1991, Menzel *et al.* 2003, Metzner & Menzel 1996,

Rudzinski 2003, 1989b, Weber 1993, Werner 1997), **Great Britain** (Freeman 1983a, Menzel *et al.* 2006), **Greece** (Röschmann & Mohrig 1996), **Ireland** (Menzel *et al.* 2006), **Italy** (Frank *et al.* 2005, Mohrig & Kauschke 1994), **Morocco** (Mohrig *et al.* 1997), **Netherlands** (Mohrig 1996), **Poland** (Lengersdorf 1929a), **Portugal, Azores** (Heller & Menzel 2004), **Portugal, Madeira** (Heller & Menzel 2004), **Russia, Adygeya republic, Altay region** (Komarova 1995a: as *dubitata*), **Moscow region, Primorsk region** (this study); **Slovenia** (this study), **Spain** (Mohrig & Blasco-Zumeta 1996), **Spain, Balearic Islands** (Heller & Menzel 2004), **Sweden** (Heller *et al.* 2009), **Switzerland** (Heller & Menzel 2004).

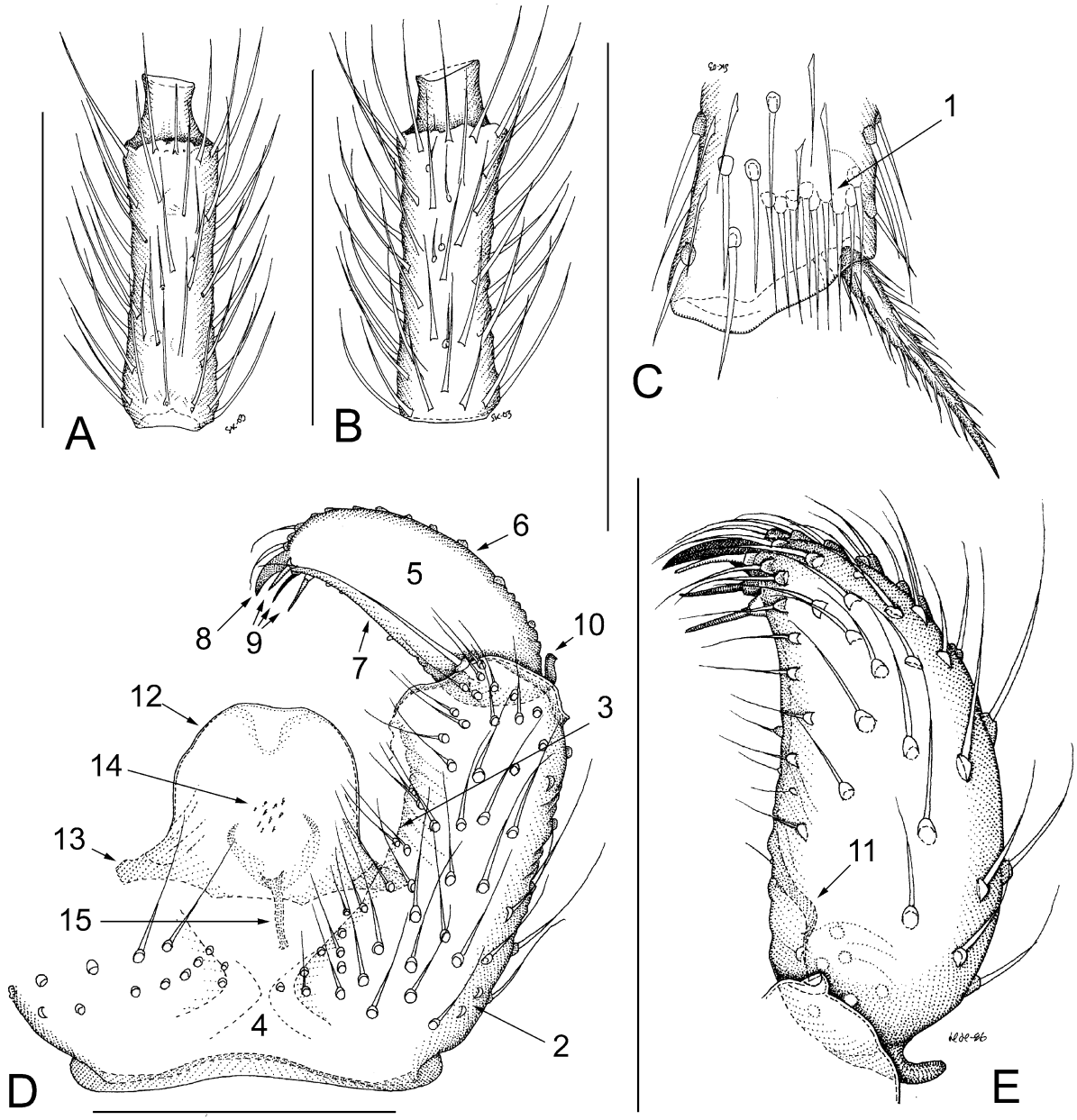

FIGURE 3. *Corynoptera perpusilla* Winnertz (A from Russia, Altay region, B, C from Germany, D from Czech Republic, E from England). **A, B.** Antennal flagellomere 4. **C.** Apical part of front tibia, prolateral view. **D.** Part of hypopygium, ventral view. **E.** Gonostylus, ventral view. Scale 0.1 mm. 1 = front tibial organ, 2 = gonocoxa, 3 = ventral mesial margin of gonocoxa, 4 = intercoxal area of hypopygium, 5 = gonostylus, 6 = lateral margin of gonostylus, 7 = mesial margin of gonostylus, 8 = apical tooth of gonostylus, 9 = gonostylar megasetae, 10 = basolateral apophysis of gonostylus 11 = basomesial sclerotization of gonostylus for reflexor muscle attachment, 12 = tegmen, 13 = apodeme of tegmen, 14 = aedeagal teeth, 15 = aedeagal apodeme.

***Corynoptera praevia* (Mohrig & Menzel, 1992)**
Figs. 4 A, B

Epidapus praevia Mohrig & Menzel, 1992: 7.
*Corynoptera praevia***,** Menzel & Mohrig, 2000: 226.

Material studied. 1 male, **SPAIN**, **Canary Islands**, Tenerife, Las Mercedes, laurel forest, pitfall trap, 11.xi.1980, K. Thaler (paratype, in PWMP); 9 males, **Canary Islands,** La Gomera, 2 km north of Laguna Grande near Las Rosas, yellow dish, 28.vii.1993, W. Mohrig (no. 7053 in PKHH, no. 1958–1962 and 2885–2887 in PWMP); 2 males, Gran Canaria, 3750 m N Cruz de Tejeda, road to Pinos de Caldar, 28º36'58''N 15º36'06''E, 1370 m, field with *Pinus canariensis*, sieving, 2.ii.1998, L. Zerche (in SDEI); 5 males, La Gomera, Embalse de Aguardece, laurel high forest, 28.vii.1993, E. Kauschke (no. 1963, 2988 in PWMP).

Description. See Mohrig and Menzel (1992); for hypopygium and gonostylus, see Figs. 4 A and B.

Discussion. Corynoptera praevia was described from two males and one female from the same sample from Canary Islands (Mohrig & Menzel 1992). We have seen only the paratype male, but there is no doubt about the conspecificity of the two males. *Corynoptera praevia* was described into *Epidapus* on the basis of having the anal lobe of wing narrow and the haltere and flagellomeres long, but was later (Menzel & Mohrig 2000) transferred into *Corynoptera*, because the species has the vestiture in the front tibial organ in a comb-like row, a character always absent in Holarctic species of *Epidapus*.

Corynoptera praevia is greatly similar to *C. perpusilla* but is distinguished by having the maxillary palpus two-segmented instead of three-segmented and by having the apical part of the gonostylus more curved. Among the other reminiscent species (see under *C. perpusilla*), *C. praevia* could be confused with those specimens of *C. sphenoptera* which have only two palpomeres, but in the latter species the number of gonostylar megasetae is always two, and the tegmen has a dorsal finger-like process. See also under *C. perpusilla*.

Distribution. **Spain, Canary Islands** (Mohrig & Menzel 1992), (Mohrig *et al.* 1997: as *C. perpusilla*).

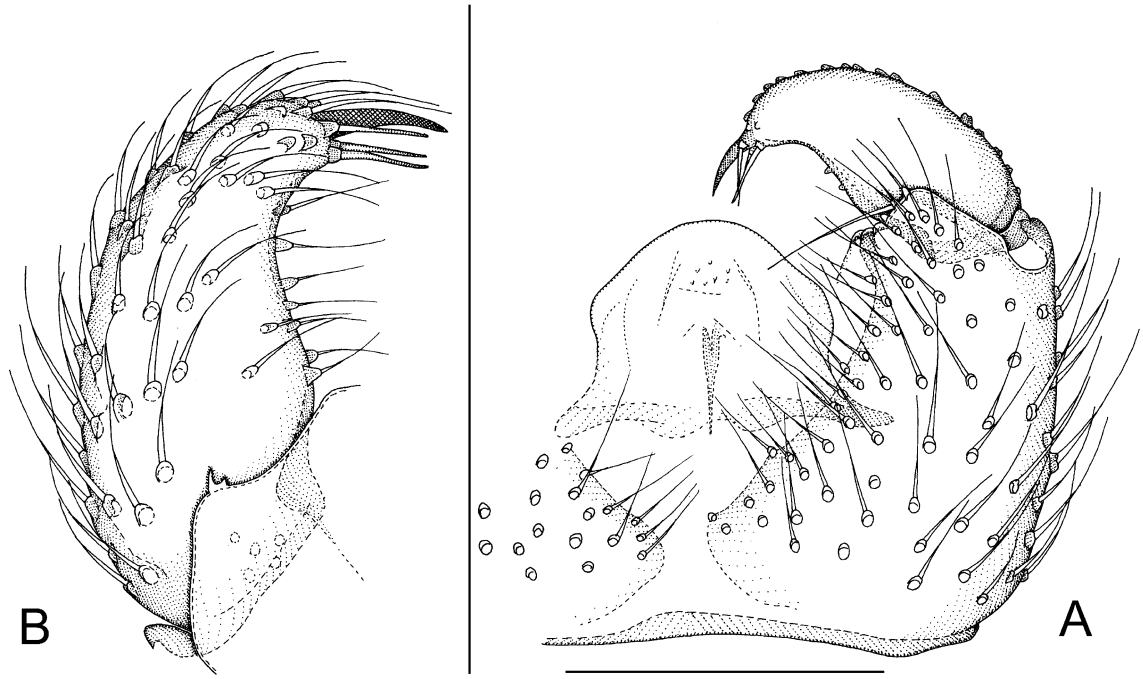

FIGURE 4. *Corynoptera praevia* (Mohrig & Menzel) (paratype). **A.** Part of hypopygium, ventral view. **B.** Gonostylus, ventral view. Scale 0.1 mm.

***Corynoptera karlkulbei* Mohrig & Röschmann, 1996**

Corynoptera karlkulbei Mohrig & Röschmann, in Röschmann & Mohrig, 1996: 301.

Description. See Röschmann and Mohrig (1996).

Discussion. The species was described from Greece based on one male, but the material has not been available.

Judged from the original description (Mohrig and Röschmann 1996), the species is similar to *C. perpusilla* and *C. praevia* in the characters of the gonostylus. It differs by having the vestiture of the front tibial organ in an non-arranged patch, without sign of a transverse comb-like row.

Distribution. **Greece** (Röschmann and Mohrig 1996).

***Corynoptera alneti* sp. n.**
Figs. 5 A–E

Material studied. *Holotype male*. **FINLAND**, Ab, Parainen, Mustfinnö, Ippos, 26.viii–12.x.1969, P.T. Lehtinen (in MZH). *Paratypes*. 2 males, **CANADA**, **British Columbia**, Vancouver I., Upper Carmanah Valley, Malaise trap, 26.vi–7.vii.1991, N. Winchester (in MZH); 3 males, same data as previous but 27.vii. (in MZH); 3 males, same data but 28.viii–9.ix.) in MZH); 1 male, same data again but 10.ix. (in MZH); 1 male, same data again but 10–29.ix. (in MZH); 2 males, Vancouver I., East Sooke Park, Malaise trap, 29.vi–18.vii.1989, R.A. Cannings (in RBCM; Ent191-163123); 1 male, Vancouver I., Victoria, Rocky Point, Malaise trap, 19.iii.1995, N. Winchester (in MZH); 3 males, same data as previous but 11.vii.1994 (in MZH); 1 male, same data again but 29.x.1994 (in MZH); 1 male, Terrace, 5.vi.1960, C.H. Mann (in CNC); 1 male, Terrace, 16.vi.1960, J.G. Chillcott (in CNC); **CZECH REPUBLIC**, Bohemia, Krušne hory (Erzgebirge), N of Nové Hamry (SW of Horni Blatna), spruce forest, sweep-net, 18.vii.2002, F. Menzel (in SDEI); 1 male, **FINLAND**, same data as holotype (on same slide; in MZH); 2 males, Ab, Naantali, Matalahti, 4.v–1.xi.1970, R. Mannila (in MZH); 2 males, Ab, Korppoo, Jurmo, 28.vi–13.viii.1969, P.T. Lehtinen (in MZH); 4 males, Ab, Vihti, Vihtijärvi, end of July 1959, R. Tuomikoski (in MZH); 2 males, same data but 24–25.vii.1960 (in MZH); 1 male, Ab, Kemiö, Kemiönsaari, Bjensböle, 60.07°N 22.44°E, spruce/pine/birch forest, sweep-net, 27.vi.2004, M. Jaschhof in (MZH); 1 male, N, Espoo, Westend, mole burrow, 7.vii.1959, W. Hackman (in MZH); 3 males, N, Espoo, Isosuo, spring at pine bog margin, Malaise trap, 18–29.vii.1999, J. Ilmonen (in MZH); 2 males, N, Helsinki, Käpylä, Taivaskallio, H. Hippa (in MZH); 2 males, Ta, Kangasala, Ponsa, 2.viii.1984, J. Tuiskunen (in MZH); 2 males, Sa, Punkasalmi, Ullinsuo, 18.viii.1985, B. Lindeberg (in MZH); 3 males, Om, Nykarleby, Bones, mole burrow, 1–10.vii.1960, Jungerstam (in MZH); 3 males, same data as previous but 11–20.vii. (in MZH); 1 male, Tb, Konnevesi, Sauvonniemi (6938:464), 12.vi.2003, J. Salmela (in MZH); 1 male, Tb, Viitasaari, Kivineva, mesotrophic fen, running water, Malaise trap, 15.viii–14.ix.2006, J. Salmela (in MZH); 2 males, Sb, Nilsiä, Väätälänkylä (701:56), birch stand, 8.viii.1986, J. Tuiskunen (in MZH); 7 males, Kb, Kitee, 12.vii–5.x.1968, S. Koponen (in MZH); 1 male, Kb, Nurmes, Mujejärvi (708:62), 8.viii.1986, J. Tuiskunen (in MZH); 1 male, Kb, Lieksa, Toivaanvaara (704:65), 9.viii.1986, J. Tuiskunen (in MZH); 1 male, Kb, Lieksa, Kalina (703:65), 2.viii.1986, J. Tuiskunen (in MZH); 1 male, Ks, Taivalkoski, Loukonoja (7253258:3573972), by a brook, Malaise trap, 3.vii–1.viii.2004, J. Salmela (in MZH); 1 male, Ks, Taivalkoski, Oikarinoja, (7253200:3562178), by a brook, Malaise trap, 3.vii–1.viii.2004, J. Salmela (in MZH); 1 male, Ks, Taivalkoski, Paavonoja (7295643:3565826), by a brook, Malaise trap, 3.vii–1.viii.2004, J. Salmela (in MZH); 1 male, Ks, Taivalkoski, Pulkkaoja (7285574:3573510), by a brook, Malaise trap, 3.vii–1.viii.2004, J. Salmela (in MZH); 1 male, Ks, Kuusamo, Kalliovaara, spruce/birch/pine forest, sweep-net, 30.vii.2004, Jaschhof, (no. 6468 in PKHH); 1 male, Ks, Kuusamo, Kalliovaara, spruce/birch swamp forest, sweep-net, 25.viii.2004, Jaschhof, (no. 6269 in PKHH); 1 male, Obb, Rovaniemi mlk, Kivalo (7358718:3488134), spruce-hardwood mire, Malaise trap, 1.vii–3.viii.2004, J. Salmela (in MZH); 1 male, Li, Inari, Tsarmitunturi, wilderness area (7620:556), 3.vii.2003, J. Salmela (in MZH); 1 male, Li, Inari, Tsarmitunturi (7623483:3555297), 340 m, spring by a brook, Malaise trap, 3.vi–6.vii.2004, J. Salmela (in MZH); 1 male, Li, Inari, Tsarmitunturi (7623483:3555297), 340 m, spring by a brook, Malaise trap, 6.vii–1.viii.2004, J. Salmela (in MZH); 1 male, Le, Kilpisjärvi, Saana, 15–30.vii.1967, A. Suormala (in MZH); 1 male, **GERMANY**, BB, Kerkwitz, swamp pond, photoeclector, Mohrig, 26.v–9.vi.1999, (no. 1593 in PWMP); 1 male, same data but 25.vi.1999 (no. 2248 in PWMP); 1 male, same data as previous but 18.x.2000 (no. 2249 in PWMP); 2 males, Traubendorfer Grenzlauch, Malaise trap, 28.ix.2000 (no. 2265, 2266 in PWMP); 1 male, BB, Peitz, Neuendorfer Seewiese, photoeclector, 18.viii.2000, W. Mohrig (no. 2247 in PWMP); 2 males, 1 female, SH, Blumenthal, photeclector over alder wood, 19.v–14.vi.2000, H. Arp (no. 3302 and 3948 in PKHH); 1 male, TH, Seebach near Mühlhausen, Galgenberg, dry grassland, pitfall trap, 1988, Riedel (in SDEI); 1 male, **NORWAY**, Finnmark, Kirkenes, forest with birch, willow and bushes, exhaustor, 2–13.vii.1994, M. Jaschhof (no. 7126 in PKHH); 1 male, **RUSSIA**, **Karelia**, Keret Islands, yellow pan, 21.vii.1992, Erlacher (in SDEI); 1 male, **SWEDEN**, Sk, Hörby, Vissmosse, 20.v–7.x.1969, S. Koponen (in MZH); 3 males, Ån, Örnsköldvik, Skuleskogen National Park, Långrå, brook ravine in mixed forest, Malaise trap, 9–23.viii.2004, Swedish Malaise Trap Project (no. 1232, 1233, 2958 in SMNH); 1 male, Bl, Ronneby, Tromtö, beech and oak forest, Malaise trap, 22.vii–25.ix.2004, Swedish Malaise Trap Project (no. 5834 in PKHH); 1 male, Hs, Hudiksvall, Stensjön-Lomtjärn,

marsh pine wood close to bog,11–25.viii.2004, Swedish Malaise Trap Project (no. 6786 in PKHH); 1 male, Hr, Härjedalen, Nyvallen, Nyvallens fäbod, alpine birch and spruce wood, Malaise trap, 7–4.viii.2004, Swedish Malaise Trap Project (195 in PASS); 5 males, Sm, Nybro, Bäckebo, Grytsjöns Nature Reserve, old moist hay-making meadow, 2–12.vii.2005, Swedish Malaise Trap Project (no. 1349, 1350, 2954–2956 in SMNH); 1 male, Sm, Högsby, Hornsö, Hornsö Kronopark, vicinity of Skärsgölarna, near end of Nya Kringlavägen, birch fen, Malaise trap, 30.vi–10.vii.2004, Swedish Malaise Trap Project (no. 6673 in PKHH); 2 males, Up, Stockholm. N. Djurgården, alder fen, pitfall trap, 29.vi–13.vii.1992, T. Kronestedt and B. Viklund (in SMNH); 1 male, To, Kiruna, Abisko, Biol. Station, lawn at tourist station, sweep-net, 28.vi.1988, M. v. Tschirnhaus (in SDEI); 3 males, **USA**, **Montana**, Gallatin, Cottonwood Canyon, Malaise trap, 16–23.vi.1996, La Masiner (no. 1696, 1997, 1703 in PKHH); 1 male, **Oregon**, Salem, Willamette R., light, 22.v.1963, K. Goeden (in NMNH); 1 male, **Alaska**, Naknek, tundra, 4.viii.1952, W.R. Mason (in CNC).

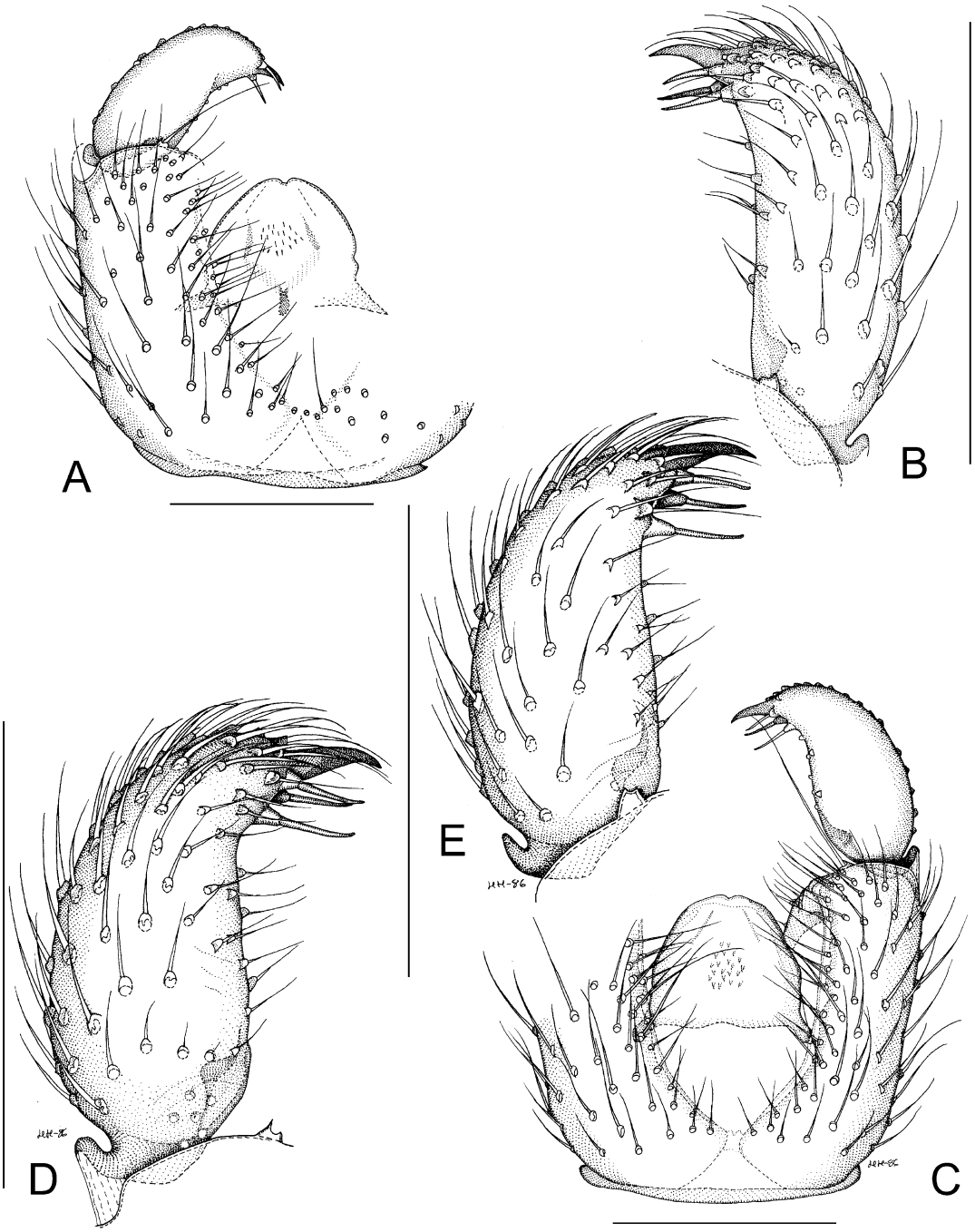

FIGURE 5. *Corynoptera alneti* sp. n. (paratype A, B from British Columbia, C, D holotype, E paratype from Germany). **A, C.** Part of hypopygium, ventral view (aedeagal apodeme omitted in C). **B, D, E.** Gonostylus, ventral view. Scale 0.1 mm.

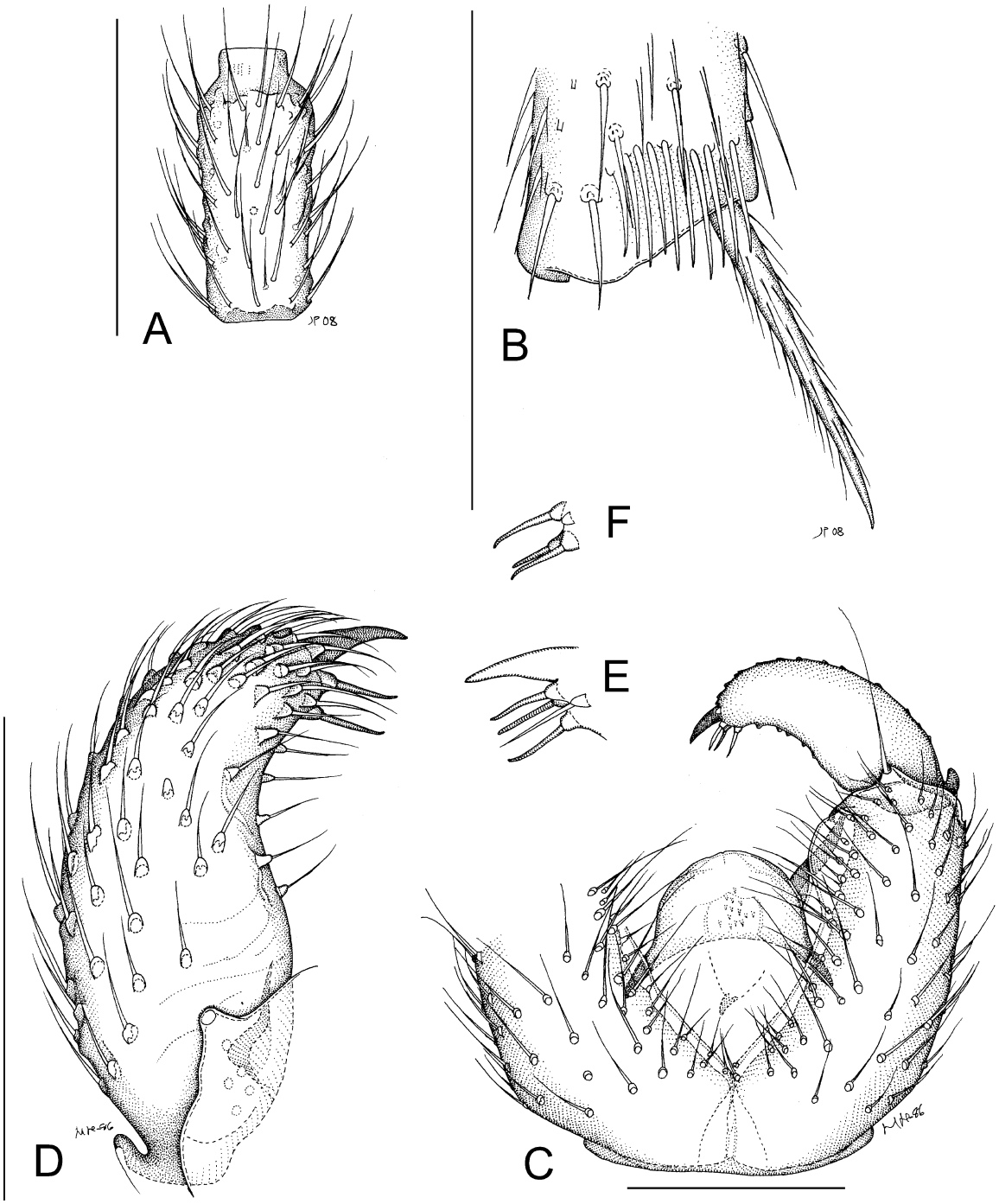

FIGURE 6. *Corynoptera alneti* sp. n. (paratype from Finland, Kilpisjärvi). **A.** Antennal flagellomere 4. **B.** Apical part of front tibia, prolateral view. **C.** Part of hypopygium, ventral view. **D.** Gonostylus, ventral view. **E.** Apical part of gonostylus, ventral view. **F.** Gonostylar megasetae, ventral view. Scale 0.1 mm, E and F as D.

Description. Male. **Head**. Brown, maxillary palpus very pale brown, with slightly paler antenna. Eye bridge 2–3 facets wide. Face with 9–17 scattered dark longer and shorter setae. Clypeus non-setose or with 1 dark seta. Maxillary palpus with 3 palpomeres; palpomere 1 longer than palpomere 3, palpomere 2 shortest; palpomere 1 with one (rarely 2) long sharp seta, with a large dorsal patch of sensilla; palpomere 2 with 1 (rarely 2) long sharp seta and 4–5 shorter truncate setae, palpomere 3 with 4–6 short truncate setae. Antennal flagellomere 4, Fig. 6 A, 2.4–2.8 times as long as wide, the neck shorter than the width of flagellomere, the longest setae slightly longer than the width of flagellomere. **Thorax**. Unicolorous brown, setae dark. Anterior pronotum with 2–3 setae. Episternum 1 with 3–7 setae. **Wing**. Length 1.2–1.4 mm. Width/length 0.40–0.45. R1/R 0.60–0.75. c/w 0.60–0.70. r-m longer than bM, r-m/bM 1.1–1.3, both r-m and bM non-setose. Haltere pale brown. **Legs**. Pale yellowish brown. Apical

part of front tibia, Fig. 6 B: tibial organ with pale and fine vestiture, forming a comb-like row with a few scattered elements. Front tibial spur slightly longer than the tibial width. **Abdomen**. Brown, same colour as thorax. The setae pale. **Hypopygium,** Figs. 5 A–E, 6 C–F. Brown, paler than abdomen. Gonocoxa longer than gonostylus. The ventral setosity of gonocoxa dense, many setae at the apical part of the mesial margin greatly elongated. Gonostylus elongated, the mesial side not impressed; the setosity sparse, apicomesially with a few elongated setae; with a strong apical tooth, with 3 megasetae, the megasetae subequal in size, apically procurved. Tegmen simple, long, but not higher than broad, without a dorsal finger-like process.

Discussion. *Corynoptera alneti* is similar to *C. nigrocauda*, *C. ninae* and *C. perpusilla*. It is distinguished from all by its characteristic apical tooth of the gonostylus which is basally notably broad and which usually has its mesial margin angled. Furthermore, the gonostylar megasetae are more inclined towards the apex of the gonostylus and their apices have an apical curvature to the same direction, not straight. Depending on the angle of view, the latter character is rather variable. For further discussion, see under *C. perpusilla*.

The most northern European specimens of *C. alneti* (Figs. 6 C, D) differ slightly from the rest by having a more curved gonostylus with a more roundish apex. They may represent a distinct taxon. The Nearctic specimens (Figs. 5 A, B) differ also from the common European type (Figs. 5 C–E) by shorter and straighter gonostylar megasetae, and may represent a distinct taxon.

Etymology. The name is Latin, *alnetum>alneti*, of alder growth/stand. It is R. Tuomikoski's unpublished name for this species.

***Corynoptera ninae* sp. n.**
Figs. 7 A–E

Material studied. *Holotype male*. **FINLAND**, Ab, Lohja, Torhola, cave entrance, pitfall trap, 22.viii.1985, O. Biström and H. Hippa (in MZH). *Paratypes*. 5 males, same data as holotype (one on same slide with holotype, four on two other slides; in MZH); 2 males, Tb, Toivakka, Ruostesuo (688:3443), Malaise trap, 1–29.vii.2003, J. Salmela (in MZH); 1 male, Sb, Kangaslampi, forest, Malaise trap, 19.vii–1.viii.2005, N. Laurenne (in MZH); 1 male, Ob, Muhos, Malaise trap, 23.vii–5.viii.2005, N. Laurenne (in MZH).

Description. Male. **Head**. Pale brown, maxillary palpus very pale brown, antenna concolorous with face. Eye bridge facets wide. Face with 5–10 scattered dark longer and shorter setae. Clypeus with 1 dark seta (rarely non-setose). Maxillary palpus with 3 palpomeres; palpomere 1 longer than palpomere 3, palpomere 2 shortest; palpomere 1 with one long sharp seta, with a dorsal patch of sensilla; palpomere 2 with 1 long sharp seta and 3–4 shorter truncate setae, palpomere 3 with 3–5 short truncate setae. Antennal flagellomere 4, Fig. 7 A, 2.7–3.8 times as long as wide, the neck shorter than the width of flagellomere, the longest setae slightly longer than the width of flagellomere. **Thorax**. Unicolorous brown, the setae dark. Anterior pronotum with 1–2(3) setae. Episternum 1 with 3–5 setae. **Wing**. Length 1.3–1.5 mm. Width/length 0.40–0.45. R1/R 0.55–0.75. c/w 0.60–0.75. r-m longer than bM, r-m/bM 1.15, both r-m and bM non-setose. Haltere pale brown. **Legs**. Pale yellowish brown. Apical part of front tibia, Fig. 7 B: tibial organ with pale and fine vestiture, forming a comb-like row with a few scattered elements. Front tibial spur as long as the tibial width. **Abdomen**. Pale brown. The setae dark. **Hypopygium,** Figs. 7 C, D, E. Pale brown, as abdomen. Gonocoxa longer than gonostylus. The ventral setosity of gonocoxa sparse, most of the setae at the apical part of the mesial margin greatly elongated. Gonostylus elongated, the mesial side not impressed; the setosity sparse, apicomesially with a few elongated setae; with a long and narrow apical tooth, with 3 megasetae, the megasetae subequal in size, straight. Tegmen simple, broader than long, without a dorsal finger-like process.

Discussion. Corynoptera ninae is similar to *C. alneti*, *C. nigrocauda* and *C. perpusilla*. It is distinguished from *C. alneti* by its basally much narrower apical tooth of the gonostylus and by the more perpendicular and straight gonostylar megasetae, from *C. nigrocauda* by lacking a rounded lobe at the lateral margin of the tegmen and by having a more rich setosity at the ventral mesial margin of the gonocoxa, and from *C. perpusilla* by the broader tegmen, the relatively longer and straighter gonostylar megasetae, which are more parallel in direction, and the distinctly curved apical part of the gonostylus. For further discussion, see under *C. perpusilla*.

Etymology. The species is named after a Finnish hymenopterologist Dr. Nina Laurenne who was one of the collectors of the type material.

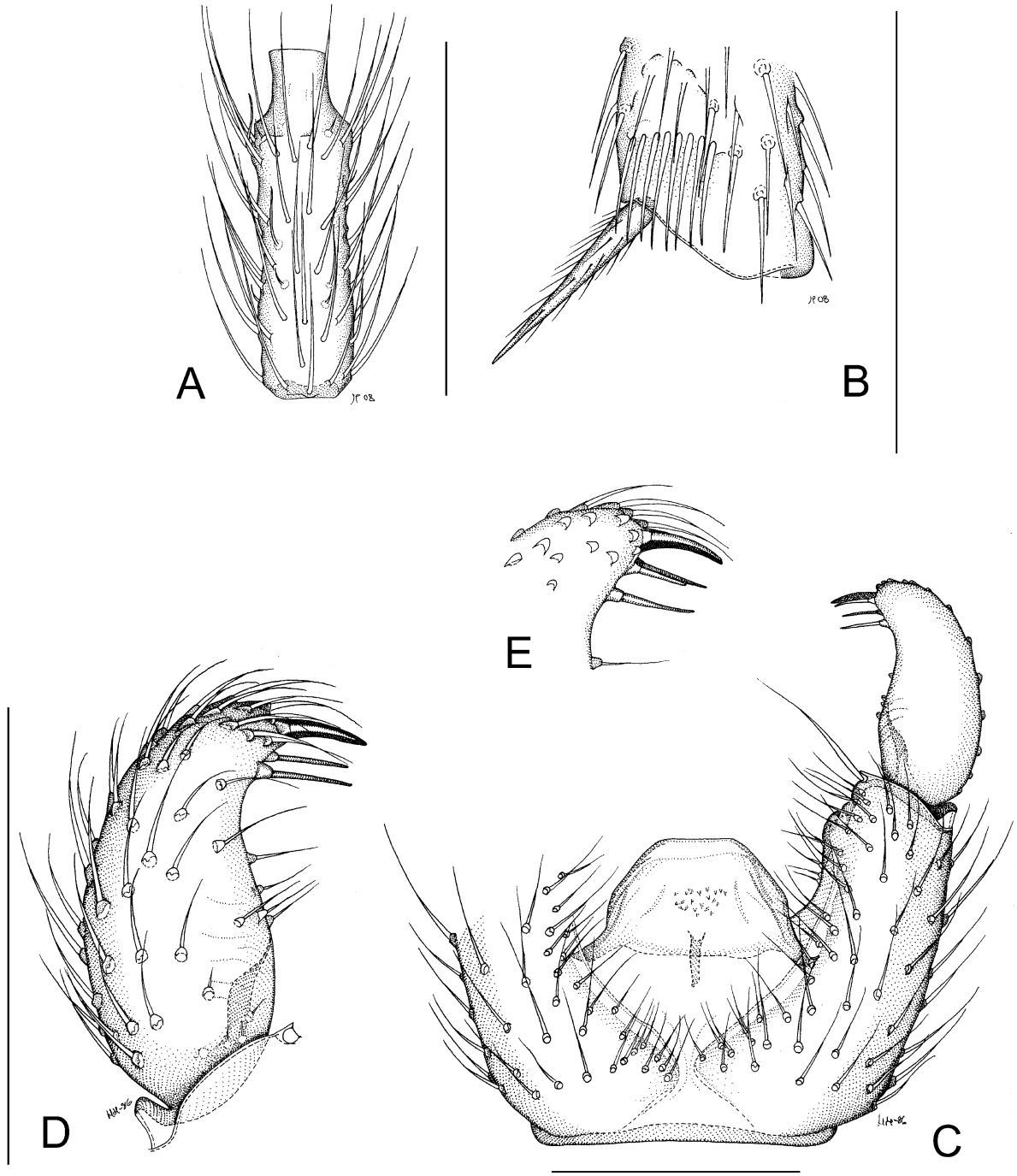

FIGURE 7. *Corynoptera ninae* sp. n. (A, B, E paratype, C, D holotype). **A.** Antennal flagellomere 4. **B.** Apical part of front tibia, prolateral view. **C.** Part of hypopygium, ventral view. **D.** Gonostylus, ventral view. **E.** Apical part of gonostylus, ventral view. Scale 0.1 mm, E as D.

Corynoptera nigrocauda **Mohrig & Menzel, 1990**

Figs. 8 A–D

Corynoptera nigrocauda Mohrig & Menzel, in Menzel *et al.* 1990: 386.

Material studied. 1 male, **GERMANY**, TH, Fischbachtal near Schleusingen, 28.vi.1988, F. Menzel (holotype, no. 202 in PWMP); 1 male, RP, Oberkirn, Gute Hoffnung III 2 tunnel, pitfall trap, 18.ix.2004, D. Weber (no. 5542 in PKHH); 1 male, SH, Kremper Au, photoeclector, 1990, J. Lietz (no. 146 in PKHH); 1 male, SH, Speicherkoog,

embankment area, photoeclector, 1–30.viii.1996, T. Tischler (no. 3047 in PKHH); 1 male, same data as previous but 15–30.vi.1995 (no. 7032 PKHH); 1 male, **GREECE**, Kerkini mountains, Procom, riverine forest along river Styrmon, Malaise trap, 30.iv–4.v.2008, G. Ramel (no. 6938 in PKHH).

Description. See Menzel *et al.* (1990); for antennal flagellomere 4, apical part of front tibia, hypopygium and gonostylus, see Figs. 8 A–D.

Discussion. Corynoptera nigrocauda was described from one male from Germany (Menzel *et al.* 1990) and has not been recorded since. *Corynoptera nigrocauda* especially resembles *C. caustica*, *C. diligenta* and *C. perornata* by its slender and sparsely setose gonostylus. *Corynoptera nigrocauda* is similar to *C. diligenta* and *C. perornata*, and differs from *C. caustica* by having the vestiture of the front tibial organ in a row. It is similar to *C. caustica* by having having shorter antennal flagellomeres, and differs from all by having the tegmen modified, with basolateral shoulders. See also under *Corynoptera perornata* and *C. caustica*.

Distribution. **Germany** (Menzel *et al.* 1990), **Greece** (this study).

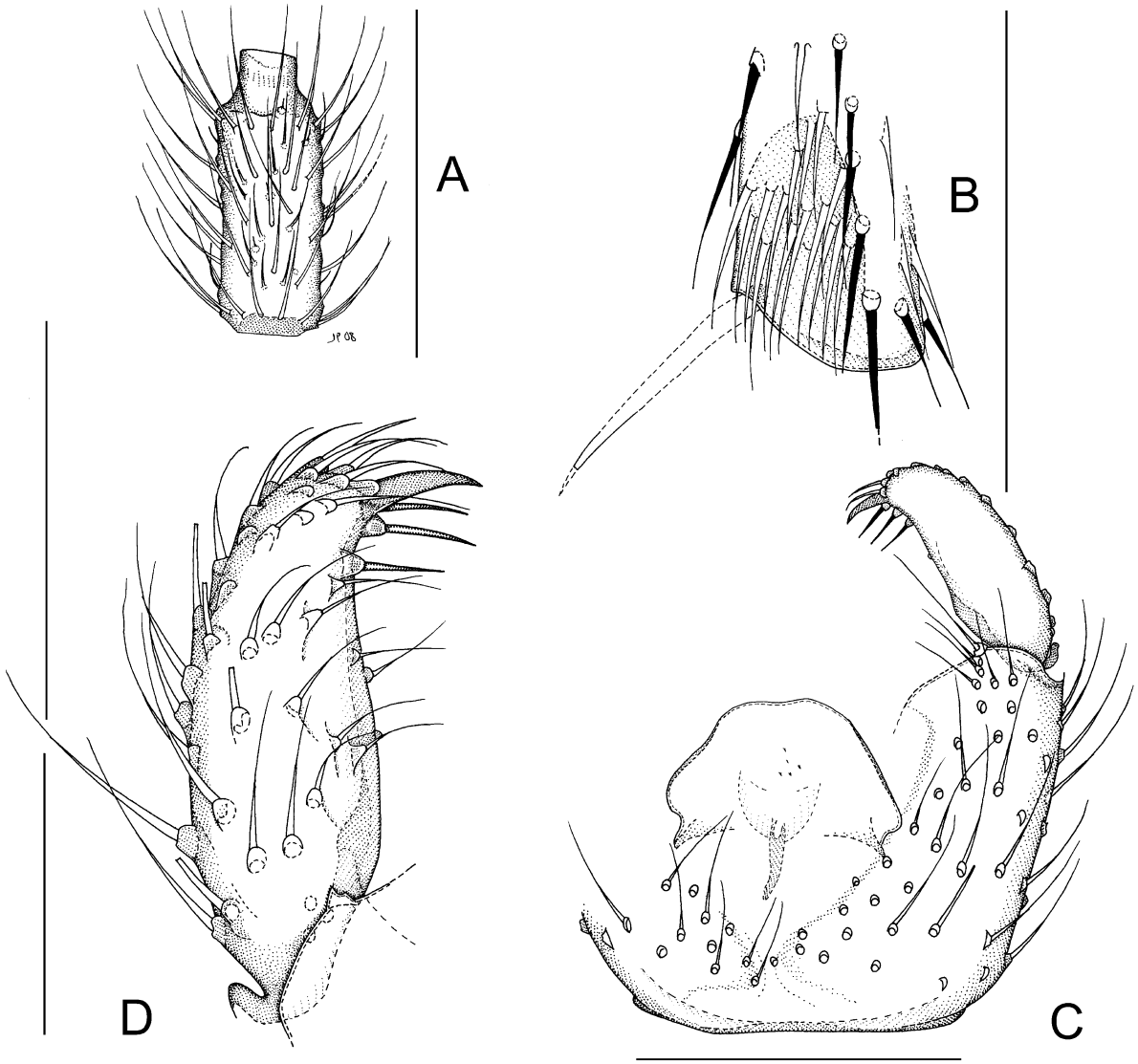

FIGURE 8. *Corynoptera nigrocauda* Mohrig & Menzel (holotype). **A.** Antennal flagellomere 4. **B.** Apical part of front tibia, prolateral view. **C.** Part of hypopygium, ventral view. **D.** Gonostylus, ventral view. Scale 0.1 mm.

***Corynoptera diligenta* Rudzinski, 2008**
Figs. 9 A, B, C

Corynoptera diligenta Rudzinski, 2008: 332.

Material studied. 5 males, **JAPAN**, Ryukyu Islands, Okinawa Pref., Iriomote Island, Funaura, sclerophyll forest, exhaustor, 5–6.x.1995, M. Jaschhof (in SDEI); 1 male, same data as previous but 4.x.1995 (in KUEC).

Redescription. Male. **Head**. Brown, maxillary palpus very pale brown, antenna paler than face. Eye bridge 3 facets wide. Face with 4–6 scattered dark longer and shorter setae. Clypeus with1 dark seta. Maxillary palpus with 3 palpomeres; palpomere 1 longer than palpomere 3, palpomere 2 shortest; palpomere 1 with one long sharp seta, with a dorsal patch of sensilla; palpomere 2 with 1 long sharp seta and 1–3 shorter truncate setae, palpomere 3 with 2–3 short truncate setae. Antennal flagellomere 4, Fig. 9 A, 2.4–2.9 times as long as wide, the neck longer than the width of flagellomere, the longest setae much longer than the width of flagellomere. **Thorax**. Yellowish, the setae dark. Anterior pronotum with 1–2 setae. Episternum 1 with 2–4 setae. **Wing**. Length 0.9–1.0 mm. Width/length 0.35–0.40. R1/R 0.45–0.55. c/w 0.50–0.75. r-m and bM subequal in length, r-m/bM 1.0–1.2, both r-m and bM non-setose. Haltere pale brown. **Legs**. Yellow. The modified vestiture of the the front tibial organ dark, forming a comb-like row with a few scattered elements. Front tibial spur slightly shorter than the tibial width. **Abdomen**. Brown. The setae short and weak. **Hypopygium,** Figs. 9 B, C. Yellow, paler than abdomen. Gonocoxa longer than gonostylus. The ventral setosity of gonocoxa sparse, a few of the setae at the apical part of the mesial margin greatly elongated. Gonostylus slender, the mesial side not impressed; the setosity sparse, apicomesially with a few elongated setae; with a long and slender apical tooth, with 3 megasetae, the megasetae subequal in size, shorter than apical tooth, nearly straight. Tegmen subtriangular, without a dorsal finger-like process.

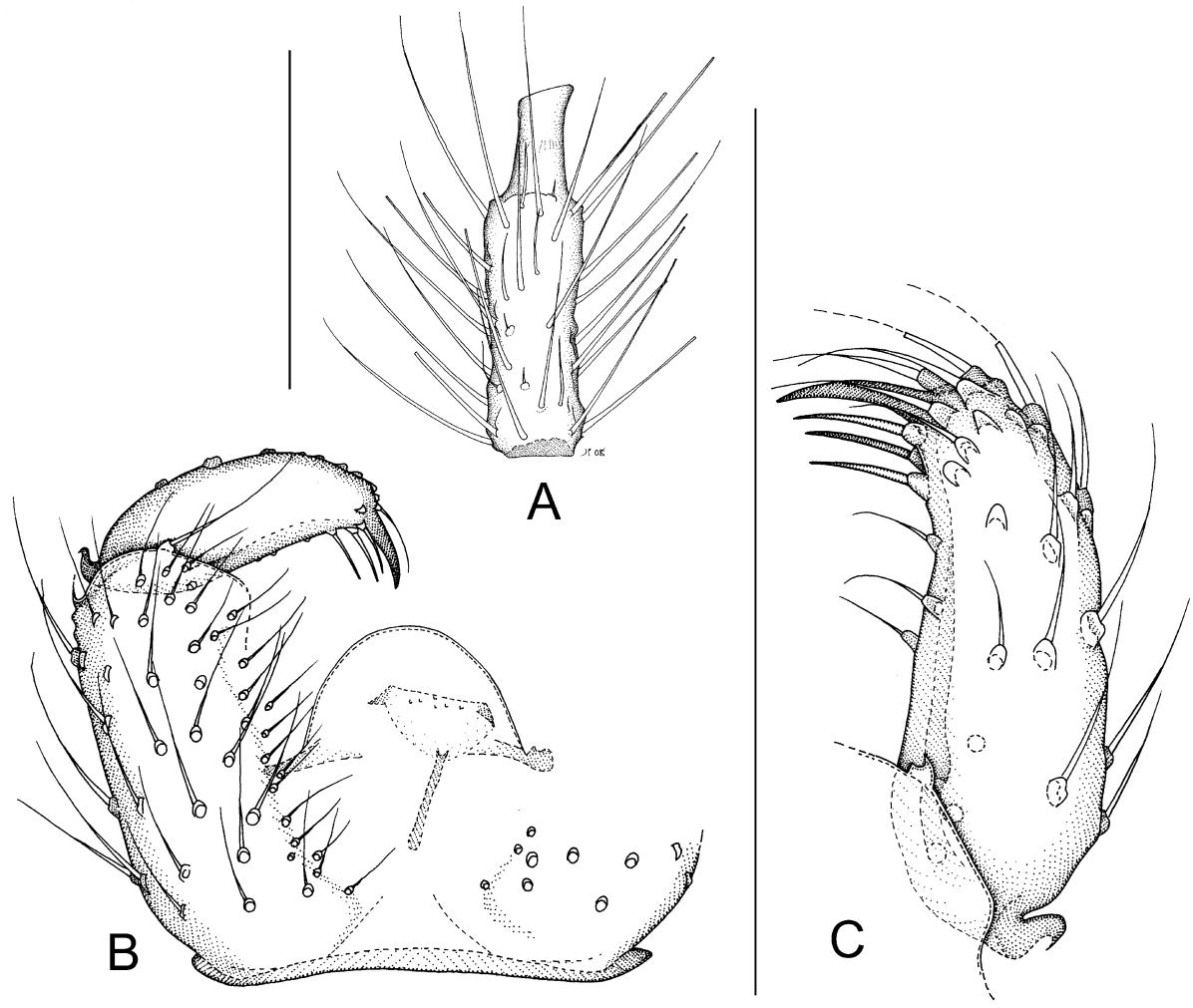

FIGURE 9. *Corynoptera diligenta* Rudzinski (from Japan). **A.** Antennal flagellomere 4. **B.** Part of hypopygium, ventral view. **C.** Gonostylus, ventral view. Scale 0.1 mm.

Discussion. *Corynoptera diligenta* was described from two males from Taiwan (Rudzinski 2008). We have not had access to the type material, but based on the original description, we consider our Japanese material conspecific. *Corynoptera diligenta* is unique among the present species by having the necks and setae of antennal flagellomeres unusually long. By its gonostylus, the species resembles *C. perornata* and *C. nigrocauda*. For further discussion, see under *C. perornata*.

Distribution. **Japan, Ryukyu Islands** (this study), **Taiwan** (Rudzinski 2008).

Corynoptera perornata Mohrig & Röschmann, 1993

Figs. 10 A–E

Corynoptera perornata Mohrig & Röschmann, in Röschmann & Mohrig, 1993: 378.
Corynoptera abscondita Rudzinski, 1994a: 298. Synonymy by Menzel and Mohrig (2000: 291).
Cratyna (*Diversicratyna*) *perornata*, Menzel & Mohrig, 1998: 363.

Material studied. 1 male, **AUSTRIA**, K, Techendorf, Weißensee, beech/oak forest, sweep-net, 11.viii.1991, F. Röschmann (holotype, no. 1562 in PWMP); 1 male, **GERMANY**, BW, Blaubeuren, Tiefental, gorge forest, yellow pan trap between old logs, 15–22.iv.2009, R. Sipple (no. 7056 in PKHH, no. 255 in PRSE); 1 male, same data as previous but Malaise trap, 20–24.vii.2008 (no. 16 in PRSE); 1 male, again same data but 8–15.iv.2009 (no. 263 in PRSE); 1 male, ST, Thale, Roßtrappe, mixed forest, sweep-net, 26.v.2006, K. Heller (no. 4760 in PKHH); 7 males, **SWEDEN**, Ög, Ödeshög, Omberg, Storpissan, old Norway spruce wood, Malaise trap, 3.iii–28.v.2005, Swedish Malaise Trap Project. (no. 1865–1868, 1965 in SMNH, 6577, 6578 in PKHH).

Redescription. Male. **Head**. Brown, maxillary palpus very pale brown, antenna concolorous with face. Eye bridge 2 facets wide. Setae of face and clypeus not well seen in the specimens studied. Maxillary palpus with 3 palpomeres; palpomere 1 longer than palpomere 3, palpomere 2 shortest; palpomere 1 with one long sharp seta, with a dorsal patch of sensilla; palpomere 2 with 1 long sharp seta and 4 shorter truncate setae, palpomere 3 with 8 short truncate setae. Antennal flagellomere 4, Fig. 10 A, 2.8–3.5 times as long as wide, the neck shorter than the width of flagellomere, the longest setae slightly longer than the width of flagellomere. **Thorax**. Unicolorous brown, the setae dark. Anterior pronotum with 2–4 setae. Episternum 1 with 2–4 setae. **Wing**. Length 1.6–1.7 mm. Width/length 0.40. R1/R 0.55–0.70. c/w 0.80–0.85. r-m and bM poorly visibly in the specimens studied, non-setose. Haltere pale brown. **Legs**. Pale yellowish brown. Apical part of front tibia, Fig. 10 B, C: the modified vestiture dark, forming an indistinct row of setae. Front tibial spur slightly longer than the tibial width. **Abdomen**. Brown. Setae dark. **Hypopygium,** Figs. 10 D, E. Brown, as abdomen. Gonocoxa longer than gonostylus. The ventral setosity of gonocoxa sparse, the setae at the apical part of the mesial margin not greatly elongated. Gonostylus elongated, the mesial side not impressed; the setosity sparse, apicomesially with a few elongated setae; with a long and slender apical tooth, with 3 (4) megasetae, the megasetae subequal in size, straight or slightly curved. Tegmen simple, without a dorsal finger-like process.

Discussion. *Corynoptera perornata* was described from the holotype male and a paratype male from Austria (Mohrig & Röschmann 1993), and *C. abscondita* from the holotype male and a paratype male from Germany (Rudzinski 1994). From these type materials, we have studied only the holotype of *Corynoptera perornata*, but do not doubt the synonymy. Menzel and Mohrig (2000) transferred *C. perornata* to *Cratyna (Diversicratyna)* Menzel & Mohrig, 1998 on the basis of four strong scutellar marginal setae and a "grob-dichte Beborstung" on the front tibial organ. In our whole material the vestiture of the front tibial organ forms a comb-like row, even if variable in details (Figs. 10 B, C). Also, the similarity of *C. perornata* in all characters to *C. perpusilla* and other similar species is striking and we do not hesitate to place the species in *Corynoptera*. Menzel and Mohrig (2000) discussed the variation in the number of the gonostylar megasetae and mentioned the number varying from three to six. In our material the number is three or four, the latter case only asymmetrically (Figs. 10 D, E). We have keyed the species only according to the lower number. Further study is needed.

Corynoptera perornata is very similar to *C. caustica*. For further discussion see under the latter. Both these species are similar to *C. diligenta*, *C. nigrocauda* and also slightly to *C. umbrata* by their evenly slender gonostylus with almost straight mesial side, the long apical tooth and long, rather strong and only slightly curved megasetae. *Corynoptera umbrata* differs from the others by having it gonostylus thicker and by having some of the ventromesial setae of the gonocoxa slightly elongated. *Corynoptera perornata* differs from *C. diligenta* by being larger

(wing length 1.6–1.7 mm versus 0.9–1.0 mm), and by having the flagellomeral necks shorter, not longer, than the width of the flagellomeres, and by being brown (not yellowish). *Corynoptera perornata* differs from *C. nigrocauda* by having the tegmen unmodified, without basolateral shoulders, by having the gonostylus narrower, gonostylar megasetae in a more tight group, and longer antennal flagellomeres with relatively shorter setosity. See also under *C. perpusilla*.

Distribution. **Austria** (Röschmann & Mohrig 1993), **Germany** (Röschmann & Mohrig 1993), (Rudzinski 1994a: as *C. abscondita*), **Great Britain** (Menzel *et al.* 2006), **Greece, Crete** (Röschmann & Mohrig 1996), **Sweden** (this study).

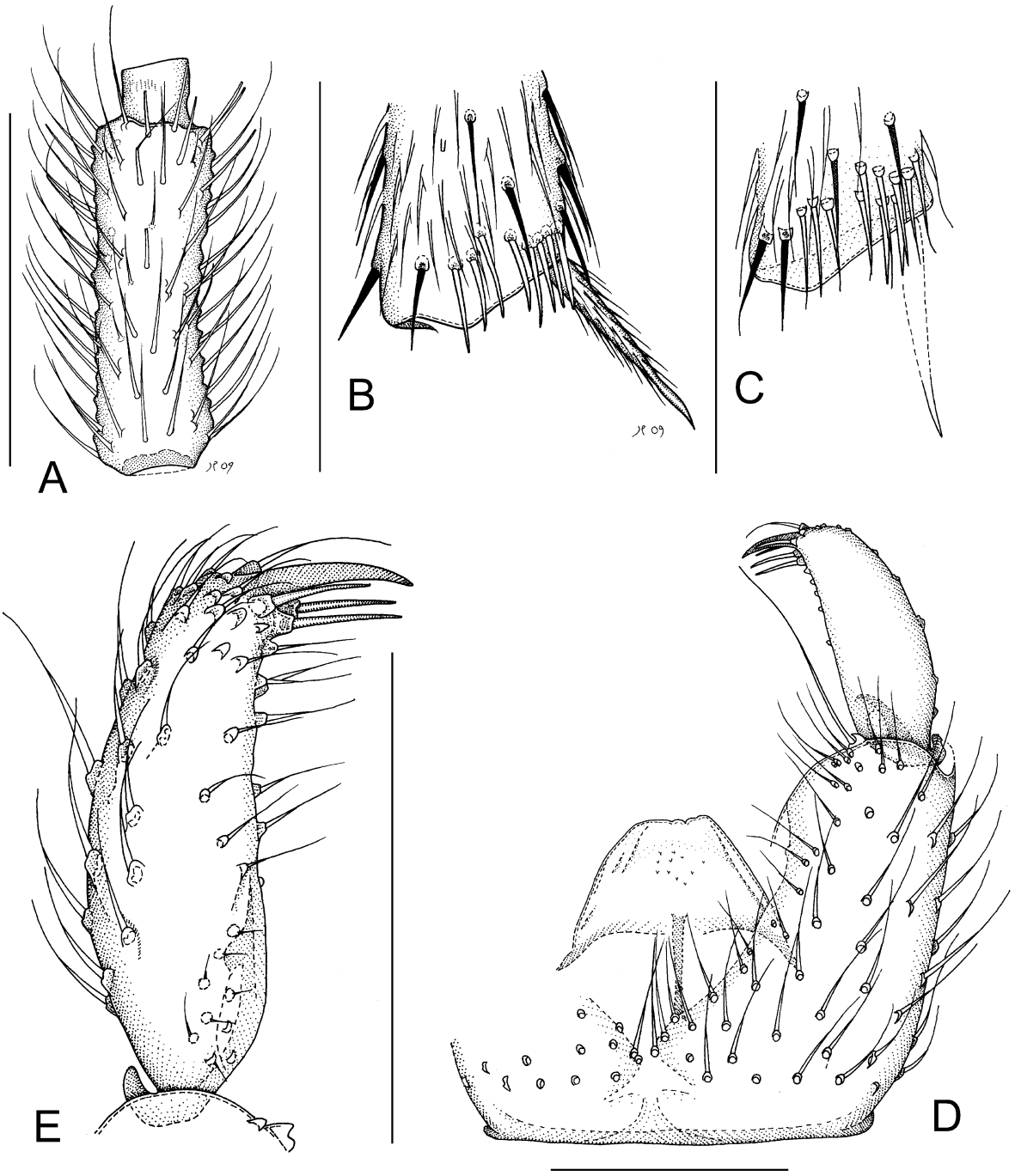

FIGURE 10. *Corynoptera perornata* Mohrig & Röschmann (from Sweden). **A.** Antennal flagellomere 4. **B, C.** Apical part of front tibia, prolateral view. **D.** Part of hypopygium, ventral view. **E.** Gonostylus, ventral view. Scale 0.1 mm.

Corynoptera caustica Mohrig & Röschmann, 1996

Corynoptera caustica Mohrig & Röschmann, in Röschmann & Mohrig, 1996: 299.

Description. See Röschmann and Mohrig (1996).

Discussion. The species was described from Greece based on one male, but the material has not been available. According to the original description (Röschmann & Mohrig 1996), the species is similar to *Corynoptera nigrocauda* and *C. perornata*. In *C. caustica* the vestiture of the front tibial organ seems to be in a completely non-arranged patch, whereas in *C. nigrocauda* and *C. perornata* the vestiture consists of a transverse comb-like element. *Corynoptera caustica* is similar to *C. nigrocauda* and differs from *C. perornata* by a short antennal flagellomere four which is ca. 1.7 times as long as broad instead of 2.8–3.5 times as long as broad in *C. perornata* . See also under *Corynoptera nigrocauda* and *C. perornata*.

Distribution. **Greece** (Röschmann & Mohrig 1996).

Corynoptera sphenoptera Tuomikoski, 1960

Figs. 1 B, 11 A–D, 12 A–E

Corynoptera sphenoptera Tuomikoski, 1960: 58.

Material studied. 2 males, **CANADA**, **Ontario**, Wylde Lake bog 6 km E Arthur, 24.x–14.xi.1987, D. Blades (in CNC); 1 male, **British Columbia**, Vancouver Island, Upper Carmanah Valley, Malaise trap, 26.vi–3.vii.1991, N. Winchester (in CNC); 3 males, same data but 4–15.vii.1991 (in MZH); 2 males, **CZECH REPUBLIC**, Bohemia, 2 km NW Duchcov, 50º36’40’’N 13º43’30’’E, flooded poplar forest along the old mining dump Osecka, 220 m, April 1998, Barták (in SDEI); Bohemia, 1 male, Bilina-Holibka, forest, 50º31’20’’N 13º49’40’’E, May–July 1998, Barták (in SDEI); 1 male, Bohemia, Šumava, Malá Niva, photoeclector, June–July 1998, Barták (in SDEI); 2 males, **FINLAND**, N, Helsinki, 1956, R. Tuomikoski (lectotype and paralectotype, hereby designated in order to fix the name of the species, in MZH); 1 male, Ab, Vihti, Vihtijärvi, 19.vii.1960, R. Tuomikoski (in MZH); same data as previous but 13–21.vi.1959 (in MZH); 2 males, Ab: Vihti, Salmi, 60.23°N 24.30°E, <100 m, spruce/birch/aspen forest, sweep-net, 27.v.2004, M. Jaschhof (in MZH), 1 male, Ab, Korppoo, Björkö, bog, pitfall trap, 15.v–16.vii.1968, P.T. Lehtinen (in MZH); 1 male, Ab, Turku, Ruissalo, Härkälänlahti, 15–28.vi.1977, P.T. Lehtinen (in MZH); 1 male, Ab, Turku, Ruissalo, 60.26°N 22.11°E, <100 m, mixed deciduous forest, sweep-net, 27.vi.2004, M. Jaschhof (in MZH); 1 male, A, Åland, Enklinge, meadow with junipers, pitfall trap, 20.vi–14.viii.1971, P.T. Lehtinen (in MZH); 1 male, Ab, Somero, Koisthuhta, 26–27.vii.1986, H. Hippa (in MZH); 1 male, N, Sipoo, Hindsby, forest, Malaise trap, 10–16.vi.2006, N. Laurenne (in MZH); 1 male, Ka, Vehkalahti, Paijärvi, Neikkarlampi, 5.vi.1985, J. Tuiskunen (in MZH); 1 male, Tb, Toivakka, Ruostesuo (688:3443), Malaise trap, 8.vi–1.vii.2003, J. Salmela (in MZH); 1 male, Tb, Konnevesi, Teerimäki (6941:468), Malaise trap, 10.v–11.vi.2003, J. Salmela (in MZH); 1 male, St, Huittinen, Mutilahti, 61.15°N 22.35°E, <100 m, birch forest with rowan, spruce, pine, sweep-net, 1.vi.2004, M. Jaschhof (in MZH); 2 males, Ks, Kuusamo, Rinteenlammit (7363761:3611320), spring, 170 m, Malaise trap, 31.v–3.viii.2005, J. Salmela (in MZH), 1 male, Ks, Kuusamo, Vansseli, (7349184:3607737), by brook, Malaise trap, 31.v–20.vi.2005, J. Salmela (in MZH); 1 male, N, Espoo, Central park, from tree stump, 23.v.1989, P. Vilkamaa (in MZH); 1 male, N, Espoo, Nuuksio, pitfall trap, 10.v–1.vi.1989, Biström & Vilkamaa (in MZH); 1 male, Ta, Tammela, Liesjärvi National Park, 60.39°N 23.54°E, <100 m, birch/spruce swamp forest, Malaise trap, 28.v–26.vi.2004, M. & C. Jaschhof (in MZH); 1 male, Kb, Kitee, 12.vii–5.x.1968, S. Koponen (in MZH); 1 male, Ob, Rovaniemi mlk, Klemetinhete (7368470:3419100), 110 m, by spring, Malaise trap, 1.vii–2.viii.2004, J. Salmela (in MZH); 1 male, **GERMANY**, BB, Kerkwitz, swamp pond, photoeclector, 26.v–9.vi.1999, Mohrig (no. 2602 in PWMP); 1 male, BE, Berlin-Treptow, district Müggelheim, Jagen 144, blue pan trap, October 1997, Späth (in SDEI); 3 males, BW, Ulm, spruce forest, dead logs, photoeclector, 12–26.v.1992, M. Buck (no. 3940–3942 in PKHH); 3 males, 1 female, same data but 21–28.v.1992 (no. 3949 in PKHH); 4 males, same data as previous but 26.v–19.vii.1992 (no. 3950 in PKHH); 2 males, BW, Bad Buchau, Federsee, Malaise trap, 5–24.v.2003, D. Doczkal (no. 4943, 4947 in PKHH); 3 males, same data as previous but 24.v–14.vii.2003, (no. 4501 in PKHH, 15 in PDDG, 9 in PASS); 1 male, again same data but 5–24.v.2003 (no. 5103 in PKHH); 1 male, BW, Beuren near Isny, Taufach-Fetznach-Moos, Malaise trap, 3.vi–14.vii.2003, D. Doczkal (no.

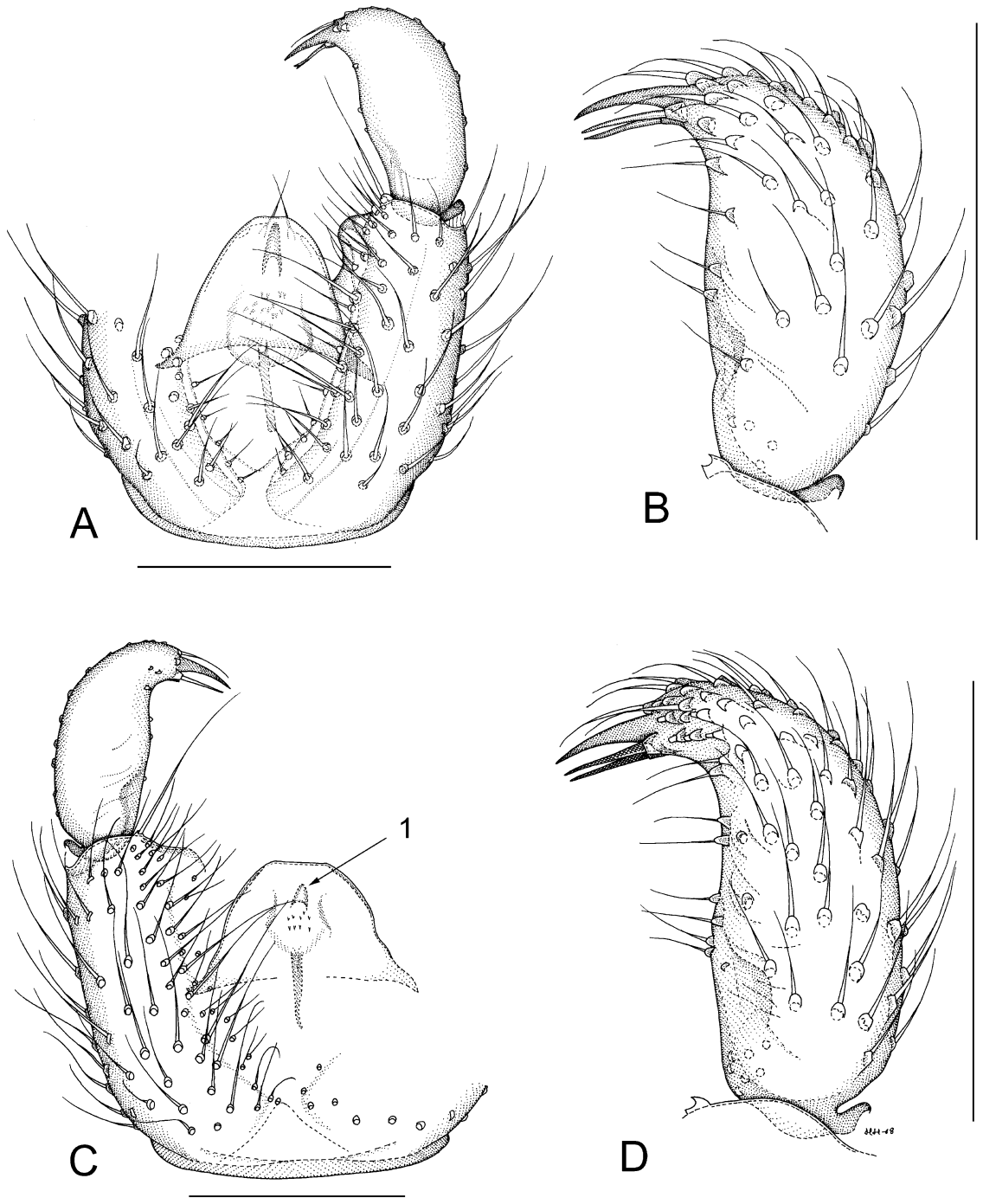

FIGURE 11. *Corynoptera sphenoptera* Tuomikoski (A from Finland, B from Sweden, C and D from Ontario). **A, C.** Part of hypopygium, ventral view. **B, D.** Gonostylus, ventral view. Scale 0.1 mm. 1 = dorsal finger-like process of tegmen.

62 in PDDG); 1 male, BW, Belchen, Malaise trap, 28.v–3.vii.2003, D. Doczkal (no. 91 in PASS); 1 male, MV, Altwarp, alder/birch/ash forest, sweep-net, 25.v.1995, M. Jaschhof (no. 5321 in PKHH); 2 males, MV, Karbow, spruce forest, sweep-net, 21.v.1994, M. Jaschhof (no. 5297 in PKHH); 2 males, NS, Harz, Wurmberg near Braunlage, coniferous forest with fern, grass and *Oxalis acetosella* undergrowth, 18.vii.1991, Menzel (in SDEI); 1 male, ST, Harz, Thale, Roßtrappe, mixed forest, sweep-net, 26.v.2006, K. Heller, (no. 4763 in PKHH); 1 male, SH, Gudow, Sarnekow lake, alder forest, sweep-net, 19.v.1991, K. Heller (no. 397 in PKHH; 1 male, **NETHERLANDS**, Tilburg, Kaaistoep, Malaise trap, 25.iv–2.v.1998 and 25.vii–1.viii. 1998, W. van Zuijlen (no. 3792 in PKHH); 1 male, same data as previous (no. 53 in NNKN); 1 male, **NORWAY**, Finnmark, Kirkenes, forest with birch, willow and bushes, exhaustor, 2./13.vii.1994, M. Jaschhof (no. 2581 in PWMP); 5 males, **POLAND**, Laskowiec, Biebrza

valley, swamp forest (alder), yellow dish, May 1994, Jaschhof, (no. 5406 in PKHH); 3 males, **RUSSIA**, **Krasnodar region**, Medvety Vorota, 1.vii.1967, B. Mamaev (no. 2585–2587 in PWMP); 2 males, **SWEDEN**, Up, Stockholm, N. Djurgården, coniferous forest, pitfall trap, 29.vi–13.vii.1992, T. Kronestedt & B. Viklund (in SMNH); 3 males, Sö, Tyresta National Park, 59°10'N 18°19'E, unburned forest (*Pinus*), Malaise trap (area 0), 7.iv–6.vi.2002, B. Viklund, L.-O. Wikars & H. Ahnlund (in SDEI), 1 male, same data as previous but 26.v–30.vii.2002 (in SDEI); 3 males, 1 female, **SWITZERLAND** ZH, Sihlwald near Zurich, photoeclector, 22.v–20.vi.1996, K. Schiegg (in PKHH).

Description. See Tuomikoski (1960) and Menzel and Mohrig (2000); for antennal flagellomere 4, see Fig. 12 A, for scutum and scutellum, see Fig. 1 B, for apical part of front tibia, see Fig. 12 B, for medial part of hind tibia, see Figs. 12 C, D, and E, for hypopygium, see Figs. 11 A–D.

Discussion. Menzel and Mohrig's (2000) concept of *Corynoptera sphenoptera* proved correct when we eventually found the two type specimens (Tuomikoski 1960) in the MZH collection and studied them.

Corynoptera sphenoptera is similar to *C. alneti, C. caustica, C. montana, C. nigrocauda, C. ninae, C. praevia, C. perornata*, and *C. perpusilla* (see under *C. perpusilla*). It differs from all by having only two gonostylar megasetae and a finger-like process dorsally on the tegmen. The species has also characteristically strong setae on the hind tibiae and a very dark and strong vestiture in the front tibial organ. There is a variation in the number of maxillary palpomeres, some species having two segments, some three, as observed by Menzel and Mohrig (2000). There is also a slight difference between the specimens from Europe and North America: the spinose setae on the hind tibia are much stronger in the Palaearctic specimens (Figs. 12 C, D, E).

Distribution. **Canada** (this study), **Czech Republic** (Menzel *et al.* 2000, Rudzinski 1994b), **Finland** (Tuomikoski 1960), **Germany** (Hennicke *et al.* 1997, Menzel & Heller 2006, Menzel & Mohrig 2000, Menzel *et al.* 2003), (Rudzinski 1993b: as *C. dubitata*), **Great Britain** (Menzel *et al.* 2006, **Italy (**Frank *et al.* 2005**), Netherlands** (Heller & Menzel 2004), **Norway** (this study), **Poland** (this study), **Russia, Krasnodar region** (this study), **Sweden** (Heller *et al.* 2009), **Switzerland** (Schiegg *et al.* 1999).

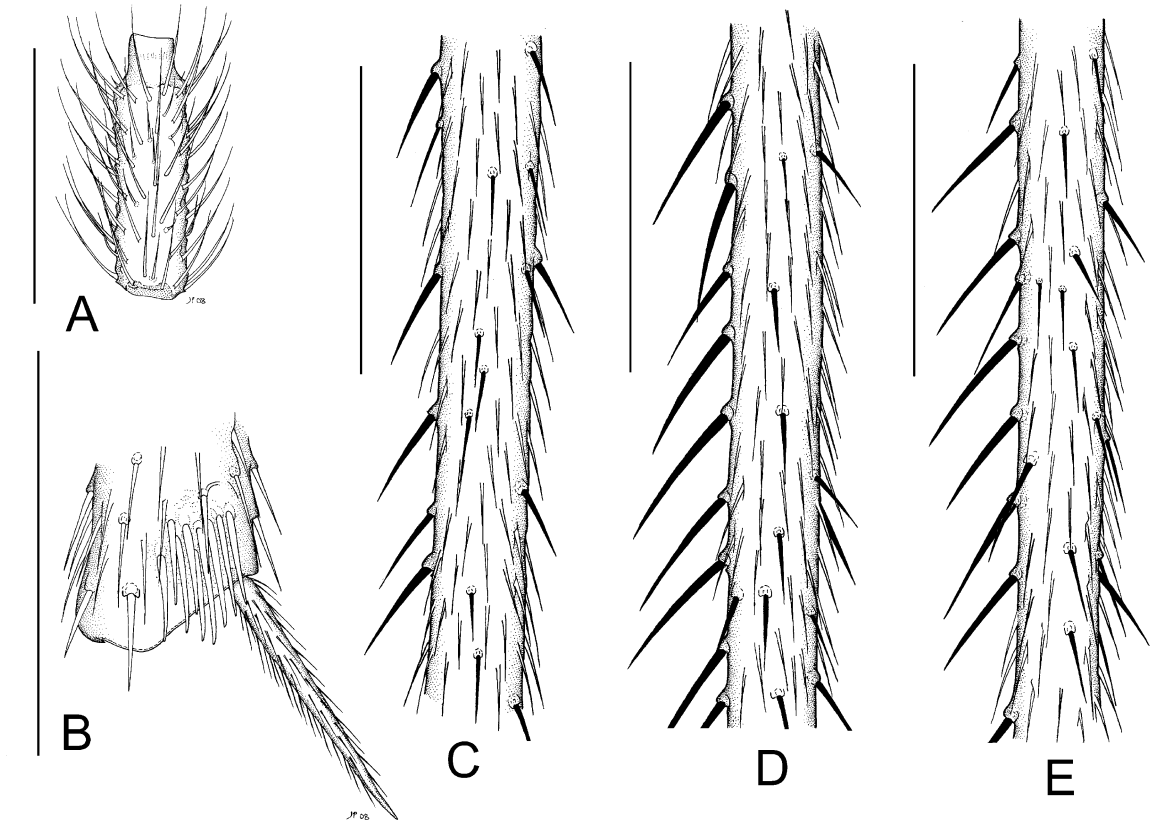

FIGURE 12. *Corynoptera sphenoptera* Tuomikoski (A, B, C from British Columbia, D from Czech Republic, E from Finland). **A.** Antennal flagellomere 4. **B.** Apical part of front tibia, prolateral view. **C, D, E.** Medial part of tibia 3, prolateral view. Scale 0.1 mm.

Remark: The specimen, recorded from Greece by Röschmann and Mohrig (1996) as *C. sphenoptera*, belongs probably to a hitherto undescribed species.

***Corynoptera serotina* sp. n.**
Figs. 13 A–D

Material studied. *Holotype male*. **SPAIN**, Retuerta de Pina near Zaragoza, *Juniperus thurifera* forest, Malaise trap, 20.x.1991, J. Blasco-Zumeta (no 2176 in PWMP). *Paratypes.* 1 male, **SPAIN,** Barcelona, Vilassar de Dalt, Malaise trap, 19–25.xi.1995, Jara (in SDEI); 1 male, same data as previous but 5–11.xi.1995 (in SDEI).

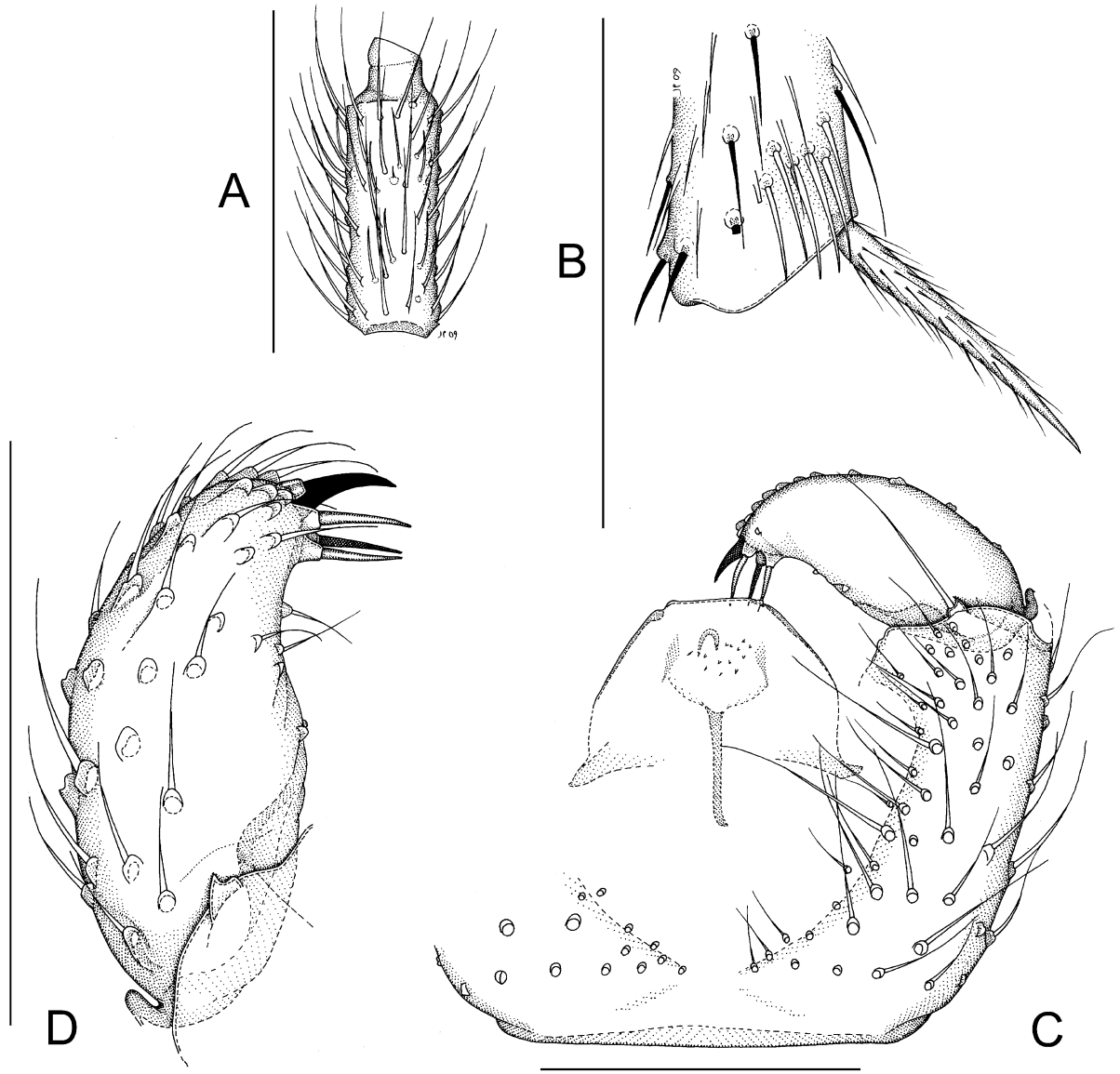

FIGURE 13. *Corynoptera serotina* sp. n. (holotype). **A.** Antennal flagellomere 4. **B.** Apical part of front tibia, prolateral view. **C.** Part of hypopygium, ventral view. **D.** Gonostylus, ventral view. Scale 0.1 mm.

Description. Male. **Head**. Brown, maxillary palpus very pale brown, antenna slightly paler than face. Eye bridge 3 facets wide. Face with 11 scattered dark long and short setae. Clypeus with 2 dark setae. Maxillary palpus with 3 palpomeres; palpomeres 1 and 3 subequal in length, palpomere 2 shorter; palpomere 1 with one long sharp seta, with a dorsal patch of sensilla; palpomere 2 with 1 long sharp seta and 5–6 shorter truncate setae, palpomere 3 with 5–6 short truncate setae. Antennal flagellomere 4, Fig. 13 A, 2.9–3.6 times as long as wide, the neck shorter than the width of flagellomere, the longest setae slightly longer than the width of flagellomere. **Thorax**. Unicolorous brown, setae dark. Anterior pronotum with 2–3 setae. Episternum 1 with 4–5 setae. **Wing**. Length 1.5 mm. Width/length 0.45. R1/R 075. c/w 0.60. r-m and bM poorly visible in the specimens studied, non-setose. Haltere pale brown. **Legs**. Pale yellowish brown. Apical part of front, Fig. 13 B: tibial organ with pale vestiture, forming an

indistinct comb-like row. Front tibial spur slightly longer than the tibial width. **Abdomen**. Brown. Setae dark. **Hypopygium,** Figs. 13 C, D. Brown, paler than abdomen. Gonocoxa longer than gonostylus. The ventral setosity of gonocoxa sparse, a few of the setae at the apical part of the mesial margin greatly elongated. Gonostylus elongated, the mesial side slightly impressed on apical third; the setosity sparse, apicomesially with a few elongated setae; with curved apical tooth, with 3 megasetae, the megasetae subequal in size, the uppermost recurved, the basal procurved. Tegmen with a dorsal finger-like process.

Discussion. *Corynoptera serotina* resembles *C. sedula* and *C. consumpta* but is distinguished by having a finger-like process dorsally on the tegmen and apically less curved gonostylus. See also under *C. subsedula*.

Etymology. The name is Latin, *serotina*, happening late, referring to the late date of the capture of the type material.

Corynoptera sedula Mohrig & Krivosheina, 1985

Figs. 14 A–C

Corynoptera sedula Mohrig & Krivosheina, in Mohrig *et al.*, 1985c: 433.

Material studied. 1 male, **RUSSIA**, **Yamal Peninsula**, Khadyta, pitfall trap, 17.vii.1981, Olschwang (holotype, no. 2554 in PWMP).

Description. See Mohrig, Mamaev and Krivosheina (1985); for antennal flagellomere 4, apical part of front tibia and gonostylus, see Figs. 14 A–C.

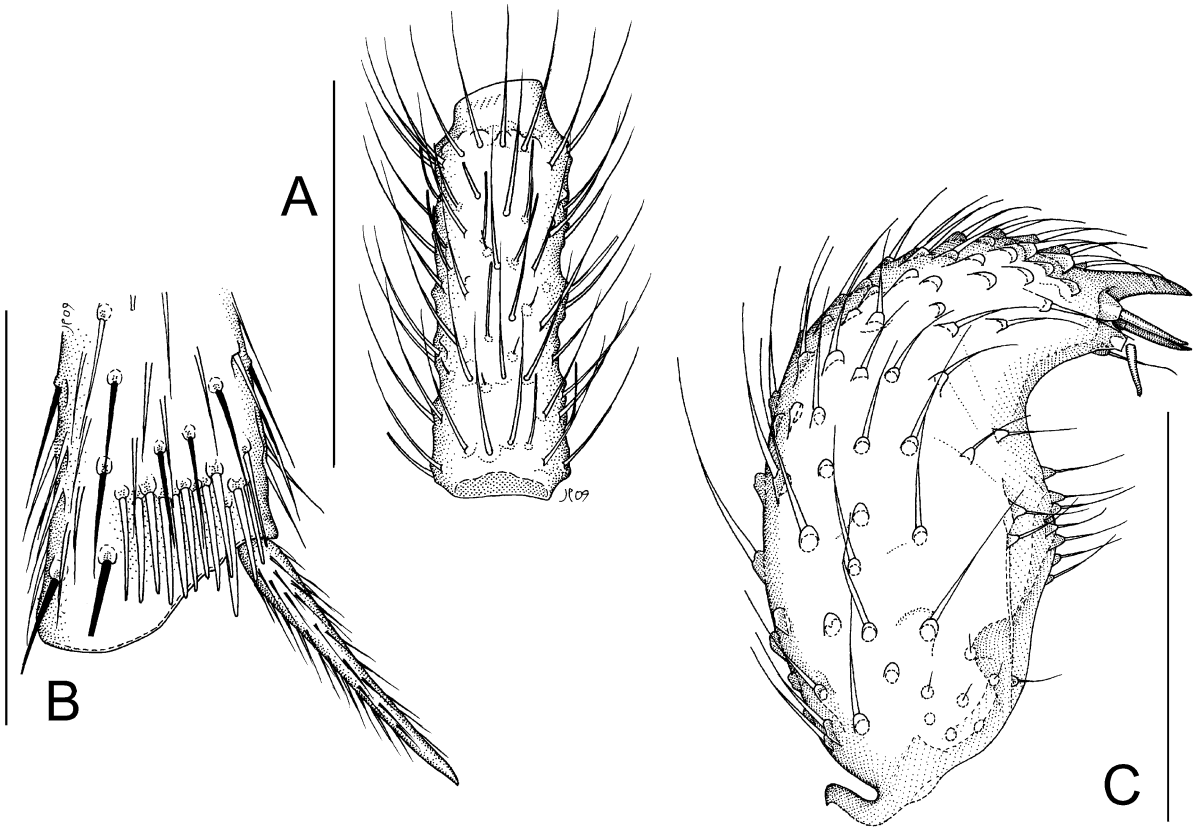

FIGURE 14. *Corynoptera sedula* Mohrig & Krivosheina (holotype). **A.** Antennal flagellomere 4. **B.** Apical part of front tibia, prolateral view. **C.** Gonostylus, ventral view. Scale 0.1 mm.

Discussion. Corynoptera sedula was described from one male from Yamal Peninsula, northern Russia, with an additional male mentioned from Germany. Instead of the holotype, this male was illustrated in the original description (Mohrig, Mamaev & Krivosheina 1985c). We have studied both specimens (Figs. 14 A, B, C, 15 C, D, E), and it is obvious that the German specimen belongs, together with numerous specimens published later as *C. sedula*, to *C. consumpta* (Freeman). Of *C. sedula*, so far only the holotype is known.

Corynoptera sedula is very similar to *C. consumpta* but distinguished by it's much thicker and dark, not pale, vestiture of abdomen and the front tibial organ. Both species also resemble *C. serotina* and *C. subsedula*. For further discussion, see under these species.

Distribution. **Russia, Yamal Peninsula** (Mohrig *et al.* 1985c).

***Corynoptera consumpta* (Freeman, 1987) restit.**
Figs. 15 A–F

Bradysia consumpta Freeman, 1987: 202.
nec *Corynoptera sedula* Mohrig & Krivosheina, 1985. Unjustified synonymy by Menzel (1998: 21).

Material studied. 1 male, **DENMARK**, Bornholm, Almindingen, deciduous forest at Rydderknaegten, sweep-net, 2.viii.2004, K. Heller (in PKHH); 1 male, **FRANCE**, Lyon, 2.viii.1990, M. Barták (no. 2190 in PWMP); 1 male, **GERMANY** BW, Bad Rotenfels, avalanche forest Birkenkopf, Malaise trap, 3.iv–3.v.2003, D. Doczkal (no. 122 in PASS); 1 male, same data as previous but 16.ix–30.x.2003 (no. 3537 in PKHH); 1 male, BW, Malsch, Nature Reserve Neuwiesen, Malaise trap, 23.v.1995, D. PDDG (no. 83 in PDDG); 1 male, HE, Odenwald, Erzbach, Roter Kandel, meadow, 30.iv.1982, H.-G. Fritz (no. 2555 in PWMP); 2 males, MV, Wampen near Greifswald, alder/birch swamp forest, sweep-net, 3.viii.1993, M. Jaschhof (no. 5363 in PKHH); 1 male, RP, Gönnersdorf, managed grassland with fruit trees, Malaise trap, 14–21.v.1994, K. Cölln (no. 1911 in PKHH); 1 male, RP, Kirchheimbolanden, Nature Reserve, Malaise trap, 23.v–7.vi.2002, D. Doczkal (no. 4903 in PKHH); 1 male, SH, Reinsdorf-Dobien near Wittenberg, wet meadow near brook, 25.vii.1988, F. Menzel (no. 2566 in PWMP); 1 male, SH, Heikendorf, garden, sweep-net, 15.v.1993, K. Heller (no. 319 in PKHH); 1 male, same data as previous but 27.viii.1993 (no. 401 in PKHH); 2 males, same data again but wayside, 4.v.2003 (no. 3972 in PKHH); 1 male, same data again but, Turmholz, beech forest edge, 11.v.2003 (no. 3976 in PKHH); 1 male, same data again but beech forest Schrevenborn, 8.v.2004 (no. 4164 in PKHH); 6 males, 1 female, SH, Kiel, district Meimersdorf, hedgerow, pitfall trap, 1–15.v.1993, K. Heller (no. 306–310, 312 in PKHH, no. 311 in PWMP); 2 males, SH, Kiel, Rönne, mixed forest, sweep-net, 4.viii.1996, K. Heller (no. 1654 in PKHH); 2 males, SH, Kiel University, garden, Malaise trap, 28.iv–5.v.1995, K. Heller (no. 983, 984 in PKHH); 1 male, same data again but 16–23.vi.1995 (no. 1025 in PKHH); 1 male, same data again but 4–11.viii.1995 (no. 1109 in PKHH); 2 males, same data but 10–16.v.1996 (no. 1378 in PKHH); 1 male, same data again but 2–9.viii.1996 (no. 1650 in PKHH); 2 males, SH, Meggerdorf, Alte Sorge Nature Reserve, bog, Malaise trap, 17–31.v.1996, K. Heller, (no. 1484, 1485 in PKHH); 1 male, SH, Mönkeberg, old gravel-pit, sweep-net, 15.v.2002, K. Heller (no. 3741 in PKHH); 1 male, SH, Schierensee, meadow, photo-eclector, 6–20.viii.1991, J. Grabow (no. 458 in PKHH); 1 male, **GREAT BRITAIN**, England, Herts., Harpenden, Rothampsted House, 14.viii.1950, B.R. Laurence (holotype, in BMNH); 1 male, **SLOVAKIA**, Terchova, Vratna, subalpine meadows, sweep-net, 23.vii.2007, K. Heller (no. 5640 in PKHH); 1 male, **SWEDEN**, Ha, Laholm, Mästocka ljunghed, north-eastern edge, heather, Malaise trap, 20.viii–13.ix.2003, Swedish Malaise Trap Project (no. 935 in SMNH); 1 male, same data as previous but 15.vi–9.vii.2004 (no. 6035 in PKHH); 6 males, Sk, Höganäs, Mölle, Kullabergs Nature Reserve, oak forest in southern slope, Malaise trap, 9.viii–20.ix.2005, Swedish Malaise Trap Project (no. 2843, 2877–2881in SMNH); 1 male, Sk, Klippan, Skäralid, valley below northern Lierna, rich beech forest, Malaise trap, 14.vii–6.viii.2004, Swedish Malaise Trap Project (no. 6726 in PKHH); 2 males, Öl, Mörbylånga, Skogsby, Gamla Skogsby, meadow with bushes, Malaise trap, 20.v–28.vi.2006, Swedish Malaise Trap Project (no. 2355, 2550 in SMNH).

Description. See Freeman (1987); for antennal flagellomere 4, see Fig. 15 A, for apical part of front tibia, see Fig. 15 B, for hypopygium, see Figs. 15 C–F.

Discussion. Corynoptera consumpta was described in the genus *Bradysia* from the holotype male and eight paratype males from England and three from Wales (Freeman 1987). We have studied the holotype and *C. consumpta* is very similar to *C. reduncа*, *C. sedula* and *C. serotina*. For further discussion, see under the three latter. See also under *C. subsedula*.

Distribution. **Czech Republic** (Menzel *et al.* 2000: as *C. sedula*), **Denmark** (Heller & Menzel 2004: as *C. sedula*), **France** (this study), **Germany** (Heller 1999, 2002a, Hövemeyer 1996b, Menzel *et al.* 1990, 2003, Mohrig *et al.* 1985c, Rudzinski 2003: all as *C. sedula*), **Great Britain** (Freeman 1987: as *C. consumpta*, Menzel *et al.* 2006: as *C. sedula*), **Slovakia** (this study), **Sweden** (Heller *et al.* 2009: as *C. sedula*).

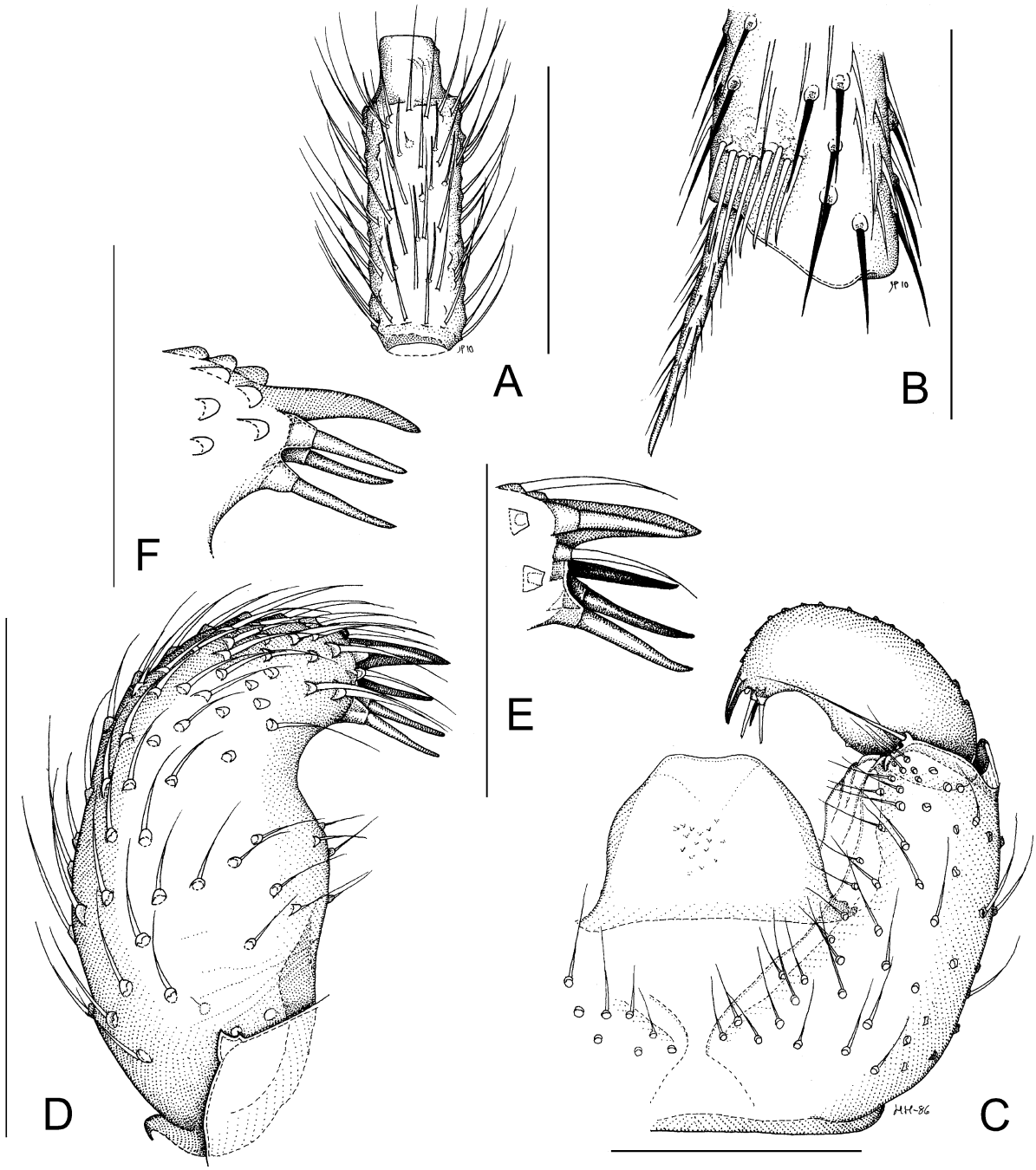

FIGURE 15. *Corynoptera consumpta* (Freeman) (A–E from Germany, F from Chech Republic). **A.** Antennal flagellomere 4. **B.** Apical part of front tibia, prolateral view. **C.** Part of hypopygium, ventral view (aedeagal apodeme omitted). **D.** Gonostylus, ventral view. **E, F.** Apical part of gonostylus, ventral view. Scale for A–B 0.1 mm, for E and F 0.05 mm.

***Corynoptera redunca* sp. n.**
Figs. 16 A–D

Material studied. Holotype male. **CANADA**, **Quebec**, Gatineau Park, King Mountain, 45°29’20’’N 75°51’45’’W, summit, 354 m, Malaise trap, 16–21.vi.2005, P. Vilkamaa (in CNC). *Paratypes*. 2 males, same data as holotype (in CNC); 2 males, same data as previous but 11–16.vi.2005 (in MZH); 1 male, same locality as holotype but sweep-net, 16.vi.2005, S. Brooks (in CNC); 1 male, same data again but P. Vilkamaa (in MZH); 1 male, **Ontario**, Mainfleet Bog, 8 km S Welland, 1.vi.1988, A. Stirling (in SMNH); 2 males, same data as previous but 10–24.v.1988 (in SMNH); 1 male, same data but 25–31.v.1988 (in SMNH).

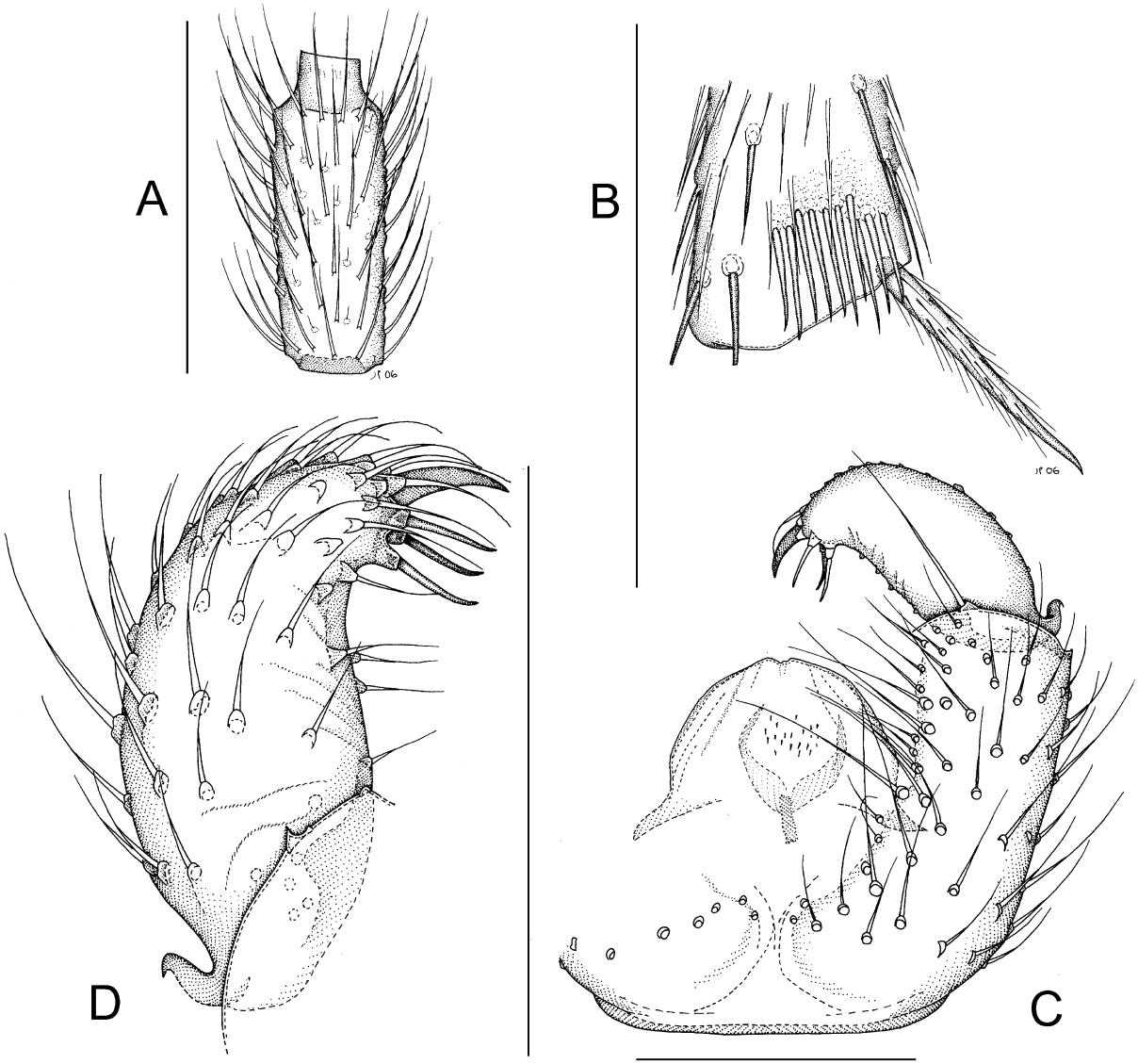

FIGURE 16. *Corynoptera redunca* sp. n. (A, B paratypes, C, D holotype). **A.** Antennal flagellomere 4. **B.** Apical part of front tibia, prolateral view. **C.** Part of hypopygium, ventral view. **D.** Gonostylus, ventral view. Scale 0.1 mm.

Description. Male. **Head**. Brown, maxillary palpus very pale brown, antenna concolorous with face. Eye bridge 2–3 facets wide. Face with 8–23 scattered dark long and short setae. Clypeus with 1–2 dark setae. Maxillary palpus with 3 palpomeres; palpomere 1 longer than palpomere 3, palpomere 2 shortest; palpomere 1 with one long sharp seta, with a dorsal patch of sensilla; palpomere 2 with 1(2) long sharp seta and 3–4 shorter truncate setae, palpomere 3 with 5–6 short truncate setae. Antennal flagellomere 4, Fig. 16 A, 2.1–2.5 times as long as wide, the neck shorter than the width of flagellomere, the longest setae slightly longer than the width of flagellomere. **Thorax**. Unicolorous pale brown, the setae dark. Anterior pronotum with 2–3 setae. Episternum 1 with 2–6 setae. **Wing**. Length 1.2–1.3 mm. Width/length 0.40–0.50. R1/R 0.50–0.65. c/w 0.50–0.65. r-m and bM variable in length, or r-m/bM 0.80–1.55, both r-m and bM non-setose. Haltere pale brown. **Legs**. Pale yellowish brown. Apical part of front tibia, Fig. 16 B: tibial organ with pale vestiture, forming an uneven comb-like row with a few scattered elements. Front tibial spur slightly longer than the tibial width. **Abdomen**. Brown, paler than thorax. Setae dark. **Hypopygium,** Figs. 16 C, D. Brown, as abdomen. Gonocoxa longer than gonostylus. The ventral setosity of gonocoxa sparse, a few of the setae at the apical part of the mesial margin elongated. Gonostylus elongated, the mesial side slightly impressed on apical third; the setosity sparse, apicomesially with a few elongated setae; with a strong apical tooth, with 3 megasetae, the megasetae subequal in size, slightly curved. Tegmen with weak apicolateral shoulders dorsally, without a dorsal finger-like process.

Discussion. Corynoptera redunca is similar to *C. sedula* and *C. consumpta*. It is distinguished by having strongly elongated setae at ventromesial margin of gonocoxa, and longer, more curved apical tooth of gonostylus. *Corynoptera redunca* also greatly resembles *C. serotina*, but has the apical part of gonostylus more curved and lacks a finger-like process dorsally on the tegmen. See also under *C. subsedula*.

Etymology. The name is Latin, *redunca*, bent or curved backward, referring to the apically curved gonostylar megasetae.

***Corynoptera subsedula* Mohrig & Mamaev, 1987**

Figs. 17 A–D

Corynoptera subsedula Mohrig & Mamaev, in Mohrig *et al.*, 1987: 99.

Material studied. 11 males, **CANADA**, **Ontario**, Algonquin, primary forest, sweep-net, 1.vi.1991, Barták (in SDEI); 1 male, **FINLAND**, Tb, Konnevesi, Sauvonniemi (6934:464), 12.vi.2003, J. Salmela (in MZH); 1 male, **RUSSIA**, **Tuva**, Ishtii-Khem, 10.vii.1974, B. Mamaev (holotype, in PWMP); 1 male, same data as previous but 10.vi.1974 (no. 2132 in PWMP).

Description. See Mohrig *et al.* (1987); for apical part of front tibia, see Fig. 17 A, for hypopygium, see Figs. 17 B, C and D.

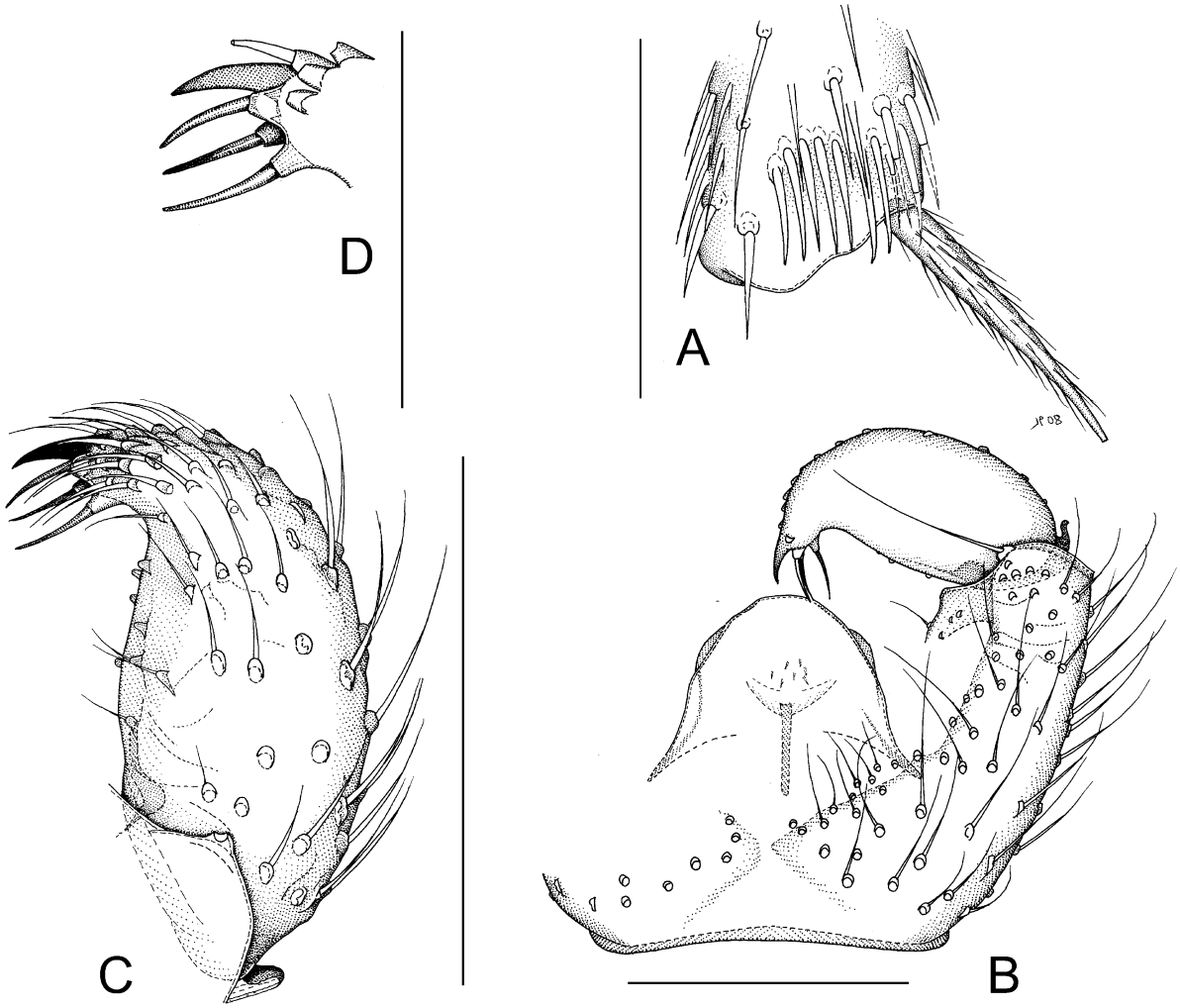

FIGURE 17. *Corynoptera subsedula* Mohrig & Mamaev (A, B from Finland, C, D holotype). **A.** Apical part of front tibia, prolateral view. **B.** Part of hypopygium, ventral view. **C.** Gonostylus, ventral view. **D.** Apical part of gonostylus, ventral view. **F.** Gonostylar megasetae, ventral view. Scale for A, B and C 0.1 mm, for D 0.05 mm.

Discussion. Corynoptera subsedula was described from the holotype male from Russia, Tuva, and has been since recorded only once (Salmela & Vilkamaa 2005). It is similar to *C. consumpta, C. redunca* and *C. sedula* and to a lesser extent *C. serotina.* It differs from all by the conspicuously narrower and more strongly curved apical part of the gonostylus, and further from *C. serotina* by lacking a finger-like process dorsally on the tegmen.

Distribution. **Canada** (this study), **Finland** (Salmela & Vilkamaa 2005), **Russia, Tuva** (Mohrig *et al.* 1987).

***Corynoptera curvapex* sp. n.**
Figs. 18 A–E

Material studied. Holotype male. **JAPAN**, Shikoku, Kochi Pref., Ashizuri Peninsula, Tosashimizu, Sata-yama Forest Reserve, 300–400 m, primary evergreen deciduous forest (*Castanopsis sieboldii*), sweep-net, 10.xi.1998, M. Jaschhof (in SDEI). *Paratypes.* 2 males, same data as holotype but 9.xi.1998 (in SDEI); 4 males, Shikoku, Kochi Pref., Kochi City, Asakura, Asakura Shrine, dry evergreen deciduous forest, 100 m, sweep-net, 6.xi.1998, M. Jaschhof (in SDEI); 4 males, Shikoku, Kochi Pref., Kochi City, Asakura, mixed secondary coniferous and evergreen deciduous forest with *Cryptomeria japonica* and bamboo, 50 m, Malaise trap, 4–11.xi.1998, M. Jaschhof (in SDEI); 2 males, same data but 11.xi.1998 (in KUEC); 2 males, Honshu, Kyoto Pref., Mt. Daimonji NW of Kyoto, mixed forest, exhaustor, 26.x.1995, M. Jaschhof (in KUEC); 6 males, Honshu, Hyogo Pref., Mt. Hyonosen, deciduous forest (*Fagus crenatus* and bamboo), 1200 m, sweep-net, 28.ix.1995, M. Jaschhof & Yagi (in KUEC); 3 males, Honshu, Fukushima Pref., Abukuma Highland, Iwaki City, Tabito, 700 m, secondary deciduous forest, *Fagus* spp., *Quercus* spp., exhaustor, 7.x.1998, M. Jaschhof (in KUEC).

Description. Male. **Head**. Brown, maxillary palpus very pale brown, antenna slightly paler than face. Eye bridge 3 facets wide. Face with 4–7 scattered dark longer and shorter setae. Clypeus with 1 dark seta. Maxillary palpus with 3 palpomeres; palpomere 1 longer than palpomere 3, palpomere 2 shortest; palpomere 1 with one long sharp seta, with a dorsal patch of sensilla; palpomere 2 with 1 long sharp seta and 2–3 shorter truncate setae, palpomere 3 with 2–4 short truncate setae. Antennal flagellomere 4, Fig. 18 A, 3.0–3.7 times as long as wide, the neck relatively long but shorter than the width of flagellomere, the longest setae much longer than the width of flagellomere. **Thorax**. Yellowish, scutum slightly darker, setae dark. Anterior pronotum with 2–3 setae. Episternum 1 with 3–6 setae. **Wing**. Length 1.1–1.5 mm. Width/length 0.35–0.45. R1/R 0.65–0.95. c/w 0.70–0.80. r-m and bM nearly subequal in length, or bm shorter, r-m/bM 1.0–1.85. both r-m and bM non-setose. Haltere pale brown. **Legs**. Pale yellowish brown. Apical part of front tibia, Fig. 18 B: tibial organ with the vestiture dark and long, forming a comb-like row. Front tibial spur slightly longer than the tibial width. **Abdomen**. Brown. Setae strong, dark. **Hypopygium,** Figs. 18 C, D, E. Brown, concolorous with abdomen. Gonocoxa and gonostylus subequal in length. The ventral setosity of gonocoxa sparse, a few of the setae at the apical part of the mesial margin greatly elongated. Gonostylus tumid, the mesial side slightly impressed on apical third, and curved mesad; the setosity sparse, apicomesially with a few elongated setae; with an apical tooth, with 3 megasetae, the medial one of the megasetae strongest. Tegmen simple, truncate, without a dorsal finger-like process.

Discussion. In *Corynoptera curvapex* there is variation in the size of the apical tooth among specimens (Figs. 18 C, D, E). *Corynoptera curvapex* is similar to *C. exerta*. Both these species differ from other reminiscent species by having the apical tooth of gonostylus shorter than the gonostylar megasetae and by having the apical part of the gonostylus curved mesiad. *Corynoptera curvapex* differs from *C. exerta* by having the gonostylus almost as long as gonocoxa, by having the medial one of the megasetae larger than the others, by having the tegmen trapezoidal, with straight lateral sides, not semicircular, and by having the flagellomeral setae longer. By their hypopygium, both species are superficially similar to *C. decepta*, but the latter has the apico-mesial part of gonostylus ventrally impressed and a strongly demarcated semicircular aedeagal margin. See also under *C. decepta.*

Etymology. The name is derived from the Latin words *curvatus*, curved, and *apex*, apex, referring to the curved apex of the gonostylus.

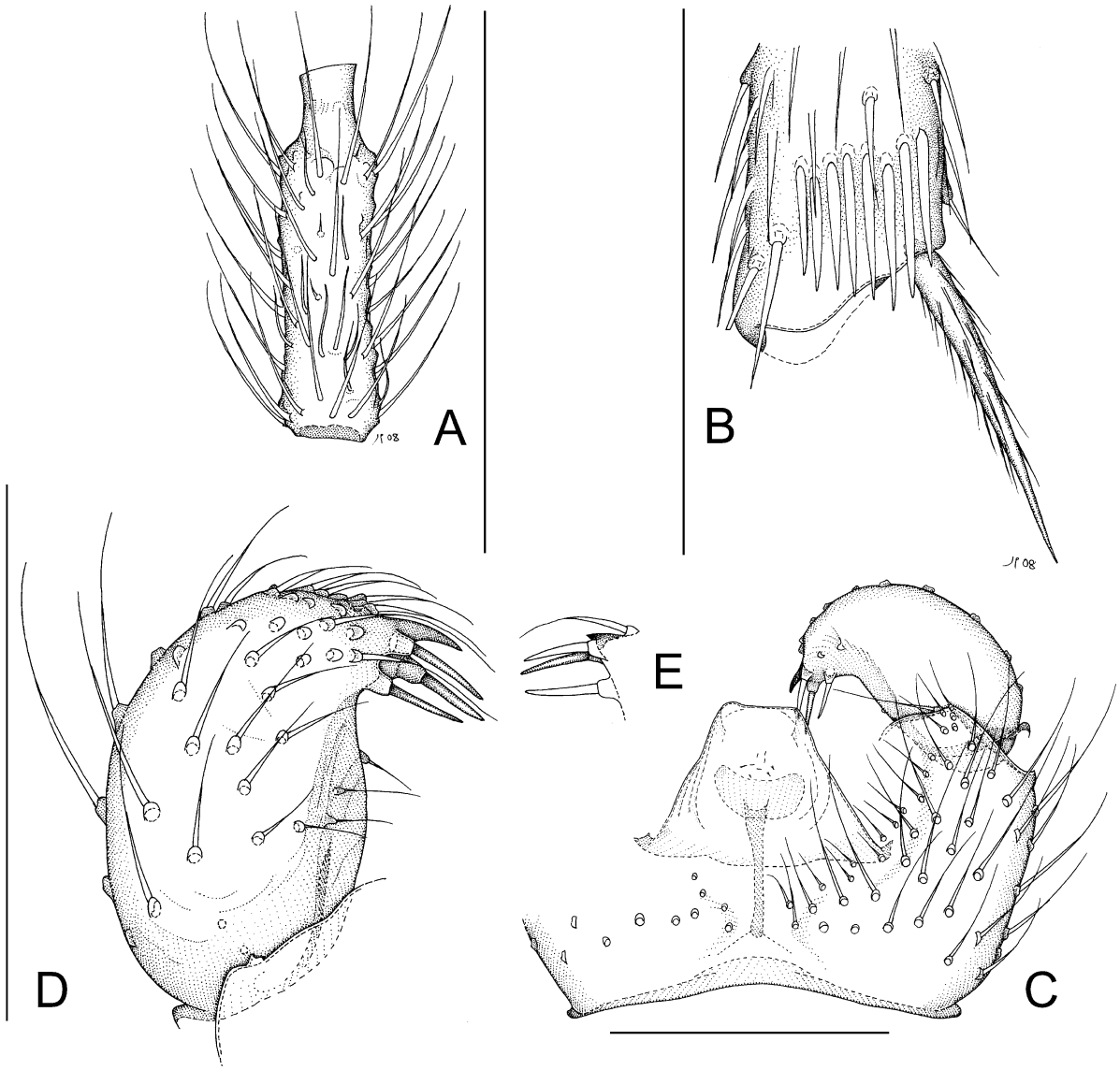

FIGURE 18. *Corynoptera curvapex* sp. n. (A paratype from Honshu, C paratype from Shikoku, B, D, E holotype). **A.** Antennal flagellomere 4. **B.** Apical part of front tibia, prolateral view. **C.** Part of hypopygium, ventral view. **D.** Gonostylus, ventral view. **E.** Apex of gonostylus, ventral view. Scale 0.1 mm, for E as D.

***Corynoptera exerta* sp. n.**
Figs. 19 A–D

Material studied. Holotype male. **RUSSIA**, **Primorsk region**, Ussuriysk Nature Reserve, 30.vi.1991, P. Vilkamaa (in MZH). *Paratype*. 1 male, **Khabarovsk region**, Khekhzyrsky Zapovednik, 8.vii.1975, E. Antonova (no. 2059 in PWMP).

Description. Male. **Head**. Brown, maxillary palpus very pale brown, antenna paler than face. Eye bridge 3 facets wide. Face with 3 dark longer and shorter setae. Clypeus non-setose. Maxillary palpus of one side with 2 palpomeres, the other with 3 palpomeres, of the latter, palpomere 1 longer than palpomere 2, palpomere 3 shortest; palpomere 1 with one long sharp seta, with a dorsal patch of sensilla; palpomere 2 with 1 long sharp seta and 2 shorter truncate setae, palpomere 3 with 1 short truncate seta. Antennal flagellomere 4, Fig. 19 A, 3.1 times as long as wide, the neck shorter than the width of flagellomere, the longest setae slightly longer than the width of flagellomere. **Thorax**. Unicolorous brown, Setae dark. Thorax broken in the specimens studied. **Wing**. Wings missing or broken in the specimen studied, c/w 0.70. Haltere pale brown. **Legs**. Yellow. Apical part of front tibia, Fig. 19 B: tibial organ with the vestiture dark, forming an uneven comb-like row. Front tibial spur slightly longer

than the tibial width. **Abdomen**. Pale brown. Setae dark. **Hypopygium,** Figs. 19 C, D. Brown, as abdomen. Gonocoxa longer than gonostylus. The ventral setosity of gonocoxa sparse, a few of the setae at the apical part of the mesial margin greatly elongated. Gonostylus elongate, apically narrowed and curved mesad; the setosity sparse, apicomesially with a few elongated setae; with an apical tooth, with 3 megasetae, the megasetae subequal in size, straight. Tegmen simple, broad, without a dorsal finger-like process.

Discussion. Corynoptera exerta resembles *C. curvapex*. For distinguishing characters, see under *C. curvapex.*

Etymology. The name is Latin, *exerta*, put forth, referring to the shape of the apical part of gonostylus.

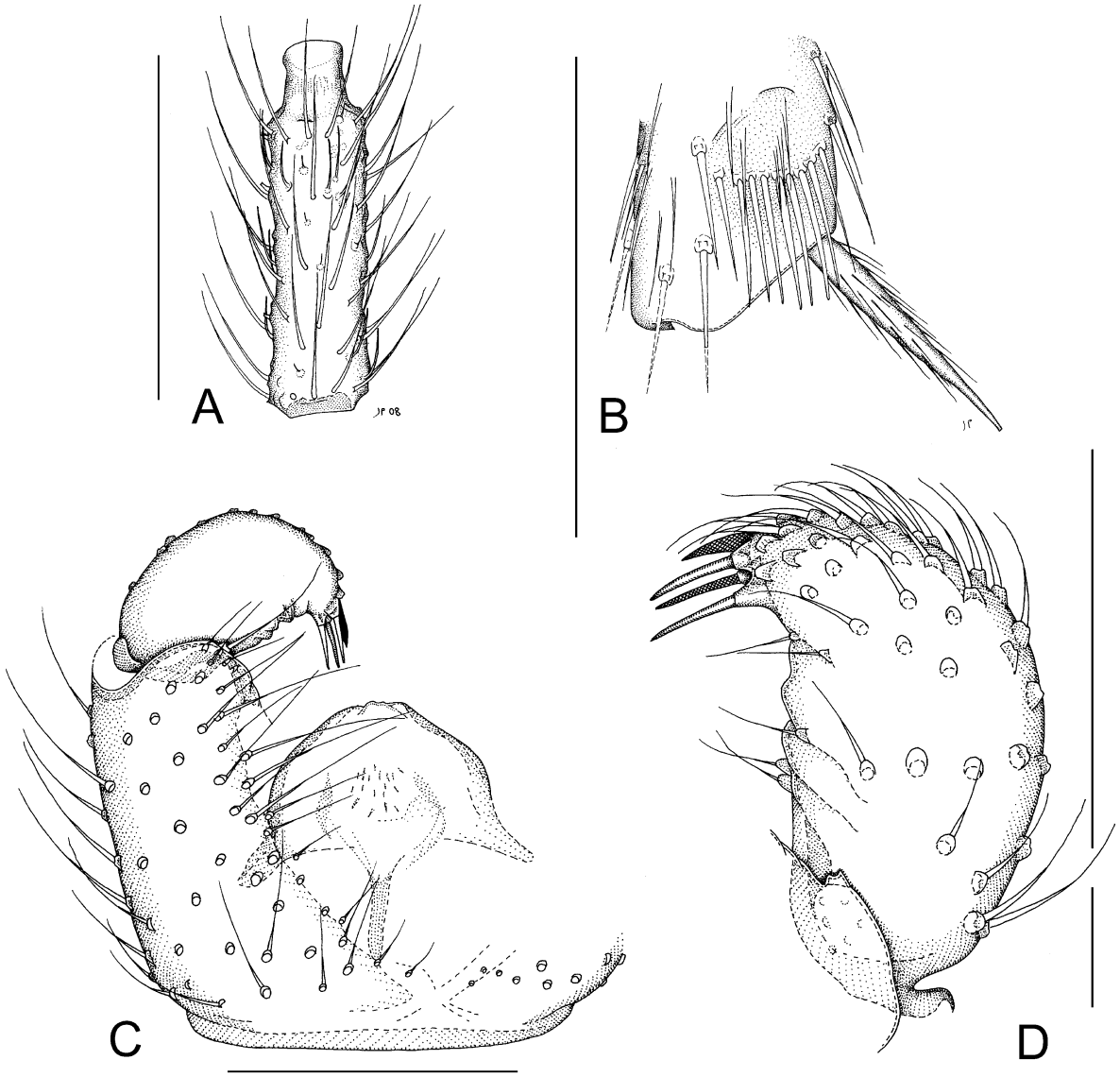

FIGURE 19. *Corynoptera exerta* sp. n. (holotype). **A.** Antennal flagellomere 4. **B.** Apical part of front tibia, prolateral view. **C.** Part of hypopygium, ventral view. **D.** Gonostylus, ventral view. Scale 0.1 mm.

***Corynoptera micula* sp. n.**

Figs. 20 A, B

Material studied. Holotype male. **JAPAN**, Kyushu, Kagoshima, Mt. Terayama, mixed forest, xerophyll forest (*Cryptomeria japonica*), exhaustor, sweep-net, 17.ix.1995, M. Jaschhof (in SDEI). *Paratypes*. 1 male, Kyushu, Kagoshima Pref., Mt. Kinpou, deciduous forest, 600 m, sweep-net, 18.ix.1995, M. Jaschhof (in SDEI); 1 male, Honshu, Osaka Pref., Mino, mixed forest (deciduous forest and *Cryptomeria japonica*), sweep-net, 29.ix.1995, M. Jaschhof (in SDEI); 1 male, Honshu, Ibaraki Pref., Kitaibaraki, Ogawa Reserve Forest, secondary deciduous forest, Malaise trap, 30.iv–14.v.1996, Mateo (no. 2243 in PWMP).

Description. Male. **Head**. Brown, maxillary palpus very pale brown, antennal flagellum concolorous with face, scape and pedicel paler. Eye bridge 3 facets wide. Face with 7 scattered dark longer and shorter setae. Clypeus not well visible in the specimens studied. Maxillary palpus with 3 palpomeres; palpomere 1 longer than palpomere 3, palpomere 2 shortest; palpomere 1 with 1 or 2 long sharp setae, with a dorsal patch of sensilla; palpomere 2 with 1 long sharp seta and 4 shorter truncate setae, palpomere 3 with 4–7 short truncate setae. Antennal flagellomere 4 1.9–2.7 times as long as wide, the neck shorter than the width of flagellomere, the longest setae as long as the width of flagellomere. **Thorax**. Unicolorous brown, Setae dark. Anterior pronotum with 3 setae. Episternum 1 with 7–8 setae. **Wing**. Length 1.3–1.4 mm. Width/length 0.45–0.50. R1/R 0.70–0.95. c/w 0.65–0.75. Lengths of r-m and bM not seen in the specimens studied, r-m and bM non-setose. Haltere pale brown. **Legs**. Pale yellowish brown. Front tibial organ with dark and strong vestiture, forming an uneven comb-like row. Front tibial spur slightly longer than the tibial width. **Abdomen**. Brown. Setae dark. **Hypopygium,** Figs. 20 A, B. Brown, as abdomen. Gonocoxa longer than gonostylus. The ventral setosity of gonocoxa sparse, a few of the setae at the apical part of the mesial margin greatly elongated. Gonostylus tumid, the mesial side impressed; the setosity sparse, apicomesially with a few elongated setae; with an apical tooth, with 3 megasetae, the megasetae subequal in size, slightly curved. Tegmen high, with a narrow dorsal finger-like process and a long aedeagus.

Discussion. By its tumid gonostylus *Corynoptera micula* resembles *C. uncata* and *C. uncinula*. It differs from both by having a finger-like process dorsally on the tegmen. Furthermore, it differs from *C. uncata* by having the gonostylar megasetae stout and curved, not slender needle-like and straight and from *C. uncinula* by having the gonostylar megasetae sharper and more strongly curved, and from both by having the mesial side of the gonostylus more widely impressed.

Etymology. The name is Latin, *micula*, grain, referring to the small size of the fly.

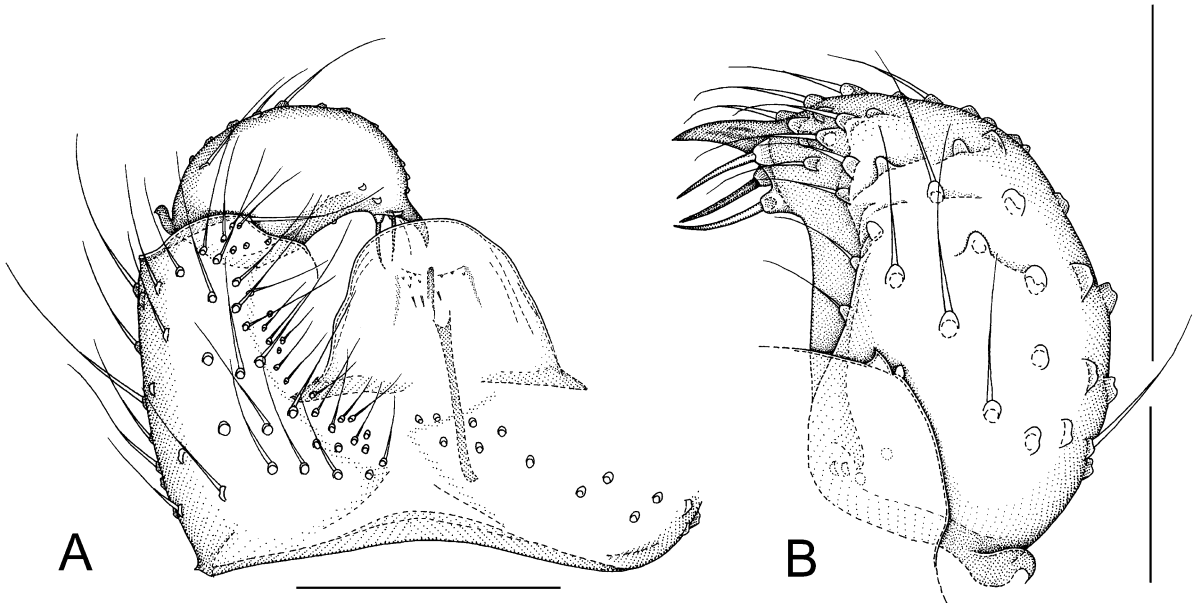

FIGURE 20. *Corynoptera micula* sp. n. (holotype). **A.** Part of hypopygium, ventral view. **B.** Gonostylus, ventral view. Scale 0.1 mm.

Corynoptera uncata Menzel & Smith, 2006

Figs. 21 A, B

Corynoptera uncata Menzel & Smith, in Menzel *et al.*, 2006: 34.

Material studied. *Holotype male.* **GREAT BRITAIN**, England, Bubbenhall, Ryton Wood Nature Reserve, deciduous forest with pedunculate oak, birch, hazel, large-leaved lime, sweep-net, 25.viii.2002, F. Menzel (in SDEI). *Paratypes.* 4 males, same data as holotype (in SDEI).

Description. See Menzel, Smith and Chandler (2006); for hypopygium and gonostylus, see Figs. 21 A and B.

Discussion. Corynoptera uncata was described from the holotype male and 20 paratype males from England (Menzel *et al.* 2006) of which we have seen the holotype and studied four of the paratypes. The differences between *C. uncata* and *C. consumpta* (as *C. sedula*) were discussed by Menzel, Smith and Chandler (2006). *Corynoptera uncata* is similar to *C. micula* and *C. uncinula*, but differs by having the gonostylar megasetae unusually slender, needle-like, and straight. The same difference applies to other reminiscent species which have the gonostylus more slender, species like *C. consumpta, C. redunca, C. sedula* and *C. serotina*. *Corynoptera uncinula* among the similar species is the only one which has constantly more than three gonostylar megasetae.

Distribution. **Great Britain** (Menzel *et al.* 2006).

FIGURE 21. *Corynoptera uncata* Menzel & Smith (paratypes). **A.** Part of hypopygium, ventral view. **B.** Gonostylus, ventral view. Scale 0.1 mm.

***Corynoptera uncinula* sp. n.**
Figs. 22 A–D

Material studied. Holotype male. **CANADA**, **Quebec**, Hudson Bay shore, pitfall trap, 27.vii–18.viii.1990, S. Koponen (in MZH). *Paratype*s. 3 males, same data as holotype (in MZH); 1 male, **Quebec**, Kuujjuarapik 55°17'N 77°48'W, partly burned *Picea glauca* forest, yellow trap, 14.vii–1.viii.1990, S. Koponen (in MZH); 1 male, Kuujjuarapik, *Sphagnum*-lichen, 2–19.viii.1990, S. Koponen (in MZH); 1 male, **Quebec**, Gatineau Park, King Mountain 45°29'20''N 75°51'45''W, summit, 354 m, Malaise trap, 16–21.vi.2005, P. Vilkamaa (in CNC); 1 male, **Yukon**, 100 km W Watson Lake, sweep-net, 4.viii.1994, L. Kaila (in MZH); 3 males, **British Columbia**, Vancouver I., Upper Carmanah Valley, forest floor, Malaise trap, 30.vii.1991, N. Winchester (in MZH); 1 male, same data but 12–27.viii.1991 (in MZH); 1 male, **Alberta**, Munn Creek, spruce forest, Malaise trap, 23.vii–15.ix.1994, E. Fuller (no. 1584 in PWMP); 1 male, **RUSSIA**, **Yamal Peninsula**, Khadyta, 21.vii.1981, Olschwang (no. 1964 in PWMP).

Description. Male. **Head**. Brown, maxillary palpus very pale brown, antenna slightly paler than face. Eye bridge 2–3 facets wide. Face with 10–18 scattered dark longer and shorter setae. Clypeus with 0–2 dark setae. Maxillary palpus with 3 palpomeres, palpomere 1 longer than palpomere 3, palpomere 2 shortest; palpomere 1 with one long sharp seta, with a dorsal patch of sensilla; palpomere 2 with 1 long sharp seta and 3–5 shorter truncate setae, palpomere 3 with 5–6 short truncate setae. Antennal flagellomere 4 2.6–3.1 times as long as wide, the neck shorter than the width of flagellomere, the longest setae about as long as the width of flagellomere. **Thorax**. Brown, pleura yellowish, setae dark. Anterior pronotum with 2–4 setae. Episternum 1 with 2–8 setae. **Wing**. Length 1.2–1.5 mm. Width/length 0.40–0.45. R1/R 0.55–0.85. c/w 0.50–0.70. r-m and bM of variable length, r-m/bM 0.70–1.50, r-m non-setose or with 1 seta, bM non-setose. Haltere pale brown. **Legs**. Pale yellowish brown. Front tibial organ with

pale vestiture, forming a comb-like row with a few scattered elements. Front tibial spur slightly longer than the tibial width. **Abdomen**. Yellow. Setae pale. **Hypopygium,** Figs. 22 A–D. Yellow. Gonocoxa longer than gonostylus.

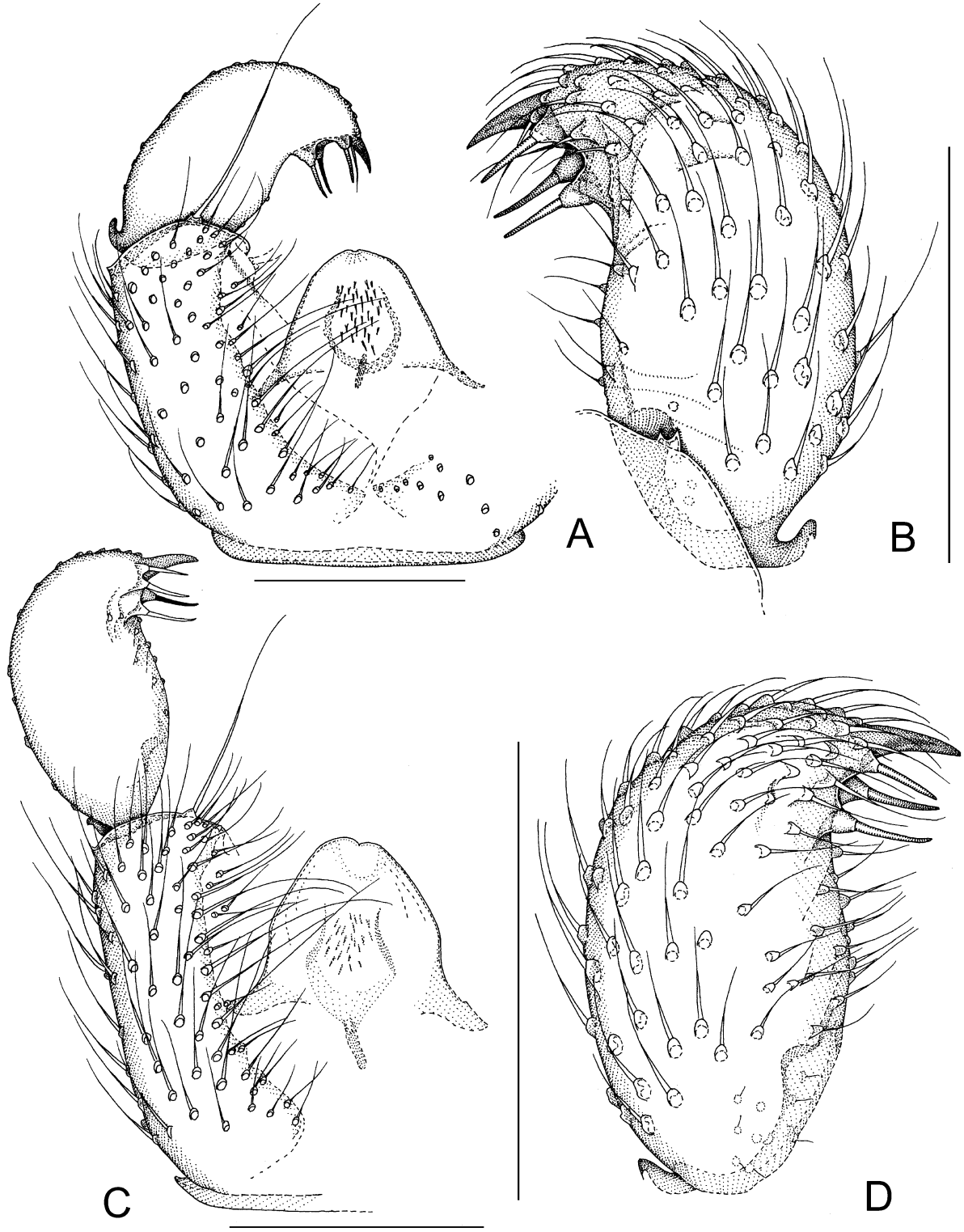

FIGURE 22. *Corynoptera uncinula* sp. n. (A, B paratype from Yukon, C holotype, D paratype from Kuujjuarapik). **A, C.** Part of hypopygium, ventral view. **B, D.** Gonostylus, ventral view. Scale 0.1 mm.

The ventral setosity of gonocoxa dense, many the setae at the apical part of the mesial margin greatly elongated. Gonostylus oval, narrowed subapically, the mesial side slightly impressed on apical part; the setosity dense, apicomesially with a few elongated setae; with a strong apical tooth, with 3–4 megasetae, the megasetae subequal in size, curved. Tegmen high, unmodified, without a dorsal finger-like process.

Discussion. *Corynoptera uncinula* is similar to *C. micula* and *C. uncata* by its tumid gonostylus. It differs from *C. uncata* by having the gonostylar megasetae stout and curved, not unusually slender and straight, needle-like. It differs from *C. micula* by lacking a finger-like process dorsally on the tegmen and by having the gonostylar megasetae more blunt, less curved and shorter. *Corynoptera uncinula* is also greatly similar to many other species, e.g. *C. consumpta, C. redunca, C. sedula* and *C. serotina*, which differ by having a more slender gonostylus.

Etymology. The name is Latin, *uncinula*, a little hook, referring to the shape of gonostylar megasetae.

***Corynoptera dubitata* Tuomikoski (1960) restit.**
Figs. 23 A–D

Corynoptera dubitata Tuomikoski, 1960: 59.

Material studied. 1 male, **FINLAND**, N, Porvoo, Ekudden, bred from oak wood, end of xii.1958, R. Tuomikoski (lectotype, hereby designated in order to fix the name of the species, in MZH); 1 male, Ob, Pudasjärvi, Lammasoja (7249314:3526999), by a brook, Malaise trap, 30.v–3.vii.2006, J. Salmela (in MZH); 1 male, Ks, Kuusamo, Rinteenlammit (7363761:3611320), by a spring, 170 m, Malaise trap, 31.v–3.viii.2005, J. Salmela (in MZH); 1 male, Kb, Lieksa, Jongunjoki National Park, spruce/pine/birch forest, sweep-net, 18.vii.2004, M. Jaschhof (no. 9154 in MZH); 1 male, Kn, Kuhmo, Kieverrysjärvet, spruce/pine/birch forest, sweep-net, 17.vii.2004, M. Jaschhof (no. 6510 in PKHH); 1 male, Kb, Lieksa, Koivusuo Strict Nature Reserve, spruce/birch/aspen forest, Malaise trap, 15.vii.2004, M. Jaschhof (no. 6528 in PKHH); 1 male, Ks, Kuusamo, Oulanka National Park, Ampumavaara, spruce/pine/birch forest, sweep-net, 26.vii.2004, M. Jaschhof (no. 6499 in PKHH); 1 male, **RUSSIA**, **Adygeya Republic**, Novo-Prokhladnoye, brown wood of oak, 27.iv.1968 (no. 1977 in PWMP); 2 males, **SWEDEN**, Dr, Orsa, Österåberget National Reserve, 500 m, mixed forest (spruce, birch, willow), Malaise trap, 4.vii–4.viii.2004, M. & C. Jaschhof (no. 5993, 5994 in PKHH); 1 male, Hr, Härjedalen, Nyvallen, Nyvallens fäbod, alpine birch and spruce wood, Malaise trap, 7–4.viii.2004, Swedish Malaise Trap Project (no. 6652 in SMNH).

Redescription. Male. **Head**. Brown, maxillary palpus very pale brown, antenna concolorous with face. Eye bridge 2 facets wide. Face with 2–3 scattered dark long and short setae. Clypeus non-setose. Maxillary palpus with 3 palpomeres; palpomere 1 longer than palpomere 2, palpomere 3 shortest; palpomere 1 with one long sharp seta, with a dorsal patch of sensilla; palpomere 2 with 1 long sharp seta and 2–3 shorter truncate setae, palpomere 3 with 2–3 short truncate setae. Antennal flagellomere 4, Fig. 23 A, 2.1–2.7 times as long as wide, the neck slightly shorter than the width of flagellomere, the longest setae longer than the width of flagellomere. **Thorax**. Unicolorous brown, setae dark. Anterior pronotum with 1–3 setae. Episternum 1 with 3–5 setae. **Wing**. Length 1.1–1.2 mm. Width/length 0.40. R1/R 0.65–0.70. c/w 0.60. r-m and bM subequal in length or bM longer, r-m/bM 0.70–1.0, both r-m and bM non-setose. Haltere pale brown. **Legs**. Pale yellowish brown. Apical part of front tibia, Fig. 23 B: tibial organ with pale and fine vestiture, forming a comb-like row. Front tibial spur nearly as long as the tibial width. **Abdomen**. Brown, paler than thorax. Setae dark. **Hypopygium,** Figs. 23 C, D. Brown, paler than abdomen. Gonocoxa longer than gonostylus. The ventral setosity of gonocoxa sparse, the setae at the apical part of the mesial margin hardly elongated. Gonostylus elongated, the mesial side slightly impressed on apical third; the setosity sparse, apicomesially with a few elongated setae; with a narrow apical tooth, with 3 slender megasetae, the megasetae subequal in size, weakly curved. Tegmen simple, without a dorsal finger-like process.

Discussion. Only one of Tuomikoski's (1960) two syntypes of *Corynoptera dubitata* was found in the MZH collection, and we designate it here as the lectotype (see above). The other syntype, from the Botanical garden in Helsinki, is probably lost and may belong to a different species. The synonymy of *C. dubitata* with C. *perpusilla*, proposed by Mohrig and Menzel (2000), is therefore invalid and accordingly, there is no record of *C. perpusilla* from Finland.

Corynoptera dubitata is not very similar to any other species but it resembles *C. caesula, C. iberica, C. truncatula, C. undulosa* and *C. vulcani* by its gonostylar megasetae which are rather slender, steadily tapering from base to a sharp apex. *Corynoptera dubitata* is distinguished from these as well as any other reminiscent species by its characteristic shape of the gonostylus in which the curvature of the lateral margin is not evenly curved but the apical third is more straight, giving an impression that the gonostylus is obliquely cut apically.

Distribution. **Finland** (Tuomikoski 1960), **Russia, Adygeya Republic** (this study), **Sweden** (this study).

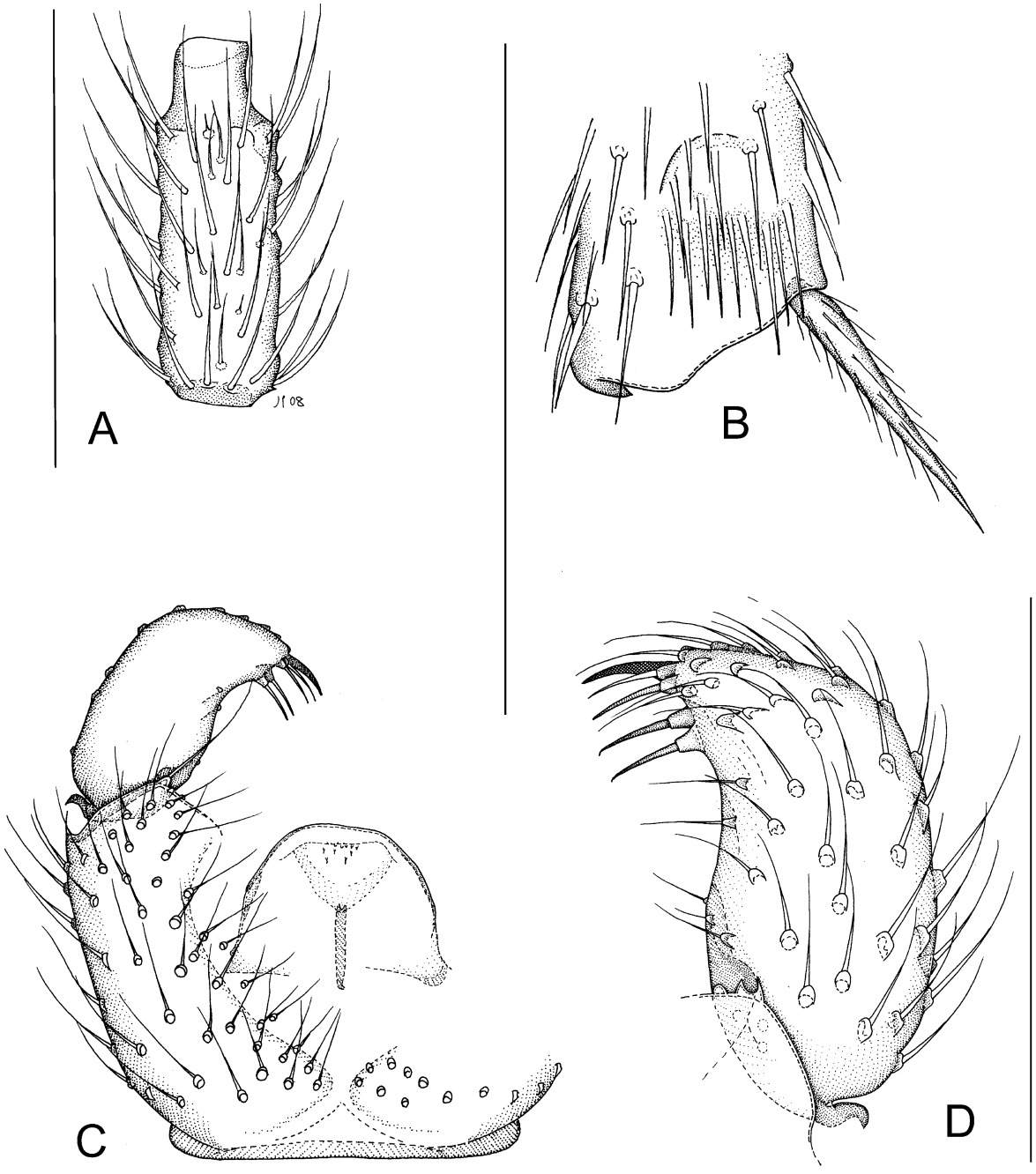

FIGURE 23. *Corynoptera dubitata* Tuomikoski (from Sweden). **A.** Antennal flagellomere 4. **B.** Apical part of front tibia, prolateral view. **C.** Part of hypopygium, ventral view. **D.** Gonostylus, ventral view. Scale 0.1 mm.

***Corynoptera umbrata* Hippa & Menzel sp. n.**
Figs. 24 A, B

Material studied. Holotype male. **SPAIN**, Andalusia, Jimena de la Frontera, humid cork oak forest by a brook (*Rubus*, *Olea*, grasses), yellow pan trap, iii–iv.1995, W. Wilden (in SDEI). *Paratypes.* 34 males, same data as holotype (33 in SDEI, 1 in MNCN); 1 male, **GREECE**, Monodendri near Ioannina, dry grassland with oak and maple, yellow pan trap, 5–7.v.1993, F. Röschmann (no. 1563 in PWMP).

Description. Male. **Head**. Brown, maxillary palpus very pale brown, antennal scapus and pedicellus yellow, flagellomeres slightly paler than face. Eye bridge 3 facets wide. Face with 5–6 scattered dark longer and shorter setae. Clypeus with 1 dark seta. Maxillary palpus with 2 or 3 palpomeres, palpomere 1 longer than palpomere 3,

palpomere 2 shortest, or palpomere 2 and 3 fused; palpomere 1 with one long sharp seta, with a dorsal patch of sensilla; palpomere 2 with 1 long sharp seta and 4–5 shorter truncate setae, palpomere 3 with 2–4 short truncate setae. Antennal flagellomere 4 2.4–2.5 times as long as wide, the neck shorter than the width of flagellomere, the longest setae as long as the width of flagellomere. **Thorax**. Brown, pleura yellowish, setae dark. Anterior pronotum with 2–3 setae. Episternum 1 with 3–5 setae. **Wing**. Length 1.2–1.4 mm. Width/length 0.40–0.45. R1/R 0.60–0.90. c/w 0.70–0.85. r-m and bM subequal in length, r-m/bM 0.90–1.00, both r-m and bM non-setose. Haltere pale brown. **Legs**. Yellow. Front tibial organ with pale vestiture, forming a comb-like row with scattered elements. Front tibial spur as long as the tibial width. **Abdomen**. Pale brown. Setae dark. **Hypopygium,** Figs. 24 A, B. Brown, as abdomen. Gonocoxa longer than gonostylus. The ventral setosity of gonocoxa, the setae at the apical part of the mesial margin not elongated. Gonostylus elongated, the mesial side slightly impressed on apical third; the setosity sparse, apicomesially with a few elongated setae; with a long apical tooth, with 3–4 megasetae, the megasetae subequal in size, straight or slightly curved. Tegmen simple, without a dorsal finger-like process.

Discussion. *Corynoptera umbrata* resembles some of the other Mediterranean species, especially *C. caesula*, *C. iberica*, *C. truncatula* and *C. undulosa*, but is not closely similar to any of these. In all of these species the gonostylus is crescent-shaped, with the mesial margin nearly straight. *Corynoptera umbrata* differs from all of these by having a stronger apical tooth and megasetae on the gonostylus, and by having the megasetae closer to the apical tooth and less sharp. Furthermore, it differs from *C. caesula*, *C. iberica* and *C. truncatula* by lacking excessive long setae at the ventral mesial margin of the gonocoxa, and also from *C. caesula* by lacking a finger-like process dorsally on the tegmen.

Distribution. **Greece** (Röschmann & Mohrig 1996: as *C. perornata*), **Spain** (Heller & Menzel 2004: as *C. umbrata* Menzel, 2004 in litt.).

Etymology. The name is derived from the Latin word *umbra*, shadow, *umbrata*, with a shadow, shadowy, referring to the shadowy place where the type material was collected.

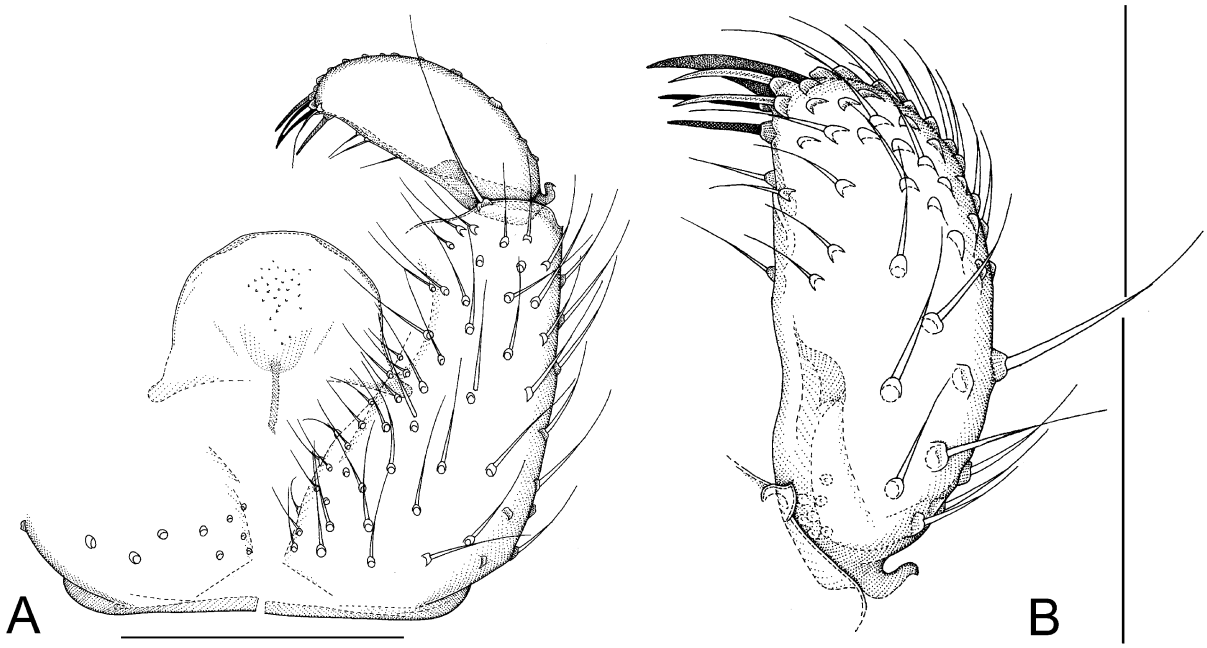

FIGURE 24. *Corynoptera umbrata* Hippa & Menzel sp. n. (holotype). **A.** Part of hypopygium, ventral view. **B.** Gonostylus, ventral view. Scale 0.1 mm.

***Corynoptera caesula* Hippa & Menzel sp. n.**
Figs. 25 A, B

Material studied. *Holotype male*. **SPAIN**, Barcelona, Vilassar de Dalt, Malaise trap, 18–24.vi.1995, Jara (in SDEI). *Paratypes*. 1 male, same data but 12–18.ii.1995; 1 male, 7–13.v.1995; 1 male, 10–16.ix.1995; 1 male, 8–14.x.1995; 1 male, 22–28.x.1995; 3 males, 5–11.xi.1995 (2 in SDEI, 5 in MZBS and 1 in PCTB).

Description. Male. **Head**. Brown, maxillary palpus very pale brown, antenna concolorous with face. Eye bridge 3 facets wide. Face with 8 scattered dark longer and shorter setae. Clypeus with 1 dark seta. Maxillary palpus with 3 palpomeres; palpomeres 1 and 3 subequal in length, palpomere 2 shorter; palpomere 1 with one long sharp seta, with a dorsal patch of sensilla; palpomere 2 with 1 long sharp seta and 4–7 shorter truncate setae, palpomere 3 with 5–7 short truncate setae. Antennal flagellomere 4 2.2–2.5 times as long as wide, the neck shorter than the width of flagellomere, the longest setae slightly shorter than the width of flagellomere. **Thorax**. Unicolorous brown, setae dark. Anterior pronotum with 3 setae. Episternum 1 with 4–5 setae. **Wing**. Length 1.4–1.7 mm. Width/length 0.40–0.45. R1/R 0.90–0.95. c/w 0.70–0.80. r-m and bM subequal in length, r-m/bM 0.95–1.00, both r-m and bM non-setose. Haltere pale brown. **Legs**. Pale yellowish brown. Front tibial organ with pale vestiture, forming a comb-like row with many scattered elements. Front tibial spur slightly longer than the tibial width. **Abdomen**. Brown. Setae dark. **Hypopygium,** Figs. 25 A, B. Brown, paler than abdomen. Gonocoxa longer than gonostylus. The ventral setosity of gonocoxa sparse, a few of the setae at the apical part of the mesial margin greatly elongated. Gonostylus elongated, the mesial side slightly impressed on apical third; the setosity sparse, with an apical tooth, with 3 megasetae, the megasetae subequal in size, slender, shorter than apical tooth, slightly curved. Tegmen with a finger-like process.

Discussion. Corynoptera caesula, C. iberica, C. truncatula and *C. undulosa* form a group of similar Mediterranean species characterized by a crescent-shaped gonostylus and rather slender, curved and from the base to apex attenuating sharp megasetae. *Corynoptera caesula* differs from the others by having a finger-like process dorsally on the tegmen. *Corynoptera caesula, C. iberica* and *C. truncatula* differ from *C. undulosa* by having excessively long setae at the ventral mesial margin of the gonocoxa. *Corynoptera caesula* differs from the two latter by shorter gonostylar megasetae. *Corynoptera caesula* is also similar to *C. vulcani*, but the latter has the apicoventral part of the gonostylus widely impressed and curved mesiad. See also under *C. dubitata.*

Distribution. **Spain** (Heller & Menzel 2004: as *C. caesula* Menzel, 2004 in litt.).

Etymology. The name is Latin, *caesula*, diminutive of *caesa*, cut, referring to the shape of the apicomesial margin of gonostylus.

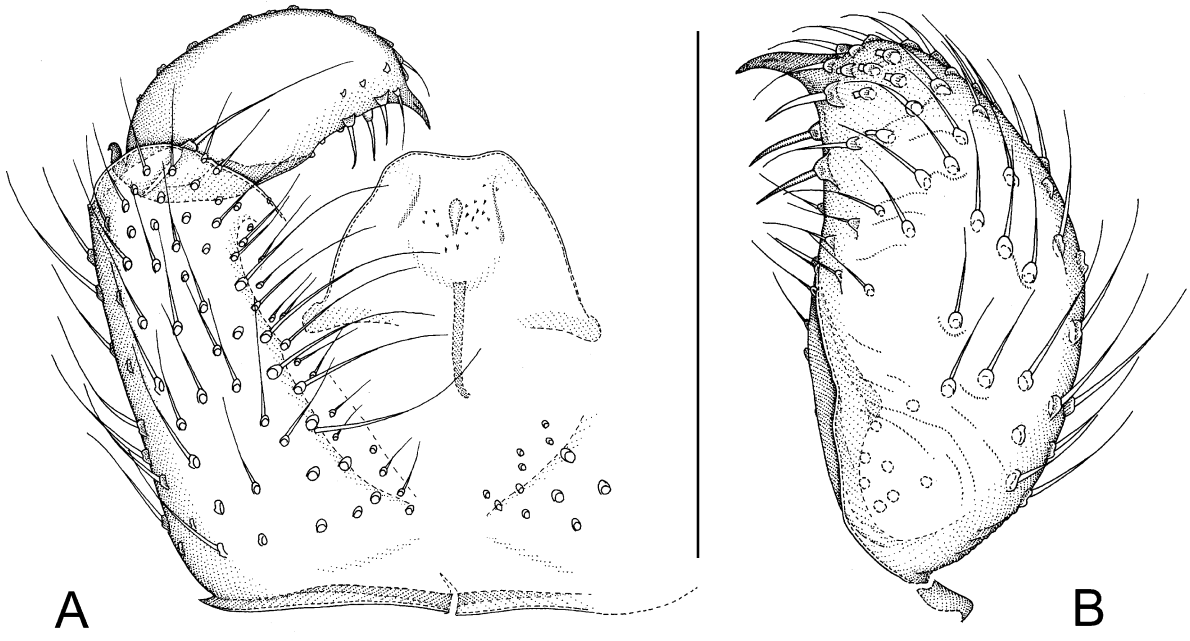

FIGURE 25. *Corynoptera caesula* Hippa & Menzel sp. n. (holotype). **A.** Part of hypopygium, ventral view. **B.** Gonostylus, ventral view. Scale 0.1 mm.

***Corynoptera iberica* sp. n.**
Figs. 26 A, B, C

Material studied. Holotype male. **SPAIN**, Andalusia, Jimena de la Frontera, humid cork oak forest by a brook (*Rubus*, *Olea*, grasses), yellow pan trap, iii–iv.1995, W. Wilden (in SDEI). *Paratypes*. 25 males, same data as holotype (in SDEI); 9 males, same data but ii.1995 (in SDEI).

Description. Male. **Head**. Brown, maxillary palpus very pale brown, antenna concolorous with face. Eye bridge 3 facets wide. Face with 7 scattered dark longer and shorter setae. Clypeus with 1 dark seta. Maxillary palpus with 3 palpomeres; palpomere 1 longer than palpomere 3, palpomere 2 shortest; palpomere 1 with one long sharp seta, with a dorsal patch of sensilla; palpomere 2 with 1 long sharp seta and 3 shorter truncate setae, palpomere 3 with 2–4 short truncate setae. Antennal flagellomere 4, Fig. 26 A, 2.1 times as long as wide, the neck shorter than the width of flagellomere, the longest setae as long as the width of flagellomere. **Thorax**. Unicolorous brown, setae dark. Anterior pronotum with 2 setae. Episternum 1 with 4 setae. **Wing**. Length 1.2 mm. Width/length 0.40. R1/R 0.65. c/w 0.55. r-m and bM subequal in length, r-m/bM 1.0, r-m with 1 seta, bM non-setose. Haltere pale brown. **Legs**. Pale yellowish brown. Front tibial organ with dark vestiture, forming a comb-like row with a few scattered elements. Front tibial spur as long as the tibial width. **Abdomen**. Brown. Setae pale. **Hypopygium,** Figs. 26 B, C. Brown, darker than abdomen. Gonocoxa longer than gonostylus. The ventral setosity of gonocoxa with a few of the setae at the apical part of the mesial margin greatly elongated. Gonostylus elongated, the mesial side slightly impressed; the setosity sparse, apicomesially with a few elongated setae; with a strong and sharp apical tooth, with 3 megasetae, the megasetae subequal in size, narrow, straight. Tegmen simple, without a dorsal finger-like process.

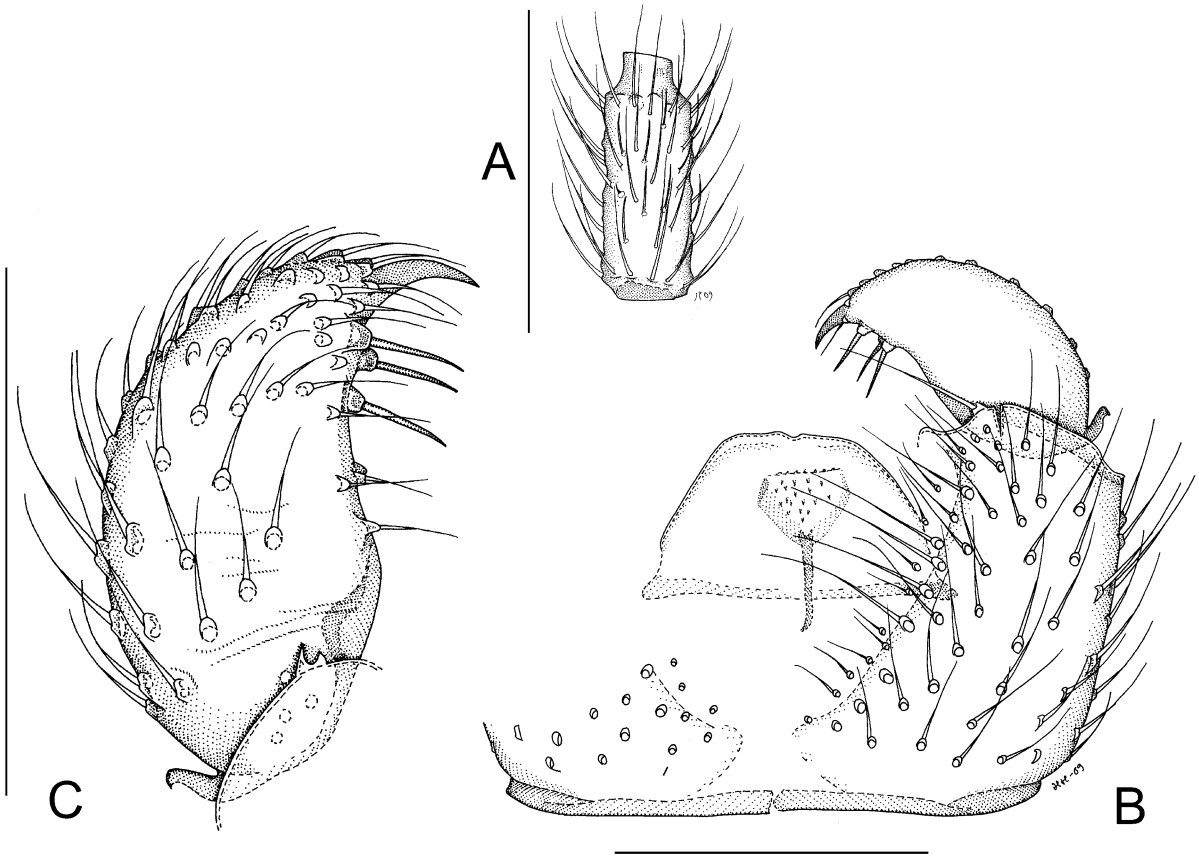

FIGURE 26. *Corynoptera iberica* sp. n. (holotype). **A.** Antennal flagellomere 4. **B.** Part of hypopygium, ventral view. **C.** Gonostylus, ventral view. Scale 0.1 mm.

Discussion. Corynoptera iberica is similar to three other Mediterranean species, *C. caesula*, *C. undulosa* and *C. truncatula*. It is distinguished from *C. caesula* by lacking a finger-like process dorsally on the tegmen and by having the gonostylar megasetae conspicuously shorter. It is distinguished from *C. truncatula* by a narrower gonostylar apex and by having the gonostylar megasetae placed more basally, and from *C. undulosa* by having distinctly

elongated setae at the mesial margin of gonocoxa. For further discussion, see under *C. caesula*, *C. umbrata* and *C. vulcani*.

Distribution. **Spain** (Heller & Menzel 2004: as *C. simonae*).

Etymology. The name is Latinized from Iberia and means Iberian.

Corynoptera undulosa Hippa & Menzel sp. n.

27 A–D

Material studied. Holotype male. **SPAIN**, Andalusia, Jimena de la Frontera, macchia-type, dry, cork oak forest with shrubs, yellow pan trap, ii–iv.1995, W. Wilden (no. 3661 in SDEI). *Paratypes.* 33 males, same data as holotype (30 in SDEI, 1 in PKHH, 1 in PCTB and 1 in MZBS); 1 male, same data as previous but ii.1995 (in SDEI); 1 male, Andalusia, Jimena de la Frontera, humid cork oak forest by a brook (*Rubus*, *Olea*, grasses), yellow pan trap, iii–iv.1995, W. Wilden (in SDEI); 2 males, Andalusia, Jimena de la Frontera, *Eucalyptus* forest, ii–iv.1995, W. Wilden (in SDEI); 1 male, Cadiz, Alcala de los Gazules, cork oak forest, sieving, 2.ii.1999, L. Zerche (in SDEI); 1 male, **ITALY**, Sicily, Fra di Floresta/S. Veneradel Besco, 450 m, 5.xi.1986, R. Gerecke (no. 2181 in PWMP); 1 male, **PORTUGAL**, Guarda, Cabeca, i.1999, Grosso-Silva (in SDEI).

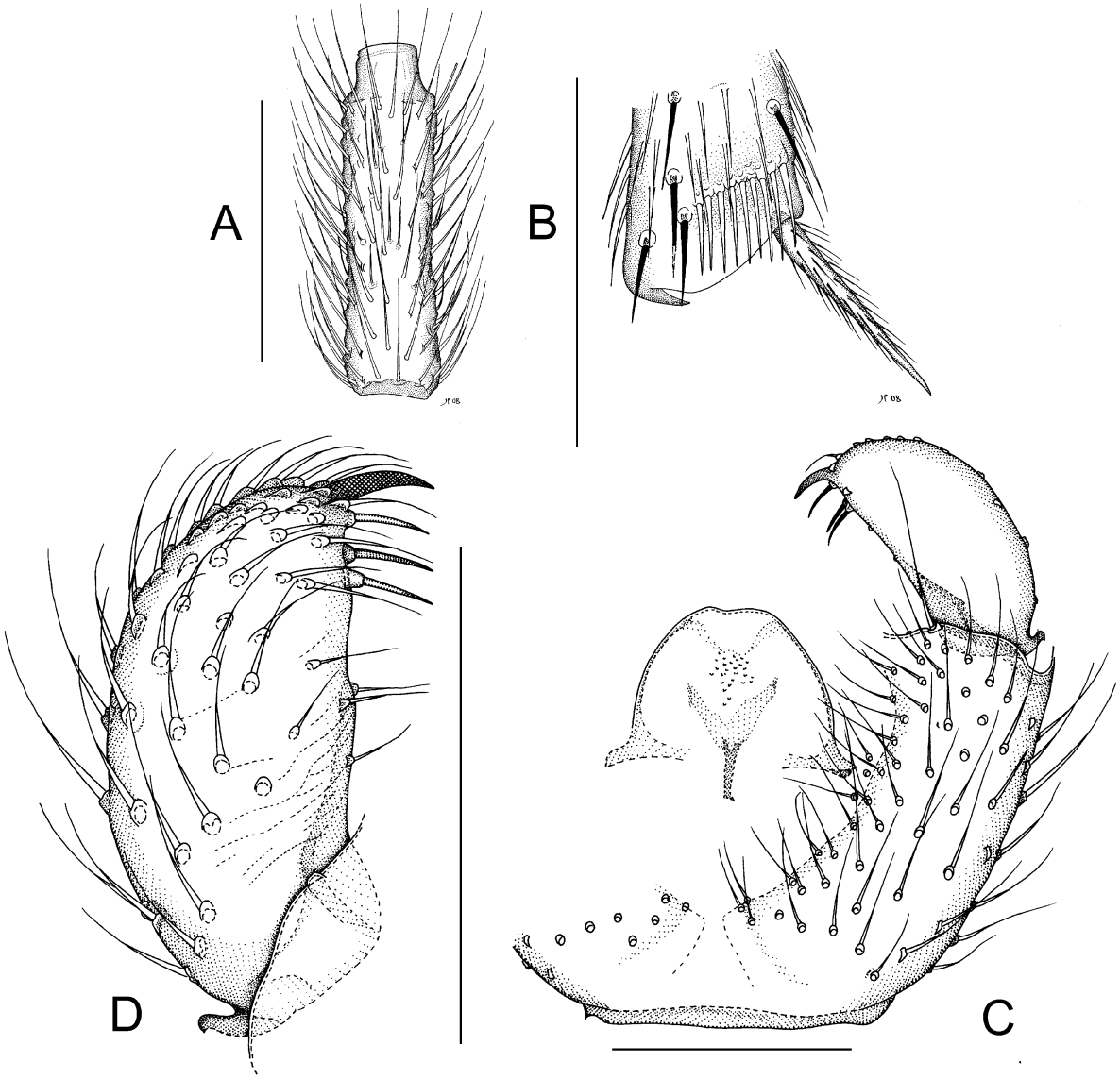

FIGURE 27. *Corynoptera undulosa* Hippa & Menzel sp. n. (A paratype, B, C holotype). **A.** Antennal flagellomere 4. **B.** Apical part of front tibia, prolateral view. **C.** Part of hypopygium, ventral view. **D.** Gonostylus, ventral view. Scale 0.1 mm.

Description. Male. **Head**. Brown, maxillary palpus very pale brown, antenna concolorous with face. Eye bridge 3 facets wide. Face with 4–5 dark longer and shorter setae. Clypeus with 1 dark seta. Maxillary palpus with 3 palpomeres; palpomere 1 longer than palpomere 3, palpomere 2 shortest; palpomere 1 or 2 with long sharp setae, with a dorsal patch of sensilla; setosity of palpomere 2 not seen in the specimens studied, palpomere 3 with 4 short truncate setae. Antennal flagellomere 4, Fig 27 A, 2.9–3.6 times as long as wide, the neck shorter than the width of flagellomere, the longest setae slightly longer than the width of flagellomere. **Thorax**. Unicolorous brown, setae dark. Anterior pronotum with 4–6 setae. Episternum 1 with 4–6 setae. **Wing**. Length 1.6–1.8 mm. Width/length 0.40–0.45. R1/R 0.85–1.0. c/w 0.70–0.75. r-m shorter than bM, r-m/bM 0.70–0.90, both r-m and bM non-setose. Haltere pale brown. **Legs**. Pale brown. Apical part of front tibia, Fig. 27 B: tibial organ with pale vestiture, forming a comb-like row with a few scattered elements. Front tibial spur as long as the tibial width. **Abdomen**. Brown. Setae dark. **Hypopygium,** Figs. 27 C, D. Brown, as abdomen. Gonocoxa longer than gonostylus. The ventral setosity of gonocoxa rather sparse, the setae at the apical part of the mesial margin not elongated. Gonostylus elongated, the mesial side not impressed; the setosity sparse, apicomesially with a few elongated setae; with a long and slender apical tooth, with 3 megasetae, the megasetae subequal in size, almost straight. Tegmen simple, without a dorsal finger-like process.

Discussion. Corynoptera undulosa is similar to and can be confused with some other Mediterranean species: *C. caesula, C. iberica* and *C. truncatula*. It differs from all of these by lacking excessively long setae at the ventral mesial margin of the gonocoxa, from *C. caesula* also e.g. by lacking a finger-like process dorsally on the tegmen and from *C. iberica* and *C. truncatula* e.g by a much longer antennal flagellomere 4.

Distribution. **Italy** (this study), **Portuga**l (this study), **Spain** (Heller & Menzel 2004: as *C. undulosa* Menzel, 2004 in litt.).

Etymology. The name is Latin, *undulosa,* full of small waves, referring to the numerous transverse ridges on the ventral surface of the gonostylus.

***Corynoptera truncatula* sp. n.**
Figs. 28 A, B

Material studied. *Holotype male.* **SPAIN**, Andalusia, Jimena de la Frontera, humid cork oak forest by a brook (*Rubus, Olea*, grasses), yellow pan trap, iii–iv.1995, W. Wilden (in SDEI).

Description. Male. **Head**. Brown, maxillary palpus very pale brown, antenna slightly paler than face. Eye bridge 3 facets wide. Face with 6 scattered dark long and short setae. Clypeus with 1 dark seta. Maxillary palpus with 3 palpomeres; palpomere 1 longer than palpomere 3, palpomere 2 shortest; palpomere 1 with one long sharp seta, with a dorsal patch of sensilla; palpomere 2 with 1 long sharp seta and 3 shorter truncate setae, palpomere 3 with 6 short truncate setae. Antennal flagellomere 4 2.4 times as long as wide, the neck shorter than the width of flagellomere, the longest setae slightly longer than the width of flagellomere. **Thorax**. Unicolorous brown, setae dark. Anterior pronotum with 2 setae. Episternum 1 with 6 setae. **Wing**. Length 1.4 mm. Width/length 0.45. R1/R 0.80. c/w 0.65. r-m shorter than bM, r-m/bM 0.80, both r-m and bM non-setose. Haltere pale brown. **Legs**. Yellow. Front tibial organ with pale vestiture, forming a comb-like row with a few scattered elements. Front tibial spur slightly longer than the tibial width. **Abdomen**. Pale brown. Setae dark. **Hypopygium,** Figs. 28 A, B. Brown, paler than abdomen. Gonocoxa longer than gonostylus. The ventral setosity of gonocoxa sparse, a few of the setae at the mesial margin greatly elongated. Gonostylus oval; the setosity sparse, apicomesially with a few elongated setae; with a strong apical tooth, with 3 megasetae, the megasetae subequal in size, slender, almost straight. Tegmen rather broad, without a dorsal finger-like process.

Discussion. *Corynoptera truncatula* is similar to *C. caesula, C. iberica* and *C. undulosa*. For distinguishing characters and further discussion, see under these.

Distribution. **Spain** (Heller & Menzel 2004: as. *C. applanata*).

Etymology. The name is Latin, *truncatula,* a little truncate, referring to the shape of the gonostylus.

FIGURE 28. *Corynoptera truncatula* sp. n. (holotype). **A.** Part of hypopygium, ventral view. **B.** Gonostylus, ventral view. Scale 0.1 mm.

***Corynoptera vulcani* sp. n.**
Figs. 29 A–D

Material studied. *Holotype male*. **SPAIN**, **Canary Islands**, La Palma, Cumbre Nueva, east side, laurel forest, 1050 m, 18.iii.1992, L. Zerche (in SDEI); *Paratypes.* 7 males, same data as holotype but yellow dish, 14–18.viii.1998, W. Mohrig (no. 7107 in PKHH, 1971–1976 in PWMP); 1 male, La Palma, La Zarza, Barranco, 1050 m, sweep-net, 30.iii.1996, K. Heller (no. 1466 in PKHH).

Description. Male. **Head**. Dark brown, maxillary palpus very pale brown, antenna darker than face. Eye bridge 3 facets wide. Face with 10 scattered dark longer and shorter setae. Clypeus with 1 dark seta. Maxillary palpus with 3 palpomeres; palpomere 1 longer than palpomere 3, palpomere 2 shortest; palpomere 1 with one long sharp seta, with a dorsal patch of sensilla; palpomere 2 with 1 long sharp seta and 6 shorter truncate setae, palpomere 3 with 6 short truncate setae. Antennal flagellomere 4, Fig. 29 A, 3.2 times as long as wide, the neck shorter than the width of flagellomere, the longest setae longer than the width of flagellomere. **Thorax**. Unicolorous pale brown, setae dark. Anterior pronotum with 3 setae. Episternum 1 with 7 setae. **Wing**. Length 1.8 mm. Width/length 0.40. R1/R 0.75. c/w. 0.75. r-m slightly longer than bM, r-m/bM 1.2, both r-m and bM non-setose. Haltere pale brown. **Legs**. Pale yellowish brown. Apical part of front tibia, Fig. 29 B: tibial organ with pale vestiture, forming a comb-like row with a few scattered elements. Front tibial spur slightly longer than the tibial width. **Abdomen**. Brown, as thorax. Setae dark. **Hypopygium,** Figs. 29 C, D. Brown, paler than abdomen. Gonocoxa longer than gonostylus. The ventral setosity of gonocoxa sparse, a few setae at the apical part of the mesial margin elongated. Gonostylus ovale, subapically narrowed; the setosity sparse, apicomesially with a few elongated setae; with an apical tooth, with 3 megasetae, the megasetae subequal in size, slender, shorter than apical tooth, nearly straight. Tegmen as high as broad, laterally broadened, without a dorsal finger-like process.

Discussion. *Corynoptera vulcani* resembles some Mediterranean species: *C. caesula*, *C. iberica*, *C. truncatula* and *C. undulosa*. All these species are characterized by rather slender and steadily from the base to apex attenuating sharp gonostylar megasetae when compared with those of a number of reminiscent species. *Corynoptera vulcani* differs from all by having the apico-ventral part of the gonostylus widely flattened and by having the apical part curved mesiad so that the mesial margin of the gonostylus is not straight from the base to the apex as in *C. iberica*, *C. truncatula* and *C. undulosa*. Otherwise *C. vulcani* is greatly similar to *C. iberica*, which also lacks excessively long setae at the ventral mesial margin of the gonocoxa.

Etymology. The name is Latin, *vulcani*, of Vulcanus, referring to volcanic character of the type locality.

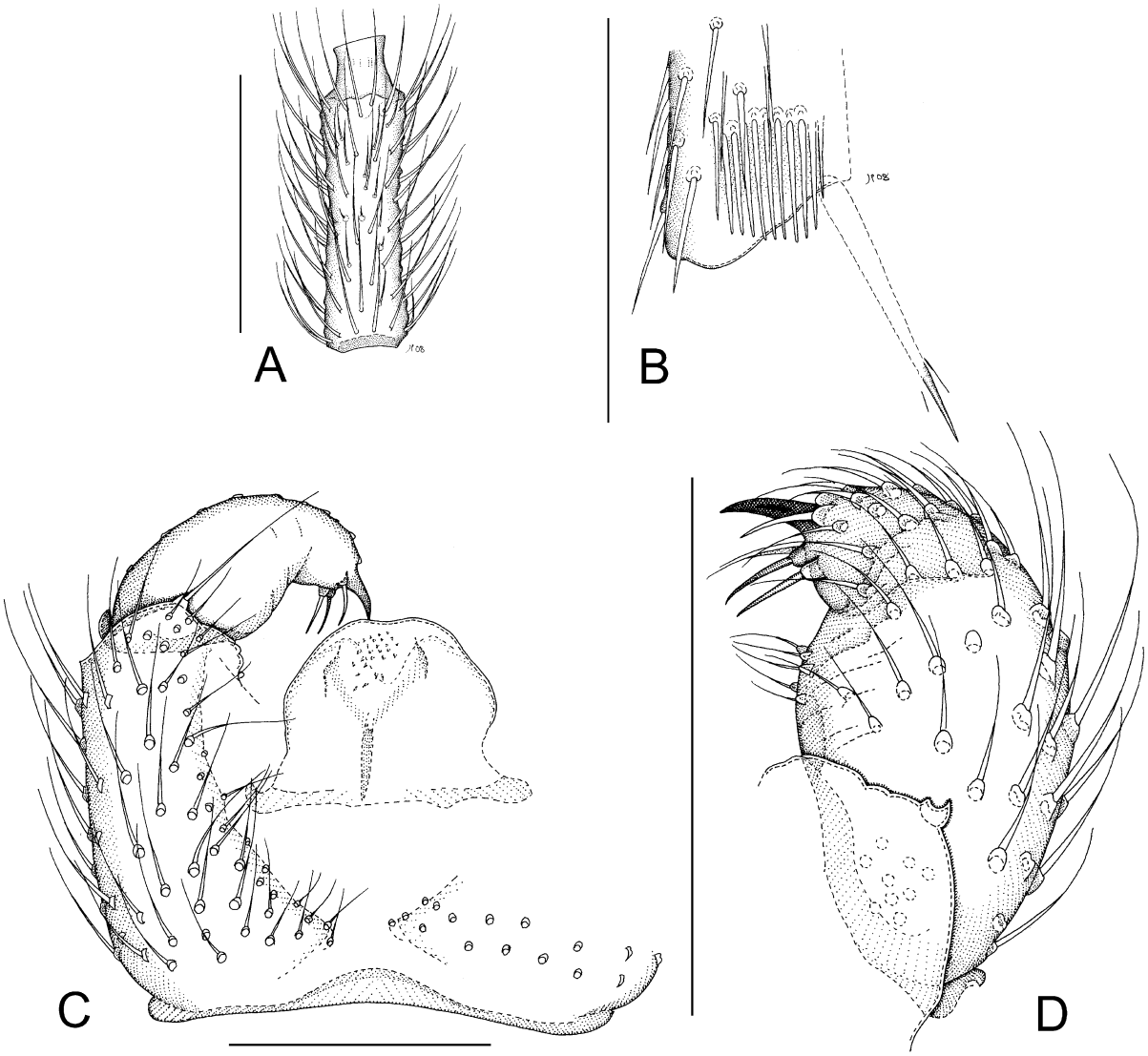

FIGURE 29. *Corynoptera vulcani* sp. n. (holotype). **A.** Antennal flagellomere 4. **B.** Apical part of front tibia, prolateral view. **C.** Part of hypopygium, ventral view. **D.** Gonostylus, ventral view. Scale 0.1 mm.

***Corynoptera montana* (Winnertz, 1869)**
Figs. 30 A–D

Sciara montana Winnertz, 1869: 659.
Sciara fusca Winnertz, 1871: 849. Synonymy by Lengersdorf (1924: 11).
Bradysia nigripes auct nec Meigen, 1830. Misinterpretation by (Frey 1948: 77).
Corynoptera montana Tuomikoski, 1960: 50.

Material studied. 1 male, **FINLAND**, Li, Inari, Näverniemi, 9.viii.1985, J. Tuiskunen (in MZH); 2 males, Li, Utsjoki (7737:535), 5.vii.2003, J. Ilmonen (in MZH); 1 male, Le, Kilpisjärvi, Saana, 27.vii.1985, J. Tuiskunen (in MZH); 1 male, Le, Kilpisjärvi, Saana SW slope (7675141:3253341), calcareous meadow, Malaise trap, 15.vii–10.viii.1986, Yakovlev & Penttinen 2006, (in MZH); 1 male, Le, Enontekiö, Annjaloanji (76868:2798), Malaise trap, 11–15.vii.2007, A. Haarto (in MZH); 1 male, Frey (no further data; in MZH); 3 males, 2 females, **GERMANY**, NS, Harz, Braunlage, young mixed forest with maple, yellow trap, 21–28.v.2006, K. Heller (no. 4722–4726 in PKHH); 1 male, **NORWAY**, Kvalsund, 1.vii.1964, R. Tuomikoski (in MZH); 4 males, **SWEDEN**, Pi, Arjeplog, L. Sädvajaure (northern end), 500 m, subalpine birch forest, Malaise trap, 7.vii–12.viii.2005, M. & C. Jaschhof (no. 5854 in PKHH, no. 982 in SMNH, no. 2386, 2387 in ZMSC); 1 male, To, Kiruna, Nikkaluokta, young birch/willow forest along stream, Malaise trap, 14.vii–5.viii.2005, M. Jaschhof (no. 1056 in SMNH).

Description. See Tuomikoski (1960); for antennal flagellomere 4, see Fig. 30 A, for apical part of front tibia, see Fig. 30 B, for hypopygium, see Figs. 30 C, D.

Discussion. We have not seen the type material of *Corynoptera montana* but base our concept on Tuomikoski (1960) and Menzel and Mohrig (2000).

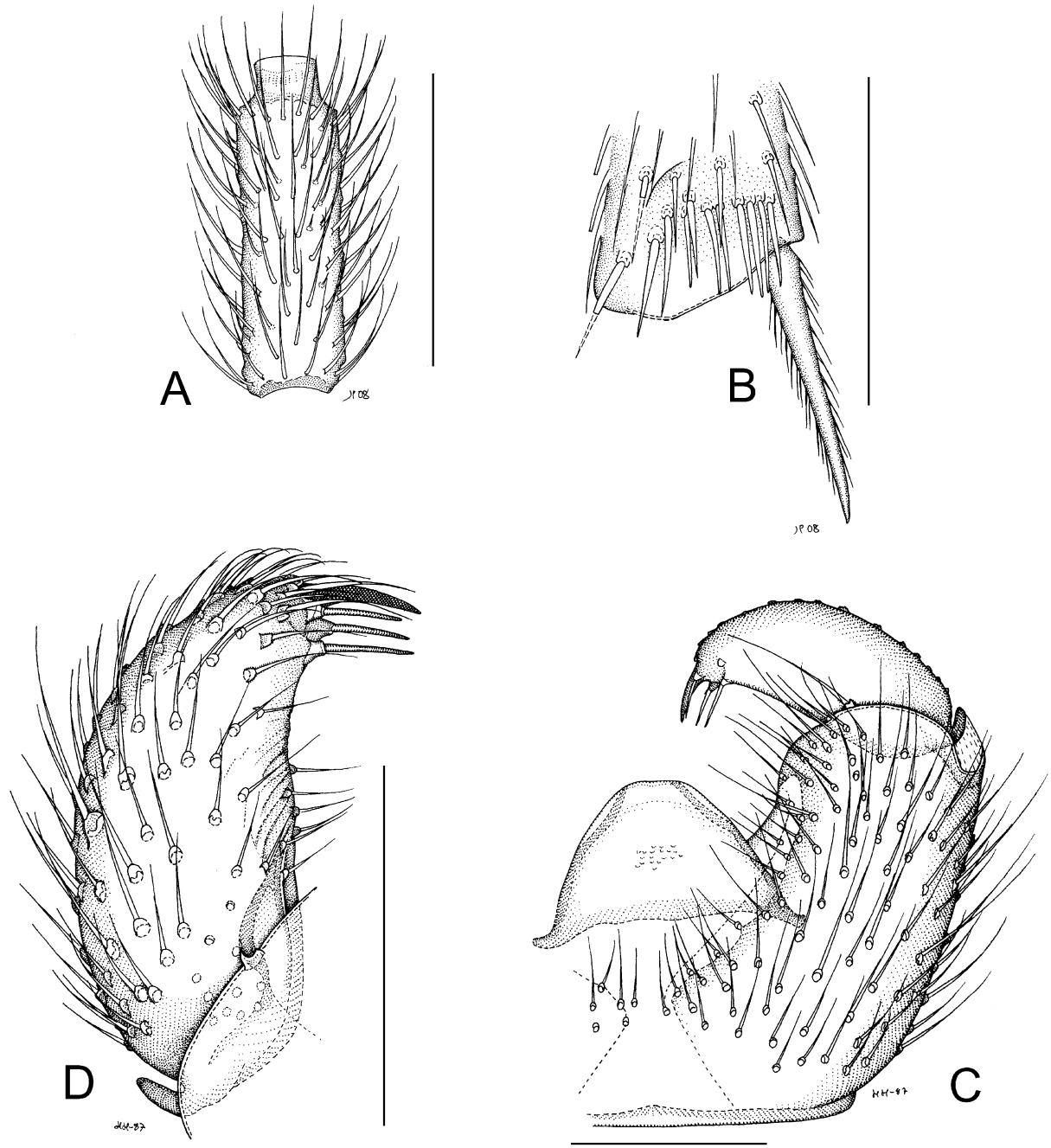

FIGURE 30. *Corynoptera montana* (Winnertz) (from Finland). **A.** Antennal flagellomere 4. **B.** Apical part of front tibia, prolateral view. **C.** Part of hypopygium, ventral view (aedeagal apodeme omitted). **D.** Gonostylus, ventral view. Scale 0.1 mm.

Corynoptera montana is similar to *C. stipidaria,* and the distinguishing characters are discussed under the latter. Both species resemble a number of those *Corynoptera* which have a slender gonostylus with an apical tooth of the same length as the gonostylar megasetae, and which have these megasetae stout and three in number, e.g. *C. alneti, C. consumpta, C. diligenta, C. nigrocauda, C. ninae, C. perornata, C. perpusilla, C. praevia, C. reduncа, C. sedula, C. serotina* and *C. subsedula,* but are larger. *Corynoptera montana* and *C. stipidaria* have the wing length of 1.8 mm or more instead of ca. 1.5 mm or less, and the gonostylus length of 0.15 mm or more instead of having it

around 0.10 mm, like the other species. In addition, probably due to the larger size, the gonocoxa is more richly setose. See also under *C. perpusilla*.

Distribution. **Austria** (Franz 1989, Lengersdorf 1924), **Czech Republic** (Rudzinski & Košel 1997), **Finland** (Frey 1948), **Germany** (Menzel 1994, Menzel & Mohrig 1993, Rudzinski 2006, Winnertz 1869, 1871), **Norway** (this study), **Sweden** (Heller *et al*. 2009, Rudzinski 1992c).

Corynoptera stipidaria Mohrig, 1994

Figs. 31 A, B, C

Corynoptera stipidaria Mohrig, in Mohrig & Blasco-Zumeta, 1994: 94.

Material studied. 1 male, **MOROCCO**, Quirgane, garden, Malaise trap, 28.iv–3.v.1996, C. Kassebeer (no. 1976 in PKHH); 1 male, **SPAIN**, Monegros region, Retuerta de Pina, *Juniperus thurifera*, yellow pan trap, 17.x.1990, Blasco-Zumeta (holotype, no. 72 in PWMP).

Description. See Mohrig and Blasco-Zumeta (1994), for apical part of front tibia, see Fig. 31 A, for hypopygium, see Figs. 31 B, C.

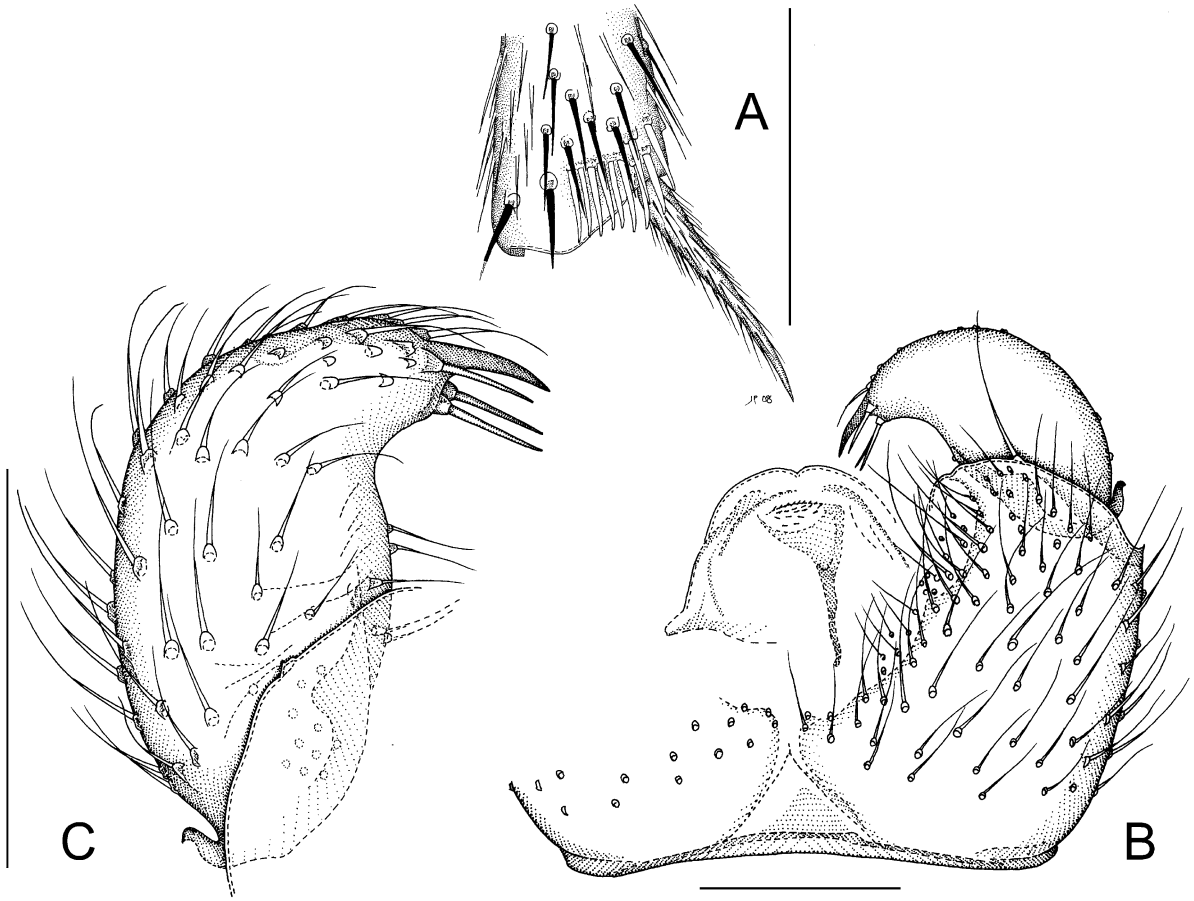

FIGURE 31. *Corynoptera stipidaria* Mohrig (from Morocco). **A.** Apical part of front tibia, prolateral view. **B.** Part of hypopygium, ventral view. **C.** Gonostylus, ventral view. Scale 0.1 mm.

Discussion. *Corynoptera stipidaria* was described from the holotype male, 45 paratype males and four paratype females from Spain (Mohrig & Blasco-Zumeta 1994). Of these we have studied only the holotype. *Corynoptera stipidaria* is similar to *C. montana* but is distinguished by having the apical part of gonostylus curved, not straight. For further discussion, see under *C. montana*.

Distribution. **Morocco** (this study), **Spain** (Mohrig & Blasco-Zumeta 1994).

***Corynoptera luteofusca* (Bukowski & Lengersdorf, 1936)**
Figs. 32 A–D

Neosciara luteofusca Bukowski & Lengersdorf, 1936: 106.
Corynoptera luteofusca, Tuomikoski, 1960: 57.

Material studied. 3 males, **CANADA**, **British Columbia**, Vancouver I., Upper Carmanah Valley, Malaise trap, 30.vii.1991, N. Winchester (in MZH, CNC and RBCM); 4 males, same data but 2.vi–3.vii.1991 (in MZH); 1 male, same data as previous but 4–15.vii.1991 (in MZH); 1 male, **CZECH REPUBLIC**, Bohemia, Riesengebirge, Godrovy domky at Bilý, near Dolni Dvûr, 650–700 m, spruce-rowan mixed forest with alder swamp, sweep-net, 21–28.vii.1994, Menzel (in SDEI); 1 male, Bohemia, Riesengebirge, Temný Dûl, NW Horni Maršov, spruce-deciduous mixed forest, 710 m, sweep-net, 21–28.vii.1994, Menzel (in SDEI); 2 males, **FINLAND**, Ab, Turku, Ruissalo, 60.26°N 22.11°E, <100 m, mixed broad-leaf forest, sweep-net, 27.vi.2004, M. Jaschhof (in MZH, no. 6418 in PKHH); 2 males, same data but 28.vi.2004 (in MZH); 1 male, same data as previous but aspirator (in MZH); 3 males, Ab, Västanfjärd, bushes and secondary mixed forest, sweep-net, 27.vi.2004, M. Jaschhof (in MZH, no. 6548 in PKHH); 1 male, Ab, Parainen, Kurckas, pitfall trap, 17.v–5.vii.1968, P.T. Lehtinen (in MZH); 3 males, Ab, Vihti, Päivölä, 28.vi.1944, R. Frey (in MZH); 2 males, N. Noux, pitfall trap, 1–20.vi.1989, O. Biström & P. Vilkamaa (in MZH); 1 male, N, Sipoo, Hindsby, deciduous forest, Malaise trap, 6–14.vii.2004, P. Vilkamaa (in MZH); 1 male, same locality as previous but Malaise trap, 18–25.vi.2005, P. Vilkamaa (in MZH); 1 male, Ta, Lammi, Biological Sta., 21.vii.1987, H. Hippa (in MZH); 3 males, Ta, Urjala, Kivijärvi Nature Reserve, Kalkkimäki (60°59'N 23°26'E = 6770:308), grove, Malaise trap, 6.vii–3.viii.2003, J. Salmela & O. Härmä (in MZH); 3 males, **GERMANY**, BW, Belchen, Malaise trap, 28.v–3.vii.2003, D. Doczkal (no. 4871, 4872, 4875 in PKHH); 1 male, 1 female, BY, Königsee, beech forest, sweep-net, 30.v.1999, K. Heller (no. 2799 in PKHH); 1 male, RP, Kirchheimbolanden, Albertskreuz Nature Reserve, Malaise trap, 23.v–7.vi.2002, D. Doczkal (no. 4904 in PKHH); 1 male, SH, southern Harz, Eisfelder Talmühle, Großer Merkelsbach, mixed forest, 30.v.1989, Menzel (in SDEI); 1 male, **GREECE**, Kerkini mountains, Ramna site, Malaise trap, 2–8.iv.2008 G. Ramel (no. 6912 in PKHH); 1 male, **SLOVAKIA**, 1 male, Martin, beech/spruce forest, sweep-net, 25.vii.2007, K. Heller (no. 5633 in PKHH); 1 male, **SLOVENIA**, Begunje, spruce forest, 2.viii.2009, K. Heller (no. 7206 in PKHH); 1 male, **SWEDEN**, Up, Stockholm, N. Djurgården, mixed forest, pitfall trap, 1–15.vi.1992, T. Kronestedt & B. Viklund (in SMNH); 14 males, Up, Stockholm, N. Djurgården, N. Lappis, Malaise trap, 13.vi–4.vii.1994, A. Heinakroon (no. 483 in SMNH); 1 male, Up, Lövstabruk, Malaise trap, 9–12.vi.1992, H. Hippa & B. Gustavsson (in SMNH); 1 male, same data as previous but 12–15.vi. (in SMNH); 2 males, Sö, Tyresta National Park SE Stockholm, 59º10'N 18º19'E, 1999 forest fire site (*Picea*), Malaise trap [area 4], 5.vi–15.vii.2000, B. Viklund, L.-O. Wikars & H. Ahnlund (in SDEI); 11 males, 3 females, Sm, Gränna, Lönnemålen, next to old cellar, Norway spruce forest with big harvested ashes, Malaise trap, 14.vi–1.vii.2005, Swedish Malaise Trap Project (no. 6716, 6712, 6722 in PKHH; no. 204 in PASS, no. 2461–2464 in ZMSC); 3 males, **SWITZERLAND**, ZH, Sihlwald near Zurich, window trap, 20.vi–8.vii.1996, K. Schiegg (no. 1774, 1781, 1782 in PKHH); 1 male, 1 female, **UKRAINE**, Crimea, (lectotype and paralectotype, des. Menzel, in Menzel & Mohrig 2000, Coll. Lengersdorf, in ZFMK).

Description. See Bukowski and Lengersdorf (1936) and Tuomikoski (1960); for hypopygium, see Figs. 32 A–D.

Discussion. Menzel and Mohrig (2000) found four males and one female of the original, larger type material from the Crimea, used by Bukowski and Lengersdorf (1936), and designated one of the males as lectotype, the other specimens as paralectotypes. We have studied one of the paralectotype males and trust on its conspecifity with the lectotype, based on the judgement of Mohrig and Menzel (2000).

Corynoptera luteofusca belongs to a group of species which have an unusually long apical tooth, usually longer than half the width of gonostylus and which is as long as or longer than the gonostylar megasetae and which have at laest some of the setae at the ventral mesial margin of the gonocoxa greatly elongated. The other similar species are *C. breviformis, C. confirmata, C. levis* and *C. pacifica* and the distinguishing characters are discussed under these species. *Corynoptera confirmata* is similar except for having an elongated gonostylus (see under *C. confirmata*). *Corynoptera condyloma* and *C. lobata* are in many ways reminiscent but lack the elongated setae on the gonocoxa (see under *C. condyloma*).

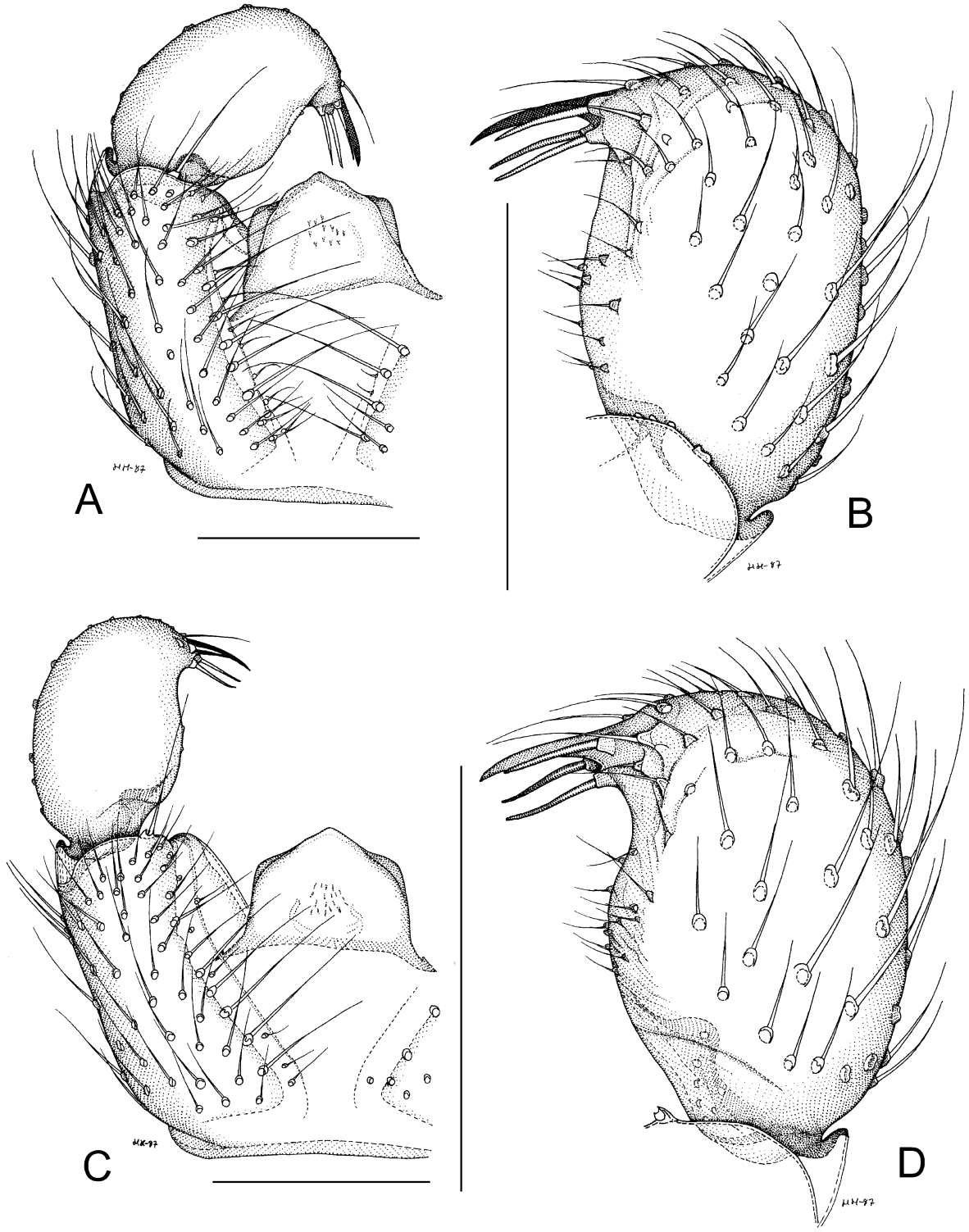

FIGURE 32. *Corynoptera luteofusca* (Bukowski & Lengersdorf) (A, B from Italy, C, D from Germany). **A, C.** Part of hypopygium, ventral view. **B, D.** Gonostylus, ventral view. Scale 0.1 mm.

Distribution. **Austria** (Menzel 2001, Troger 1978), **Bulgaria** (Dimitrova & Mohrig 1993), **Canada** (this study), **Czech Republic** (Menzel *et al.* 2000), **Finland** (Salmela & Vilkamaa 2005, Tuomikoski 1960, Vilkamaa *et al.* 2007), **Germany** (Bogenschütz 2005, Hövemeyer 1992, 1996b, 1997, Menzel *et al.* 1990, Rudzinski 1989b, 1995, Thiede 1977), **Great Britain** (Menzel *et al.* 2006), **Greece** (this study), **Slovakia** (Rudzinski 2009), **Slovenia** (this study), **Sweden**, (Heller *et al.* 2009), **Switzerland** (Röschmann & Mohrig 1994), **Ukraine** (Bukowski & Lengersdorf 1936).

***Corynoptera pacifica* sp. n.**
Figs. 33 A, B

Material studied. *Holotype male*. **USA**, **California**, Marin Co., Lily Pond, Alpine Lake, 15.ii.1969, D.D. Munroe (in MZH). *Paratype*. 1 male, same data as holotype (in MZH).

Description. Male. **Head**. Brown, maxillary palpus very pale brown, antenna concolorous with face. Eye bridge 2–3 facets wide. Face with 9–10 scattered dark longer and shorter setae. Clypeus with 1 dark seta. Maxillary palpus with 3 palpomeres; palpomeres 1 and 3 subequal in length, palpomere 2 shorter; palpomere 1 with 1–3 long sharp setae, with a dorsal patch of sensilla; palpomere 2 with 1 long sharp seta and 5 shorter truncate setae, palpomere 3 with 8 short truncate setae. Antennal flagellomere 4 3.1–3.2 times as long as wide, the neck shorter than the width of flagellomere, the longest setae about as long as the width of flagellomere. **Thorax**. Unicolorous brown, setae dark. Anterior pronotum with 2 setae. Episternum 1 with 3–4 setae. **Wing**. Length 1.9–2.0 mm. Width/length 0.45. R1/R 0.75–1.05. c/w 075–0.80. r-m longer than bM, r-m/bM 1.10–1.30, both r-m and bM non-setose. **Legs**. Pale yellowish brown. Front tibial organ with dark vestiture, forming a comb-like row. Front tibial spur slightly longer than the tibial width. **Abdomen**. Brown. Setae dark. **Hypopygium,** Figs. 33 A, B. Brown, paler than abdomen. Gonocoxa and gonostylus subequal in length. The ventral setosity of gonocoxa rather sparse, a few of the setae at the apical part of the mesial margin greatly elongated. Gonostylus tumid, the mesial side slightly impressed on apical third; the setosity sparse, apicomesially with a few elongated setae; without an apical tooth, with 3 megasetae, the megasetae subequal in size, straight. Tegmen simple, with a small dorsal finger-like process.

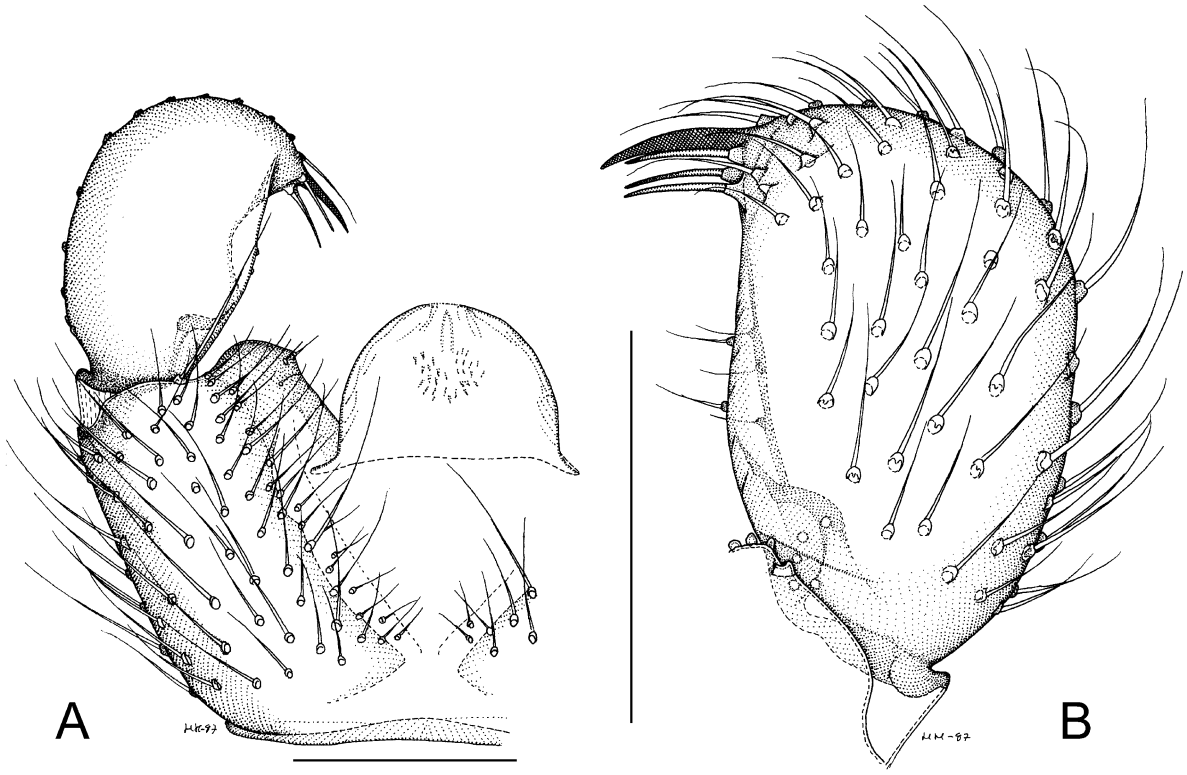

FIGURE 33. *Corynoptera pacifica* sp. n. (holotype). **A.** Part of hypopygium, ventral view (aedeagal apodeme omitted). **B.** Gonostylus, ventral view. Scale 0.1 mm.

Discussion. *Corynoptera pacifica* is very similar to *C. luteofusca.* It is distinguished by having the apical tooth and the megaseta of the gonostylus shorter, both perpendicular to the long axis of the gonostylus, not inclined towards the gonostylar base. It has finger-like process dorsally on the tegmen unlike *C. luteofusca*, but the process is rather weak and may be difficult to see in the usual mounts. In *C. pacifica* the gonostylar megasetae are evenly gently curved, in *C. luteofusca* they are often gently undulating.

Etymology. The name is Latin, *pacifica*, pacific, referring to the Pacific coast of North America where the type locality is situated.

***Corynoptera breviformis* Mohrig & Krivosheina, 1983**
Figs. 34 A–F

Corynoptera breviformis Mohrig & Krivosheina, in Mohrig *et al.*, 1983: 160.

Material studied. 1 male, **AUSTRIA**, K, Grossglockner High Alpine Road, Piffalpe, mountain field, 1300–1450 m, sweep-net, 14.vii.1993, Menzel (in SDEI); 1 male, **CZECH REPUBLIC**, Bohemia, Riesengebirge, Krkonoše, near Pension Paramo, Spindleruv Mlyn, 800 m, spruce-sycamore mixed forest, sweep-net, 21–28.vii.1994, Menzel (in SDEI); 1 male, Bohemia, Bohemian Forest, Burg Kašperk by Kašperské Hory south of Sušice, spruce forest with *Carpinus betulus*, 860 m, sweep-net, 12.vii.1992, Menzel (in SDEI); 1 male, **FINLAND**, Ab, Rymättylä, rocky S-slope, pitfall trap, 20.v–27.vii.1968, P. Häkkilä (in MZH); 2 males, Ab, Korppoo, Jurmo, pitfall trap, 28.vi–14.viii.1969, P.T. Lehtinen (in MZH; 1 male, Ab, Korppoo, Åvensor, N-slope, pitfall trap, 27.iv–28.vi.1968, P. Häkkilä (in MZH); 1 male, N, Sipoo, Hindsby forest, Malaise trap, 14.vii–18.viii.2005, P. Vilkamaa (in MZH); 1 male, Oa, Ilmajoki, Tuomimaa (6972:260), Malaise trap, 10.vii–5.viii.2004, V.M. Mukkala (in MZH); 1 male, Li, Inari, Tsarmitunturi (7623483:3555297), 340 m, spring by a brook, Malaise trap, 1.vii–1.viii.2004, J. Salmela (in MZH); 2 males, **GERMANY**, BW, Belchen, Malaise trap, 28.v–3.vii.2003, D. Doczkal (no. 4833, 4869 in PKHH); 1 male, BW, Ringingen near Ulm, forest "Hirscheler Hudewald", Malaise trap, 16.v–3.vi.2000, D. Doczkal (no. 5055 in PKHH); 1 male, SH, Kremper Au, photoeclector, 2.vi.1990, J. Lietz (no. 736 in PKHH); 1 male, TH, Friedrichroda, beech forest, sweep-net, 23.vi.1996, K. Heller (no. 1527 in PKHH); 1 male, **ITALY**, Brunate, Como Cap. C.A.O., 1000–1800 m, sweep-net, 11.vii.1986, H. Hippa (in MZH); 2 males, Malcesine, Monte Baldo, 700–1700 m, sweep-net, 7.vii.1986, H. Hippa (in MZH); 1 male, Altkaser region, St. Magdalena in Gsiesertal, larch heather, sweep-net, 31.vii.2002, Heller (no. 3838 in PKHH); 1 male, South Tyrol, St. Magdalena, spruce forest at Spielbühl, 1600 m, sweep-net, 31.vii.2002 (no. 3870 in PKHH); 1 male, South Tyrol, St. Magdalena, Pordoi Pass, 2000 m, alpine vegetation, sweep-net, 27.vii.2002 (no. 3881 in PKHH); 1 male, **RUSSIA**, **Krasnodar region**, the Caucasus, Krasnaya Polyana, subalpine forest, sweep-net, 24.vii.1974, Antonova (holotype, no. 2192 in PWMP); 3 males, same data but 1966, B. Mamaev, (no. 1912, 1913, 2193 in PWMP); 1 male, same locality as previous but pitfall trap, 16.v–15.x.1988, H. Hippa & P. Vilkamaa (in MZH); 1 male, Krasnaya Polyana, Kordon Lavra, sweep-net, 13.v.1988, P. Vilkamaa (in MZH); 1 male, by the highway Adler-Krasnaya Polyana, sweep-net, 8.x.1988, P. Vilkamaa (in MZH); 3 males, north-western Caucasus, **Adygeya Republic**, Dachovkaya, Gornaya Legenda Camp, coastal forest of Belaya, 26.vii–3.viii.1994, Mohrig (no. 1914, 1915, 2194 in PWMP); 1 male, **SWEDEN**, Sö, Tyresta National Park SE Stockholm, 59º10'N 18º19'E, 1999 forest fire site (*Pinus*), Malaise trap [area 1S], 2.vi–15.vii.2000, B. Viklund, L.-O. Wikars & H. Ahnlund (in SDEI); 1 male, Ha, Halmstad, Gårdshult, Buskastycket, moist hay meadow, Malaise trap, 25.v–8.vi.2005, Swedish Malaise Trap Project (no. 6709 in PKHH); 1 male, **SWITZERLAND**, ZH, Sihlwald near Zurich, photoeclector, 24.v–19. vi.1996, K. Schiegg (no. 2430 in PKHH).

Description. See Mohrig *et al.* (1983); for antennal flagellomere 4, see Fig. 34 A, for apical part of front tibia, see 34 B, for hypopygium, see Figs. 34 C–G.

Discussion. Corynoptera breviformis was described form the holotype male from the Caucasus and from an additional male from Austria (Mohrig *et al.* 1983). We have studied the holotype.

Corynoptera breviformis is similar to *C. luteofusca* and *C. pacifica*, especially to the former. It is distinguished from both by the slightly narrower gonostylus with the apical part attenuated. It differs from *C. luteofusca* and is similar to *C. pacifica* by having a dorsal finger-like process on the tegmen, but the process is often difficult to see in the usual mounts. The apical tooth and the megasetae of the gonostylus are similar to *C. luteofusca* when compared with *C. pacifica* but still longer.

Distribution. **Austria** (Mohrig *et al.* 1983), **Czech Republic** (this study), **Finland** (this study), **Germany** (Heller 2004: as *C. luteofusca*), **Italy** (this study), **Russia, Krasnodar region** (Mohrig *et al.* 1983), **Russia, Adygeya Republic** (this study), **Sweden** (Heller *et al.* 2009), **Switzerland** (this study).

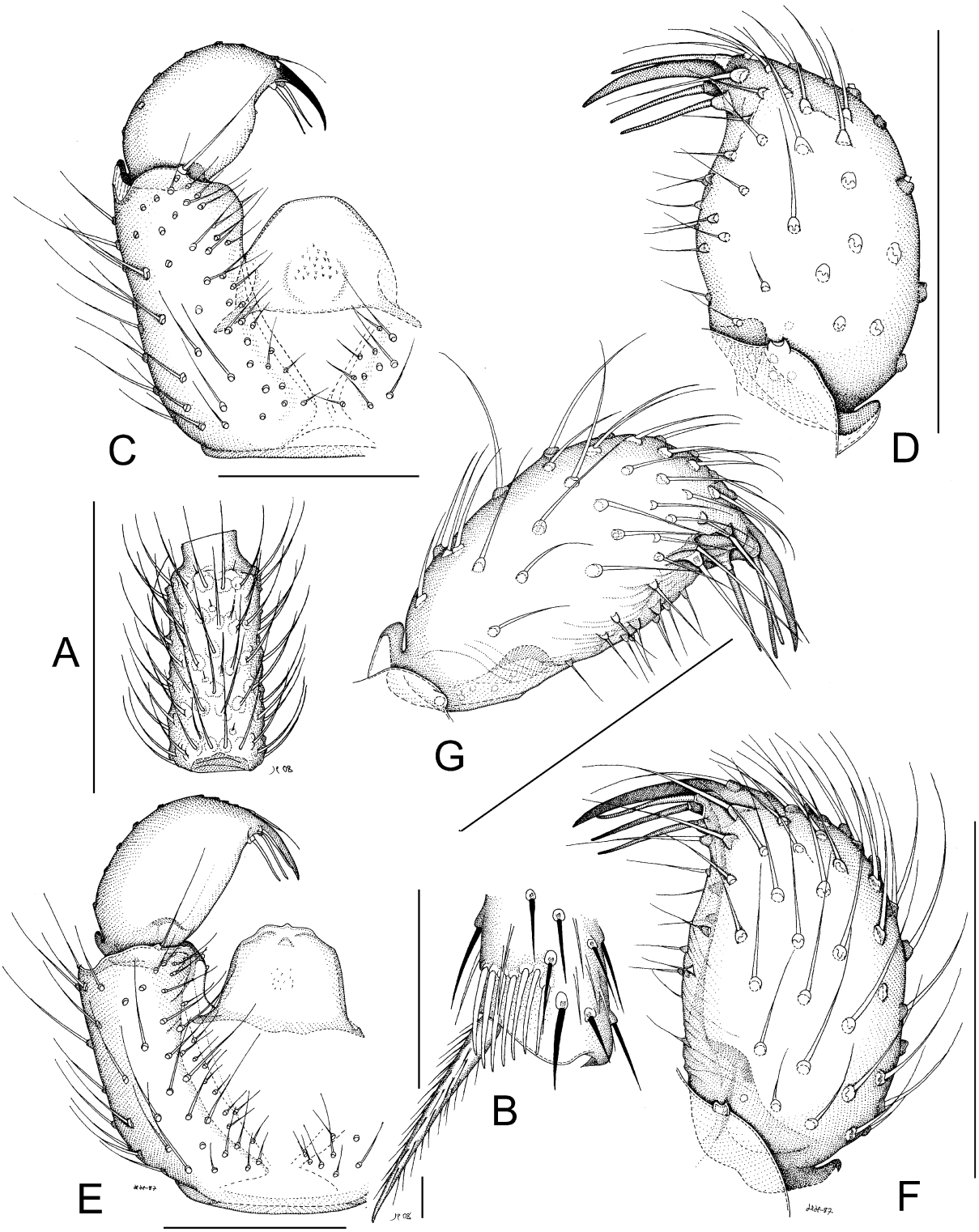

FIGURE 34. *Corynoptera breviformis* Mohrig & Krivosheina (A, G from Finland, C, D from Sochi, B, E, F from Krasnodar region). **A.** Antennal flagellomere 4. **B.** Apical part of front tibia, prolateral view. **C, E.** Part of hypopygium, ventral view (aedeagal apodeme omitted in C). **D, F, G.** Gonostylus, ventral view. Scale 0.1 mm.

***Corynoptera levis* Tuomikoski, 1960**
Figs. 35 A, B

Corynoptera levis Tuomikoski, 1960: 55.

Material studied. 1 male, **AUSTRIA**, S, Grossglockner High Alpine Road, Lärchach, 1750 m, larch/spruce mixed forest,sweep-net, 14.vii.1993 (in SDEI); 5 males, **FINLAND**, Ab, Vihti, Vihtijärvi, 11–12.vii.1959, R. Tuomikoski (lectotype, hereby designated in order to fix the name of the species, and paralectotypes, in MZH); 11 males (mounted on three slides), same data but 2–5.vii.1959 (paralectotypes, in MZH); 1 male, Ab, Vihti, Vihtijärvi, 7.vii.1962, R. Tuomikoski (in MZH); 1 male, same data as previous but 22–24.viii.1961, R. Tuomikoski (in MZH); 1 male, again same data but 25–27.viii.1961 (in MZH), 1 male, again same data but 8.vii.1962 (in MZH); 1 male, Oa, Ilmajoki, Kivistönmäki, Malaise trap, 17.vii–6.ix.2003, J. Salmela (in MZH); Om, Himanka Rahja, Närvänen, (7125:336), window trap, 8.vii.1989, M. Sievänen (in MZH); 1 male, Tb, Saarijärvi, W Saaripuro, N Pyhä-Häkki National Park, 62.52°N 25.26°E, 140 m, spruce/birch/alder/pine forest along stream, sweep-net, 3.vii.2004, M. Jaschhof (in MZH); 1 male, Ks, Kuusamo, Matinjärvi, (7367909:3615372), by a brook, Malaise trap, 30.v–3.viii.2005, J. Salmela (in MZH); 1 male, Ks, Kuusamo, Putaanoja (7367392:3608548), by a brook, Malaise trap, 30.v–3.viii.2005, J. Salmela (in MZH); 3 males, **GERMANY**, MV, Galenbecker See Nature Reserve, Mariawerth, swamp forest, photoeclector, 28.viii–1992, M. Jaschhof (no. 2707–2709 in PWMP); 5 males, 2 females, SH, Blumenthal, photeclector over alder wood, 10.iv–19.v.2000, H. Arp (no. 3152, 3153, 3172–3174 in PKHH); 2 males, 1 female, SH, Rade, wet meadow, photoeclector, 22.vii–19.viii.1999, K. Heller (no. 3048, 3049); 1 male, TH, Breitenbach, Vesser valley, emergence trap, 13.vi.1987 (no. 2710 in PWMP); 1 male, **SWEDEN**, Lu, Kåbdalis, Suorke DR, yellow window trap, 31.v–23.ix.1993, B. Viklund (in SMNH); 1 male, Ly, Laxnäs, 15–17.vii. 1922, L. Janzon (no. 818 in SMNH); 7 males, Pi, Arjeplog, L. Sädvajaure (northern end), 500 m, subalpine birch forest, Malaise trap, 7.vii–12.viii.2005, M. & C. Jaschhof (no. 5914, 5915 in PKHH, no. 1044, 1045, 1048 in SMNH, no. 2403, 2404 in ZMSC); 1 male, To, Kiruna, Nikkaluokta, young birch/willow forest along stream, Malaise trap, 14.vii–5.viii.2005, M. Jaschhof (no. 1067 in SMNH); 2 males, **SWITZERLAND**, GR, Alp Bischola, mountain pasture, yellow dish, 16–17.viii.1996, B. Kistenmacher (no. 1824, 1825 in PKHH).

Description. See Tuomikoski (1960); for hypopygium, see Figs. 35 A, B.

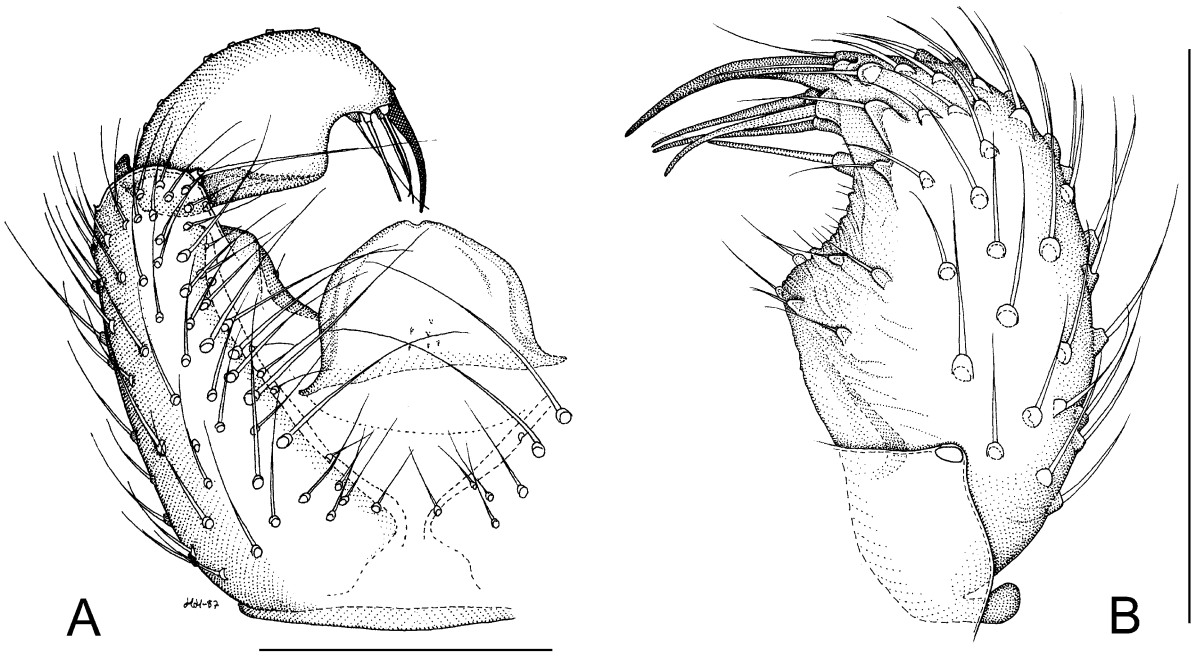

FIGURE 35. *Corynoptera levis* Tuomikoski (from Finland). **A.** Part of hypopygium, ventral view (aedeagal apodeme omitted). **B.** Gonostylus, ventral view. Scale 0.1 mm.

Discussion. *Corynoptera levis* was described from an unspecified number of males from southern Finland (Tuomikoski 1960). In the collection of MZH we have found 16 specimens and have selected the lectotype.

In its hypopygium *C. levis* is similar to *C. breviformis*, *C. luteofusca* and *C. pacifica*, especially the first one. It differs from all by having a heel-like lobe at the middle of the mesial margin of the gonostylus. It differs from *C. breviformis* and *C. pacifica* by lacking a finger-like process dorsally on the tegmen.

Distribution. **Austria** (Menzel 2001, Troger 1978), **Finland** (Tuomikoski 1960), **Germany** (Heller 2002a, Rudzinski 1989b, 2006), **Great Britain** (Menzel *et al*. 2006), **Russia, Altay region** (Komarova 1995b), **Sweden** (Heller *et al.* 2009), **Switzerland** (this study).

***Corynoptera condyloma* sp. n.**
Figs. 36 A–D

Material studied. Holotype male. **JAPAN**, Kyushu, Kagoshima Pref., Mt. Kinpou, 600 m, deciduous forest, sweep-net, 18.ix.1995, M. Jaschhof (in SDEI).

Description. Male. **Head**. Dark brown, maxillary palpus very pale brown, antenna slightly paler than face. Eye bridge 3–4 facets wide. Face with 7–9 scattered dark longer and shorter setae. Clypeus with 1 dark seta. Maxillary palpus with 3 palpomeres; palpomere 1 longer than palpomere 2, palpomere 3 shortest; palpomere 1 with one long sharp seta, with a dorsal patch of sensilla; palpomere 2 with 1 long sharp seta and 4–6 shorter truncate setae, palpomere 3 with 4–7 short truncate setae. Antennal flagellomere 4, Fig. 36 A, 2.4–2.5 times as long as wide, the neck

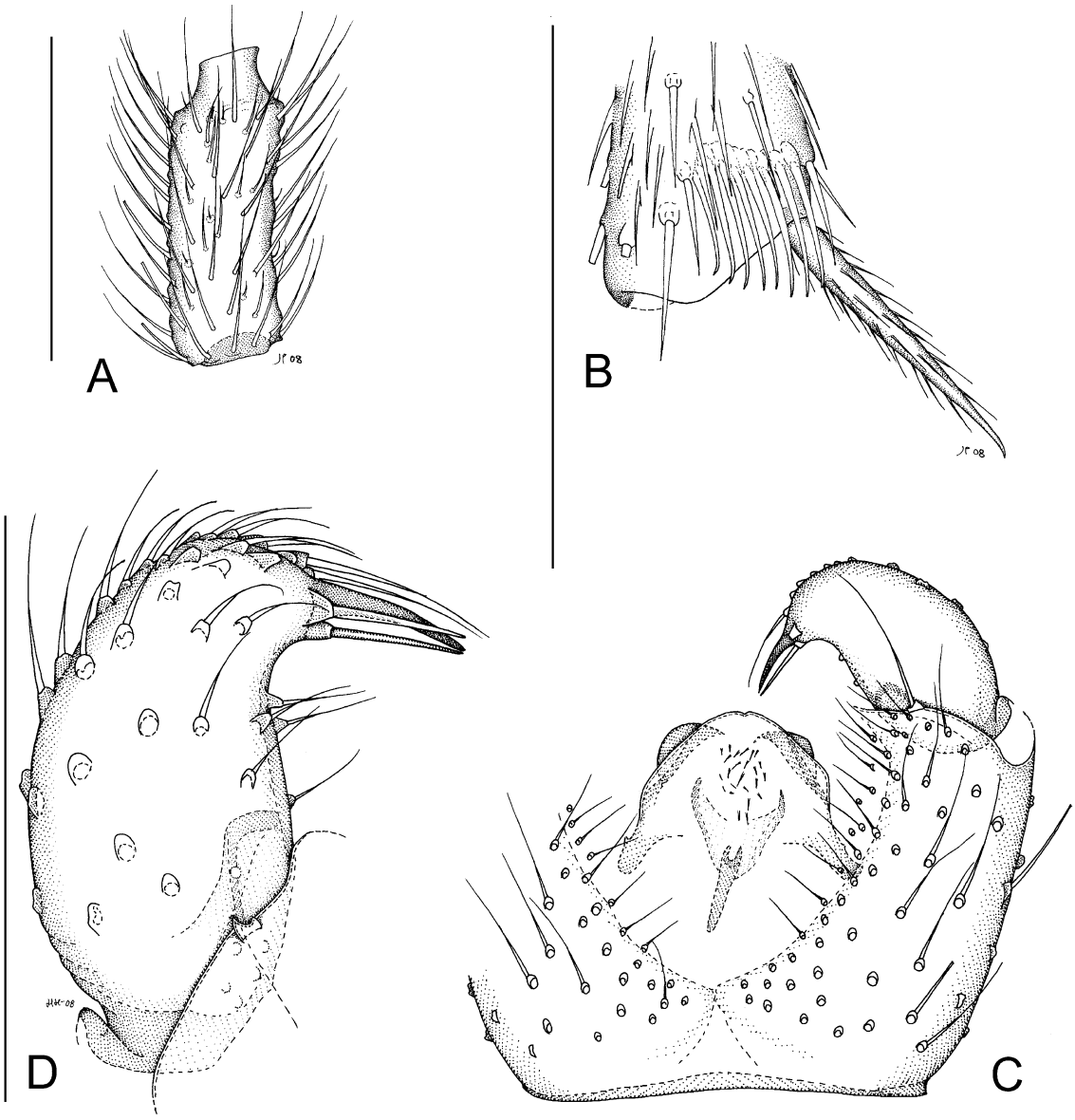

FIGURE 36. *Corynoptera condyloma* sp. n. (holotype). **A.** Antennal flagellomere 4. **B.** Apical part of front tibia, prolateral view. **C.** Part of hypopygium, ventral view. **D.** Gonostylus, ventral view. Scale 0.1 mm.

shorter than the width of flagellomere, the longest setae slightly longer than the width of flagellomere. **Thorax**. Unicolorous brown, setae dark. Anterior pronotum with 2 setae. Episternum 1 with 2–5 setae. **Wing**. Length 1.1–1.2 mm. Width/length 0.45. R1/R 0.60–0.70. c/w 0.60. r-m and bM subequal in length or bM longer, r-m/bM 0.85–1.0, both r-m and bM non-setose. Haltere pale brown. **Legs**. Pale yellowish brown. Apical part of front tibia, Fig. 36 B: tibial organ with dark vestiture, forming a comb-like row with a few scattered elements. Front tibial spur as long as tibial width. **Abdomen**. Brown, paler than thorax. Setae dark. **Hypopygium,** Figs. 36 C, D. Brown, paler than abdomen. Gonocoxa longer than gonostylus. The ventral setosity of gonocoxa sparse, the setae at the apical part of the mesial margin not elongated. Gonostylus elongated, apicomesially curved; the setosity sparse, apicomesially with a few elongated setae; without a long narrow apical tooth, with 2 megasetae, the megasetae subequal in size, straight and slender. Tegmen simple, without a dorsal finger-like process, with apicolateral dorsal shoulders.

Discussion. Corynoptera condyloma is not especially similar to any other species. By the very long apical tooth and megasetae on the gonostylus it resembles *C. breviformis, C. luteofusca, C. pacifica* and *C. confirmata*. It differs from all by having only two, not three, gonostylar megasetae. *Corynoptera condyloma* has a characteristic tegmen with a prominent apicolateral lobe. A reminiscent smaller lobe is also present in *C. luteofusca* (Figs. 32 A, C) and *C. breviformis* even if it may be very poorly visible in most mounts. Unlike the mentioned species *C. condyloma* lacks conspicuously elongated setae at the ventral mesial margin of the gonocoxa and has the gonostylus less tumid. *Corynoptera condyloma* has a great overall similarity to *C. lobata* but the later has the lobes of tegmen much smaller, the apical tooth and the megasetae of the gonostylus are shorter and the number of the megasetae is three. *Corynoptera condyloma* and *C. lobata* are not unlike some other species dealt with earlier in this paper. For example, the hypopygium of *C. condyloma* resembles that of *C. sphenoptera*, except for the lobate tegmen, the longer apical tooth and the megasetae on the gonostylus and lack of the dorsal finger-like process on the tegmen. The hypopygium of *C. lobata* recalls *C. serotina, C. sedula* and *C. consumpta* but differs by the lobated tegmen and the slightly longer apical tooth and the megasetae on the gonostylus.

Etymology. The name is derived from the Greek words *kondylos,* knob, and *loma,* border, referring to the knob-like lobe at the lateral margin of the tegmen. In nomenclatural meaning the name is to be regarded as an arbitrary combination of letters.

***Corynoptera lobata* sp. n.**
Figs. 37 A, B, C

Material studied. Holotype male. **JAPAN**, Kyushu, Kagoshima Pref., Mt. Kinpou, deciduous forest, 600 m, sweep-net, 18.ix.1995, M. Jaschhof (in SDEI). *Paratypes*. 1 male, same data as holotype (in SDEI); 1 male, Shikoku, Kochi Pref., Ashizuri Peninsula, Tosashimizu, Sata-yama Forest Reserve, 300–400 m, primary evergreen deciduous forest (*Castanopsis sieboldii*), sweep-net, 10.xi.1998, M. Jaschhof (in KUEC).

Description. Male. **Head**. Dark brown, maxillary palpus very pale brown, antenna slightly paler than face. Eye bridge 3–4 facets wide. Face with 7–9 scattered dark longer and shorter setae. Clypeus with 1 dark seta. Maxillary palpus with 3 palpomeres; palpomere 1 longer than palpomere 2, palpomere 3 shortest; palpomere 1 with one long sharp seta, with a dorsal patch of sensilla; palpomere 2 with 1 long sharp seta and 4–6 shorter truncate setae, palpomere 3 with 4–7 short truncate setae. Antennal flagellomere 4, Fig. 37 A, 2.4–2.5 times as long as wide, the neck shorter than the width of flagellomere, the longest setae slightly longer than the width of flagellomere. **Thorax**. Unicolorous brown, setae dark. Anterior pronotum with 2 setae. Episternum 1 with 2–5 setae. **Wing**. Length 1.1–1.2 mm. Width/length 0.45. R1/R 0.60–0.70. c/w 0.60. r-m and bM subequal in length or bM longer, r-m/bM 0.85–1.0, both r-m and bM non-setose. Haltere pale brown. **Legs**. Pale yellowish brown. Front tibial organ with dark vestiture, forming a comb-like row with a few scattered elements. Front tibial spur as long as tibial width. **Abdomen**. Brown, paler than thorax. Setae dark. **Hypopygium,** Figs. 37 B, C. Brown, paler than abdomen. Gonocoxa longer than gonostylus. The ventral setosity of gonocoxa sparse, the setae at the apical part of the mesial margin not elongated. Gonostylus elongated, apicomesially curved; the setosity sparse, apicomesially with a few elongated setae; with a long narrow apical tooth, with 3 megasetae, the megasetae subequal in size, straight and slender. Tegmen simple, without a dorsal finger-like process, with lateral dorsal strongly sclerotized shoulders.

Discussion. *S*ee under *Corynoptera condyloma*.

Etymology. The name is Latin, *lobata*, with lobe, referring to the lateral lobes on the tegmen.

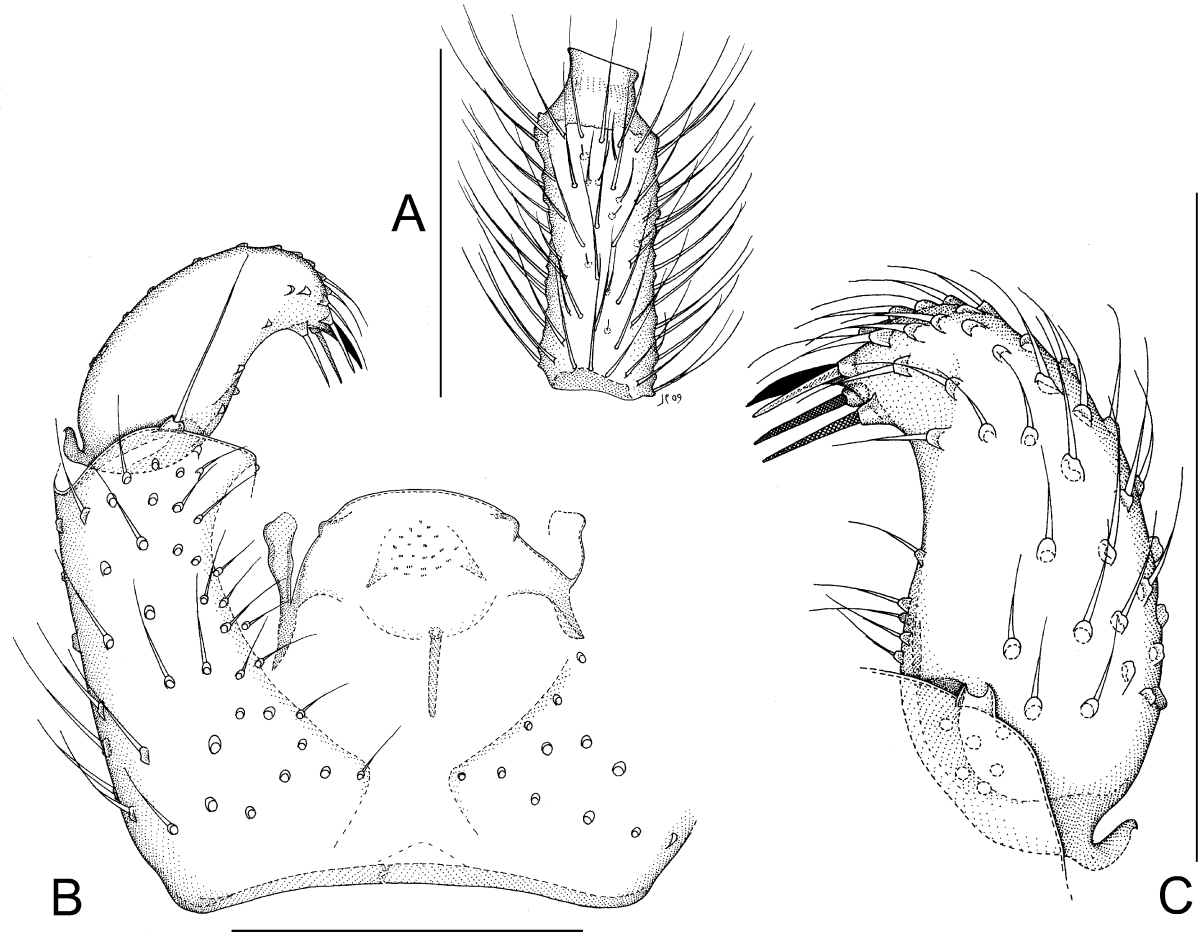

FIGURE 37. *Corynoptera lobata* sp. n. (holotype). **A.** Antennal flagellomere 4. **B.** Part of hypopygium, ventral view. **C.** Gonostylus, ventral view. Scale 0.1 mm.

***Corynoptera confirmata* Mohrig, 1985**
Figs. 38 A, B, C

Corynoptera confirmata Mohrig, 1985: 232

Material studied. 1 male, **AUSTRIA**, T, Oetz Valley, Obergurgl, 1960–1980 m, alpine field, photoeclector, 3–10.vii.1976, Troger (holotype, in PWMP); 4 males, **RUSSIA**, **Primorsk region**, Ussuriysk Nature Reserve, 12.vii.1991, P. Vilkamaa (in MZH).

Description. See Mohrig (1985); for antennal flagellomere 4, see Fig. 38 A, for hypopygium, see Figs. 38 B, C.

Discussion. *Corynoptera confirmata* was described from the holotype male which we have studied from the Austrian Alps (Mohrig 1985), and has not been recorded since. It is greatly similar to *C. breviformis*, *C. luteofusca* and *C. pacifica* but differs by the quite different elongated shape of the gonostylus. There is a dorsal finger-like process on the tegmen like in *C. breviformis* and *C. pacifica*.

Distribution. **Austria** (Mohrig 1985), **Russia, Primorsk region** (this study).

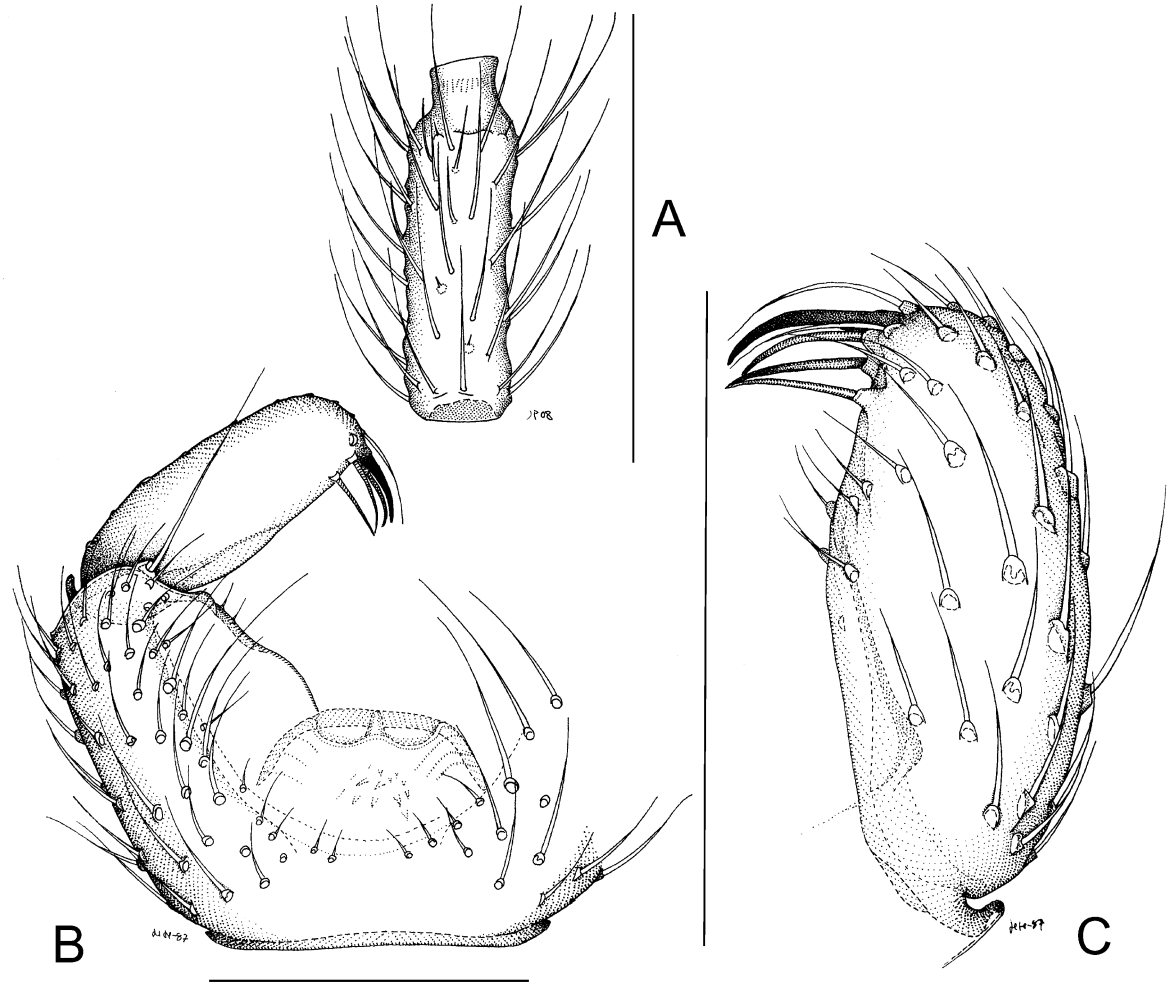

FIGURE 38. *Corynoptera confirmata* Mohrig (holotype). **A.** Antennal flagellomere 4. **B.** Part of hypopygium, ventral view (aedeagal apodeme omitted). **C.** Gonostylus, ventral view. Scale 0.1 mm.

Corynoptera applanata Mohrig & Dimitrova, 1992

Figs. 39 A, B, C

Corynoptera applanata Mohrig & Dimitrova, 1992: 180.

Material studied. 1 male, **BULGARIA**, Vitosha mountains, Boyana, meadow in hornbeam forest, 28.v.1989, B. Dimitrova (holotype, no. 1476 in PWMP); 5 males, **GREECE**, Lesbos, near Agiassos, *Pinus/Quercus coccifera* forest, Malaise trap, 3–8.v.2006, Exp. Zool. Mus. Helsinki & Zool. Mus. Turku (in MZH).

Description. See Mohrig and Dimitrova (1992); for antennal flagellomere 4, see Fig. 39 A, for hypopygium, see Figs. 39 B, C.

Discussion. Corynoptera applanata was described from the holotype male and four paratype males from Bulgaria (Mohrig & Dimitrova 1992). Of these we have seen only the holotype. *Corynoptera applanata* is similar to *C. macricula*. For further discussion, see under that.

Distribution. **Bulgaria** (Mohrig & Dimitrova 1992), **Greece** (this study).

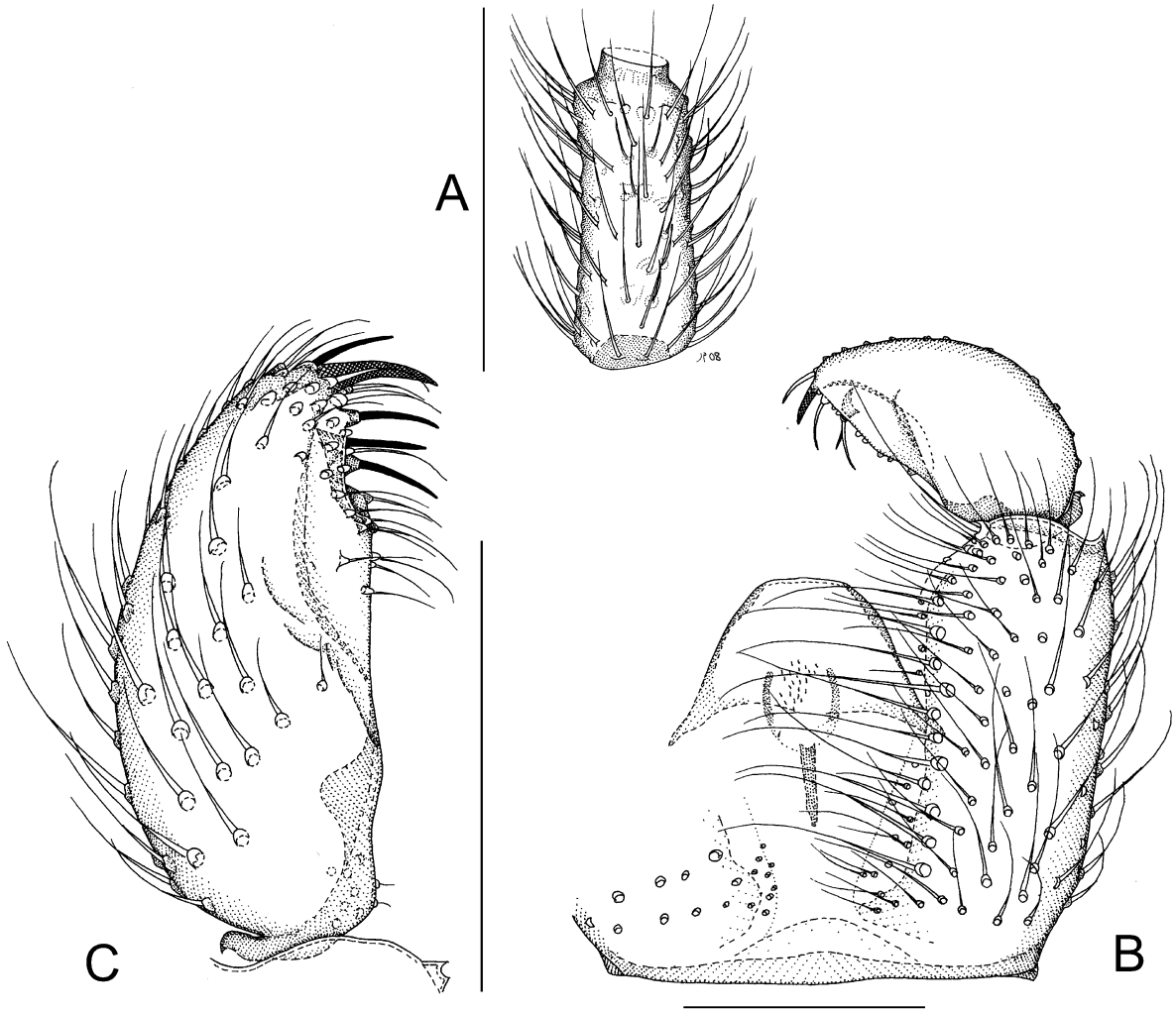

FIGURE 39. *Corynoptera applanata* Mohrig & Dimitrova (A holotype, B, C from Lesbos). **A.** Antennal flagellomere 4. **B.** Part of hypopygium, ventral view. **C.** Gonostylus, ventral view. Scale 0.1 mm.

Corynoptera macricula Mohrig & Krivosheina, 1986

Figs. 40 A–D, 41 A–E

Corynoptera macricula Mohrig & Krivosheina, in Mohrig *et al.*, 1986: 32.
Corynoptera simonae Rudzinski, 1992b: 1. **New synonymy.**

Material studied. 2 males, **FRANCE,** Paimpoint, July 1990, S. Deleporte (holotype and paratype of *C. simonae* Rudzinski, in ZSMC); 1 male, **ITALY**, Sicily, 627 ME, Nebrodi 630 m, spring at NE slope, Mt. Trifinaidi, 13.xi.1987, R. Gerecke (no. 2180 in PWMP); 1 male, Rome, Villa Ada, 30.iii.1988, H. Hippa (in MZH); 1 male, **NETHERLANDS**, Tilburg, Kaaistoep, Malaise trap, 16.v.1998, v. Zuijlen (no. 3763 in PKHH); 3 males, **SPAIN**, Majorca, Lluch, oak forest, pitfall trap, 19–28.iv.1995, K. Heller (no. 1043 in PKHH, no. 1042 in SDEI, no. 1044 in PWMP); 1 male, **TURKMENISTAN**, Central Kopetdag, Ipai-Kala, 7.vi.1971, Antonova (holotype, in PWMP).

Description. See Mohrig *et al.* (1986) and Rudzinski (1992); for antennal flagellomere 4, see Fig. 40 A, for apical part of front tibia, see Fig. 40 B, for hypopygium, see Figs. 40 C and D and 41 A–E.

Discussion. Corynoptera macricula was described from the holotype male from Turkmenistan (Mohrig *et al.* 1986), and *C. simonae* from the holotype male and three paratype males from France (Rudzinski 1992b). We have studied the holotype as well as the holotype and paratype of *C. simonae,* and in our view, it is one species, in spite of the seeming differences in the gonostylus. The ventro-mesial margin at the mesial impression may obviously

either cover (Figs. 40 C, D, 41 C, D) or expose the bases of the megasetae (Figs. 41 A, B), depending on the preparation. *Corynoptera macricula* resembles *C. applanata* but differs by having a finger-like process in its tegmen and by having three gonostylar megasetae instead of four, the one at the very apex of the gonostylus lacking. *Corynoptera macricula* resembles also *C. chaetospina.* For further discussion, see under the latter.

Distribution. **France** (Rudzinski 1992b: as *C. simonae*), **Great Britain** (Menzel *et al.* 2006), **Italy** (this study), **Netherlands** (Heller & Menzel 2004), **Spain, Balearic Islands** (Heller & Menzel 2004: as *C. simonae*), **Turkmenistan** (Mohrig *et al.* 1986).

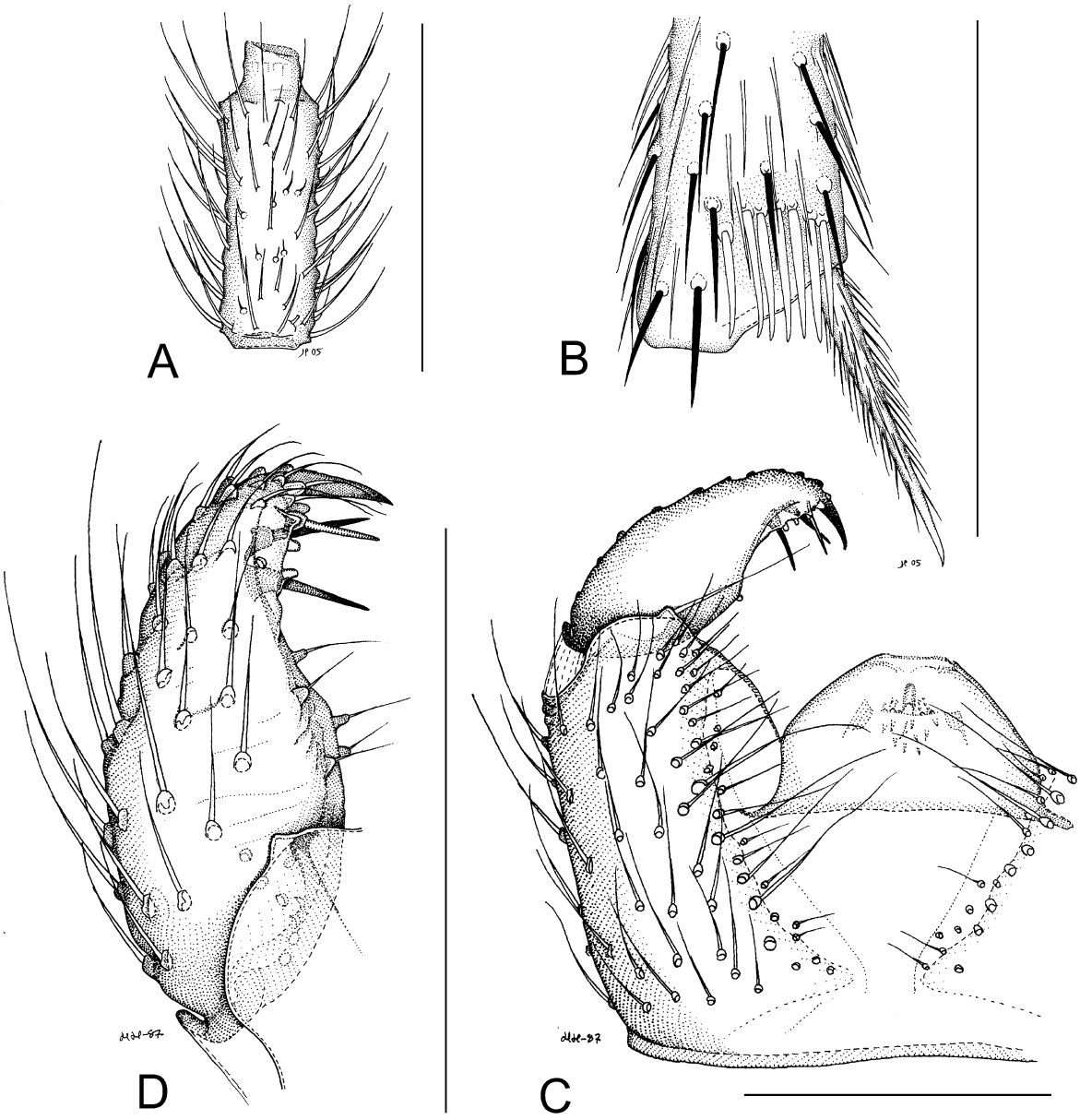

FIGURE 40. *Corynoptera macricula* Mohrig & Krivosheina (A, B from Netherlands, C, D holotype). **A.** Antennal flagellomere 4. **B.** Apical part of front tibia, prolateral view. **C.** Part of hypopygium, ventral view (aedeagal apodeme omitted). **D.** Gonostylus, ventral view. Scale 0.1 mm.

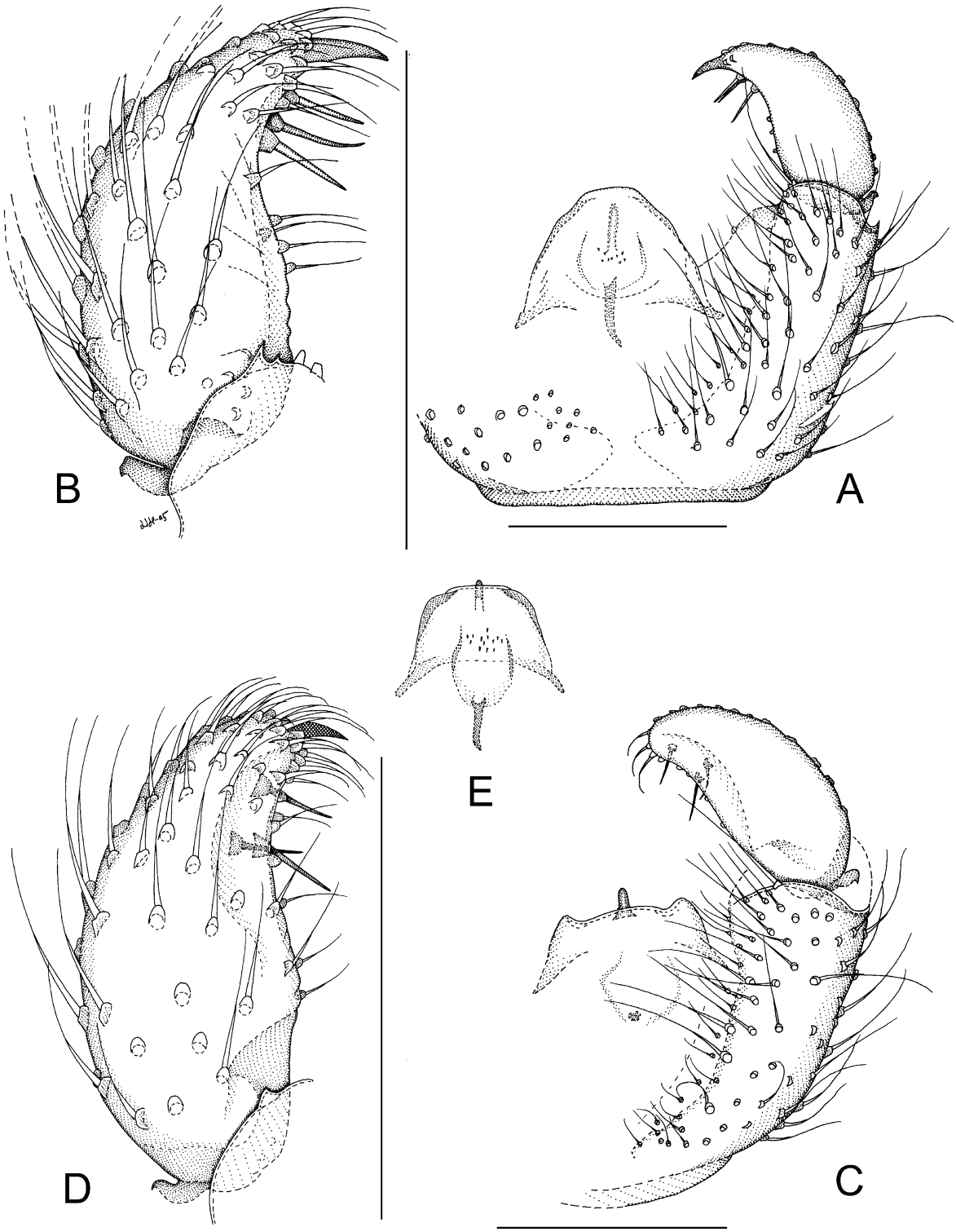

FIGURE 41. *Corynoptera macricula* Mohrig & Krivosheina (A, B paratype of *C. simonae* Rudzinski, C, D from Rome, E from Sicily). **A, C.** Part of hypopygium, ventral view. **B, D.** Gonostylus, ventral view. **E.** Tegmen, ventral view. Scale 0.1 mm, for E as C.

Corynoptera chaetospina Mohrig & Röschmann, 1996

Corynoptera chaetospina Mohrig & Röschmann, in Röschmann & Mohrig, 1996: 300.

Description. See Röschmann and Mohrig (1996).

Discussion. The species was described from Greece based on two males, but the material has not been available for study. Judged from the original description (Mohrig & Röschmann 1996), the species is similar to *Corynoptera macricula* of which it differs by having a two-segmented, not three-segmented, palpus and by having the apical tooth of gonostylus as long as, not shorter than, the gonostylar megasetae. The presence or absence of a finger-like process dorsally on tegmen was not described, but we assume it is present as in *C. macricula.*

Distribution. **Greece** (Röschmann & Mohrig 1996).

***Corynoptera aequispina* sp. n.**
Figs. 42 A, B

Material studied. *Holotype male*. **CANADA**, **Quebec**, Gatineau Park, King Mountain 45°29'20"N 75°51'45"W, summit, 354 m, Malaise trap, 16–21.vi.2005, P. Vilkamaa (in CNC). *Paratype*. 1 male, same data as holotype (in MZH).

Description. Male. **Head**. Brown, maxillary palpus very pale brown, antenna paler than face. Eye bridge 2–3 facets wide. Face with 5 scattered dark longer and shorter setae. Clypeus with 1 dark seta. Maxillary palpus with 3 palpomeres; palpomere 1 longer than palpomere 3, palpomere 2 shortest; palpomere 1 with one long sharp seta, with a dorsal patch of sensilla; palpomere 2 with 1 long sharp seta and 2–3 shorter truncate setae, palpomere 3 with 4 short truncate setae. Antennal flagellomere 4 2.2–2.9 times as long as wide, the neck shorter than the width of flagellomere, the longest setae slightly longer than the width of flagellomere. **Thorax**. Pale brown, setae dark. Anterior pronotum with 3 setae. Episternum 1 with 4 setae. **Wing**. Length 1.4–1.5 mm. Width/length 0.40. R1/R 0.70–0.75. c/w 0.75–0.85. r-m and bM subequal in length, or bM longer, r-m/bM 0.75–1.0, both r-m and bM non-setose. Haltere pale brown. **Legs**. Yellowish. Front tibial organ with dark vestiture, forming a comb-like row. Front tibial spur slightly longer than the tibial width. **Abdomen**. Pale brown. Setae dark and long. **Hypopygium,** Figs. 42 A, B. Brown, concolorous with abdomen. Gonocoxa longer than gonostylus. The ventral setosity of gonocoxa sparse, the setae at the apical part of the mesial margin elongated. Gonostylus with the mesial side slightly impressed on apical third; the setosity sparse, apicomesially with a few elongated setae; with an apical tooth, with 3 megasetae, the megasetae subequal in size, rather strong and straight. Tegmen with a dorsal finger-like process.

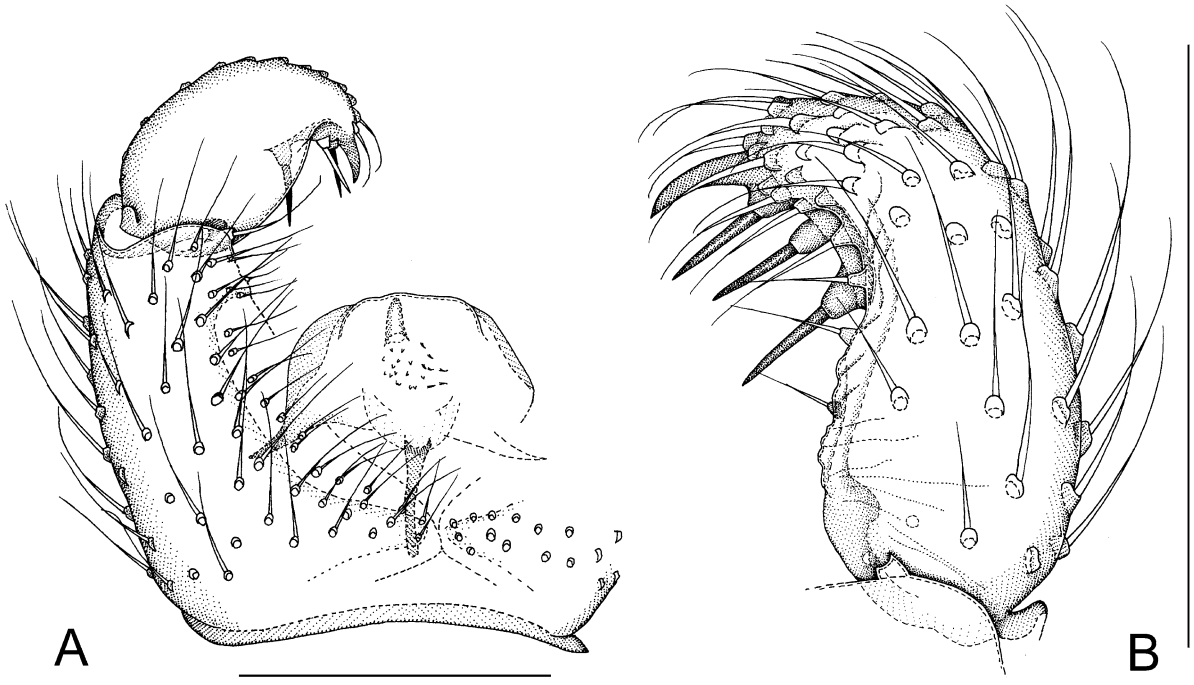

FIGURE 42. *Corynoptera aequispina* sp. n. (holotype). **A.** Part of hypopygium, ventral view. **B.** Gonostylus, ventral view. Scale 0.1 mm.

Discussion. Corynoptera aequispina is similar to *C. tetrachaeta* and could be mixed with it. It differs by having only three strong gonostylar megasetae instead of four weaker ones and by having a finger-like process dorsally on the tegmen. For further discussion, see under *C. tetrachaeta.*

Etymology. The name is derived from the Latin words *aequus*, equal, and *spina*, thorn, referring to the equally sized gonostylar megasetae.

***Corynoptera primoriensis* sp. n.**
Figs. 43 A–D

Material studied. *Holotype male*. **RUSSIA**, **Primorsk region**, Ussuriysk Nature Reserve, sweep-net, 30.vi.1991, P. Vilkamaa (in MZH). *Paratypes.* 5 males, same data as holotype (in MZH); 2 males, 1 female, same locality but 25.vi.1964, B. Mamaev (no. 1956, 1957 in PWMP); 1 male, Kedrovaya Pad, 6.ix.1964, B. Mamaev (no. 1970 in PWMP).

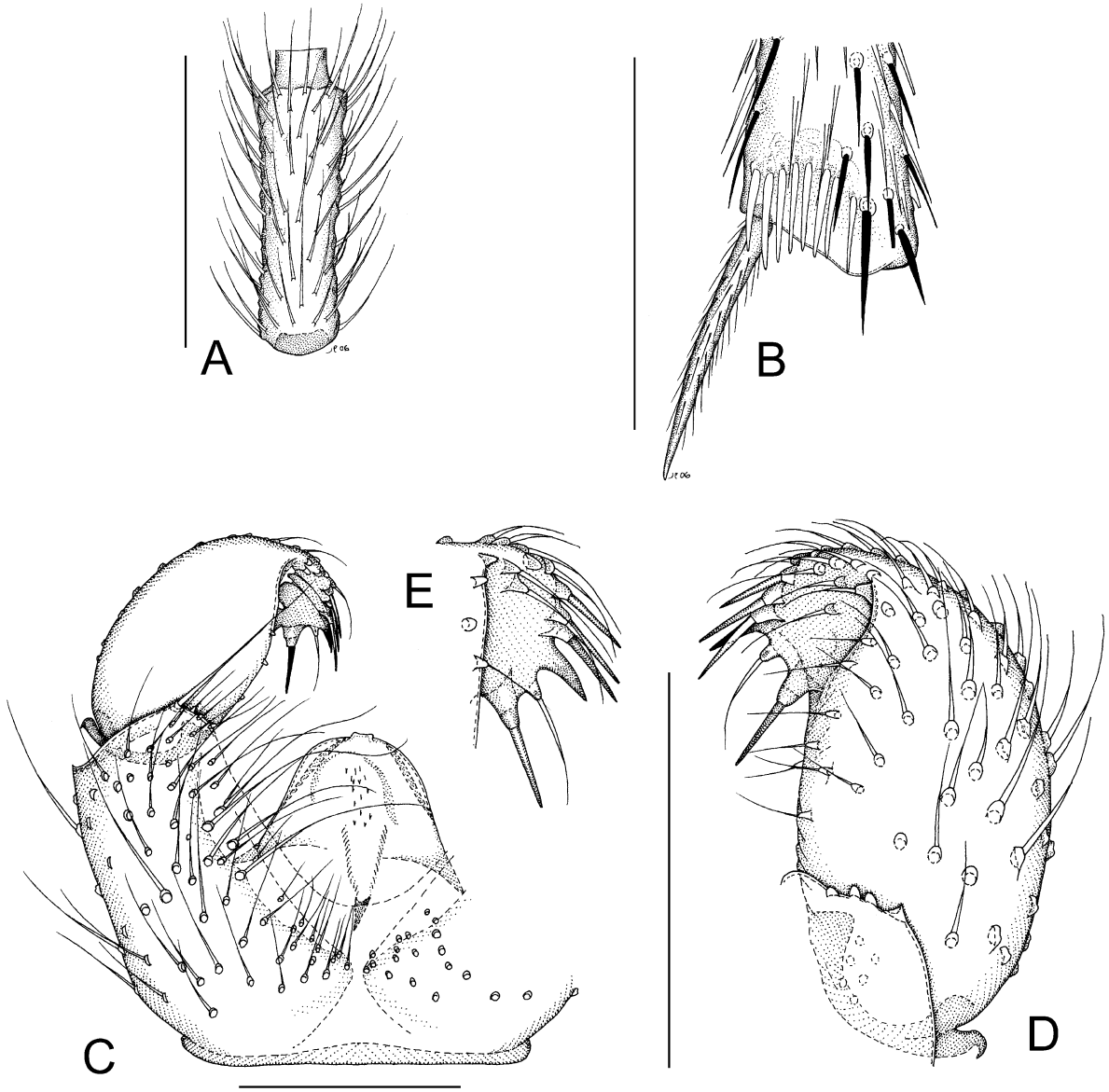

FIGURE 43. *Corynoptera primoriensis* sp. n. (A, B, C, D holotype, E paratype). **A.** Antennal flagellomere 4. **B.** Apical part of front tibia, prolateral view. **C.** Part of hypopygium, ventral view. **D.** Gonostylus, ventral view. **E.** Apical part of gonostylus, ventral view. Scale 0.1 mm, for E as D.

Description. Male. **Head**. Brown, maxillary palpus very pale brown, antenna paler than face. Eye bridge 3 facets wide. Face with 8–14 scattered dark longer and shorter setae. Clypeus with 1 dark seta. Maxillary palpus with 3 palpomeres; palpomere 1 longest, palpomeres 2 and 3 subequal in length; palpomere 1 with 1(3) long sharp seta, with a dorsal patch of sensilla; palpomere 2 with 1 long sharp seta and 6–7 shorter truncate setae, palpomere 3 with 6–7 short truncate setae. Antennal flagellomere 4, Fig. 43 A, 3.0–3.7 times as long as wide, the neck shorter than the width of flagellomere, the longest setae slightly longer than the width of flagellomere. **Thorax**. Unicolorous brown, setae dark. Anterior pronotum with 2–3 setae. Episternum 1 with 2–6 setae. **Wing**. Length 1.5–1.6 mm. Width/length 0.40–0.45. R1/R 0.65–0.75. c/w 0.70–0.75. r-m and bM variable in length, r-m/bM 0.90–1.65, r-m with1–2 setae, bM non-setose. Haltere pale brown. Legs. Yellow. Apical part of front tibia, Fig. 43 B: tibial organ with dark vestiture, forming a loose comb-like row of thick elements. Front tibial spur slightly longer than the tibial width. **Abdomen**. Brown. Setae pale. **Hypopygium**, Figs. 43 C, D, E. Brown, as abdomen. Gonocoxa longer than gonostylus. The ventral setosity of gonocoxa sparse, the setae at the apical part of the mesial margin greatly elongated. Gonostylus elongated, the mesial side slightly impressed apically; the setosity sparse, apicomesially with a few elongated setae; with an apical tooth, with 4 megasetae, in group of 3+1; longer than apical tooth. Tegmen simple, without a dorsal finger-like process.

Discussion. Corynoptera primoriensis is similar to *C. subtetrachaeta* which is the only species it could be confused with. *Corynoptera primoriensis* differs by having three of the four gonostylar megasetae in a transverse row at the level of the apical tooth or placed more apically than the tooth, in *C. subtetrachaeta* there are two megasetae at the apical tooth. Furthermore, *C. primoriensis* lacks a strongly demarcated aedeagal margin characteristic to *C. subtetrachaeta* and has the apical tooth of gonostylus shorter, much shorter than the gonostylar megasetae unlike *C. subtetrachaeta*. *Corynoptera primoriensis* also slightly resembles *C. tetrachaeta*. For further discussion, see under the latter.

By the arrangement of the four gonostylar megasetae and the rather short apical tooth of gonostylus *C. primoriensis* is similar to *C. anae*, but in the latter the three apical megasetae are in a group, not in a transverse row, the megasetae are stouter and the apical part of the gonostylus lacks the mesial impression.

Etymology. The name is derived from the Russian province Primorye where the type locality is situated, by the Latin suffix *-ensis* denoting place.

***Corynoptera plusiochaeta* sp. n.**
Figs. 44 A–E

Material studied. *Holotype male*. **FINLAND**, Lk, Kolari, Yllästunturi, Hormistonjänkkä (7503827:3381388), moist, natural spruce-birch mixed forest, Malaise trap, 15.vii–10.viii.2006, Yakovlev & Penttinen (in MZH). *Paratypes*. 1 male, Li, Inari, Tsarmitunturi wilderness (7618:555), 14.vii.2003, J. Salmela (in MZH); 1 male, Li, Inari, Kolmosjoki, Malaise trap, 2–16.vii.2003, J. Salmela & J. Ilmonen (in MZH); 1 male, Le, Enontekiö, Kilpisjärvi, Saana, 16–30.vii.1967, J. Suormala (in MZH); 1 male, Le, Kilpisjärvi, Saana, SW slope, Malaise trap, 15.vii–10.viii.2006, Penttinen & Yakovlev (in MZH); 1 male, Le, Enontekiö, Annjaloanji (76868:2798), Malaise trap, 11–15.vii.2007, A. Haarto (in MZH); 1 male, **SWEDEN**, Pi, Arjeplog, Kungsleden SW Jäkkvik, 350 m, subalpine birch forest, Malaise trap, 7–12.viii.2005, M. & C. Jaschhof (1012 in SMNH); 4 males, Pi, Arvidsjaur, Reivo Nature Reserve, NW L. Reivo, 450 m, swampy spruce/pine forest, Malaise trap, 11.vii–10.viii.2005, M. & C. Jaschhof (no. 5897, 5900 in PKHH, no. 1022, 1026 in SMNH); 16 males, To, Kiruna, Abisko, birch forest, northern slope, yellow dish, 13–17.vii.1991, M. v. Tschirnhaus (no. 1567–1582 in PWMP); 6 males, To, Kiruna, Nikkaluokta, young birch/willow forest along stream, Malaise trap, 14.vii–5.viii.2005, M. Jaschhof (no. 6047–6050 in PKHH, no. 2427–2428 in ZSMC); 1 male, **USA**, **Alaska**, Isabel Pass, Mi. 206 Richardson Highway, 2900 ft, 13.vii.1962, P.J. Skitsko (in CNC).

Description. Male. **Head**. Dark brown, maxillary palpus very pale brown, antenna concolorous with face. Eye bridge 3 facets wide. Face with 7–9 scattered dark longer and shorter setae. Clypeus with 1 dark seta. Maxillary palpus with 3 palpomeres; palpomere 1 longer than palpomere 3, palpomere 2 shortest; palpomere 1 with one long sharp seta, with a dorsal patch of sensilla; palpomere 2 with 1 long sharp seta and 4–8 shorter truncate setae, palpomere 3 with 6–9 short truncate setae. Antennal flagellomere 4, Fig. 44 A, 2.7–3.5 times as long as wide, the neck shorter than the width of flagellomere, the longest setae slightly shorter than the width of flagellomere. **Thorax**.

Unicolorous dark brown, setae dark. Anterior pronotum with 3–4 setae. Episternum 1 with 4–9 setae. **Wing**. Length 2.0–2.2 mm. Width/length 0.30–0.45. R1/R 0.75–0.85. c/w 0.60–0.65. r-m longer than bM, r-m/bM 1.20–1.25, r-m with 1–4 setae, bM non-setose. Haltere brown. **Legs**. Pale yellowish brown. Apical part of front tibia, Fig. 44 B: tibial organ with dark vestiture, forming an uneven comb-like row with a few scattered elements. Front tibial spur slightly longer than the tibial width. **Abdomen**. Brown, as thorax. Setae dark. **Hypopygium,** Figs. 44 C, D, E. Brown, as abdomen. Gonocoxa longer than gonostylus. The ventral setosity of gonocoxa dense, many setae at the apical part of the mesial margin greatly elongated. Gonostylus elongated, narrowed apically, the mesial side slightly impressed on apical fourth; the setosity sparse, apicomesially with a few elongated setae; with an apical

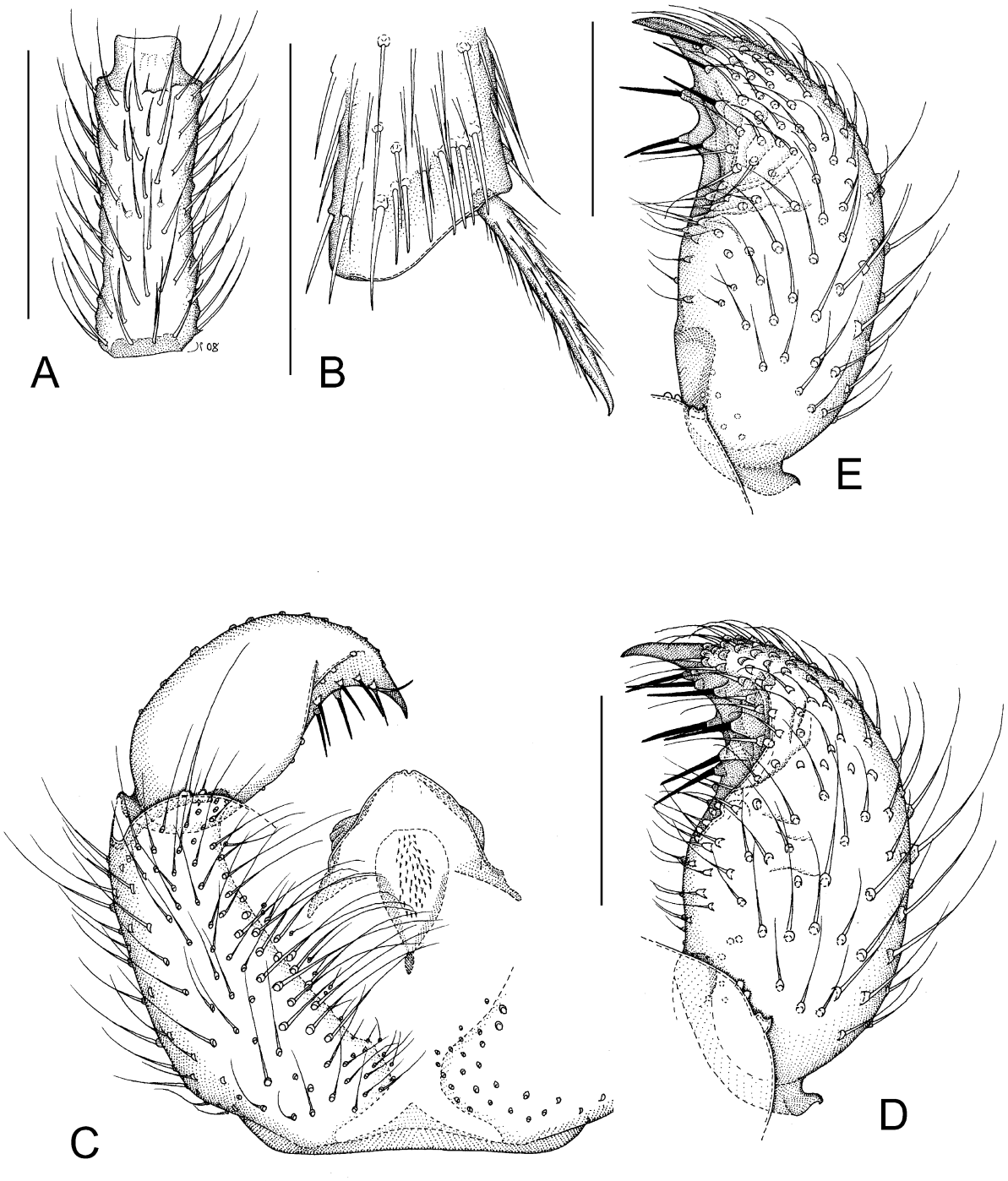

FIGURE 44. *Corynoptera plusiochaeta* sp. n. (A, B, C, D holotype, E from Alaska). **A.** Antennal flagellomere 4. **B.** Apical part of front tibia, prolateral view. **C.** Part of hypopygium, ventral view. **D, E.** Gonostylus, ventral view. Scale 0.1 mm.

tooth, with 6–7 megasetae, the megasetae subequal in size, as long as the apical tooth, slender and straight. Tegmen subtriangular, with lateral shoulders, with short aedeagus, without a dorsal finger-like process.

Discussion. Corynoptera plusiochaeta has a general similarity to *C. subtetrachaeta* but is larger in size (wing length 2.0–2.2, versus 1.4–1.7 mm) and has 6–7 gonostylar megasetae instead of 4. *Corynoptera plusiochaeta* seems to have an exclusively northern distribution. See also under *C. decepta*.

Etymology. The name is Latinized from the Greek words *plousios*, wealthy and *chaite*, hair, referring to the densely setose gonostylus.

***Corynoptera subtetrachaeta* Komarova, 1995**

Figs. 45 A, B, 46 A–F

Corynoptera subtetrachaeta Komarova, 1995b: 122.

Material studied. 3 males, **FINLAND**, Ab, Vihti, Vihtijärvi, 14.vii.1960, R. Tuomikoski (in MZH); 1 male, Ta, Kangasala, Ponsa, 22.vi.1985, J. Tuiskunen (in MZH); 1 male, Om, Kauhajoki, Kauhaneva, Malaise trap, 8.vi–13.vii.2003, J. Salmela (in MZH); 1 male, **ITALY**, Malcesine, Monte Baldo, 700–1700 m, 7.vii.1986, H. Hippa (in MZH); 3 males, **RUSSIA**, **Altay region**, Togul District, environs of Novoyushino, relict linden grove, 26.v.1993, Komarova (same data as holotype; no. 285 in PLKB); 1 male, **Moscow region**, 150 km W Moscow, forest, 15.viii.1996, M. Krivosheina (in MZH); 3 males, **Tuva**, Lake Tere-khol, 50°01'N 95°01'E, 1150 m, *Populus* wood near shore, pitfall trap, 11–12.vi.1995, S. Koponen (in MZH); 1 male, **Karelia**, Kivach, pine-lichen forest, Malaise trap, 5–7.viii.1986, Y. Yakovlev (in MZH).

Description. See Komarova (1995b); for antennal flagellomere 4, see Fig. 46 A, for apical part of front tibia, see Fig. 46 B, for hypopygium, see Figs. 45 A and B and 46 C–F.

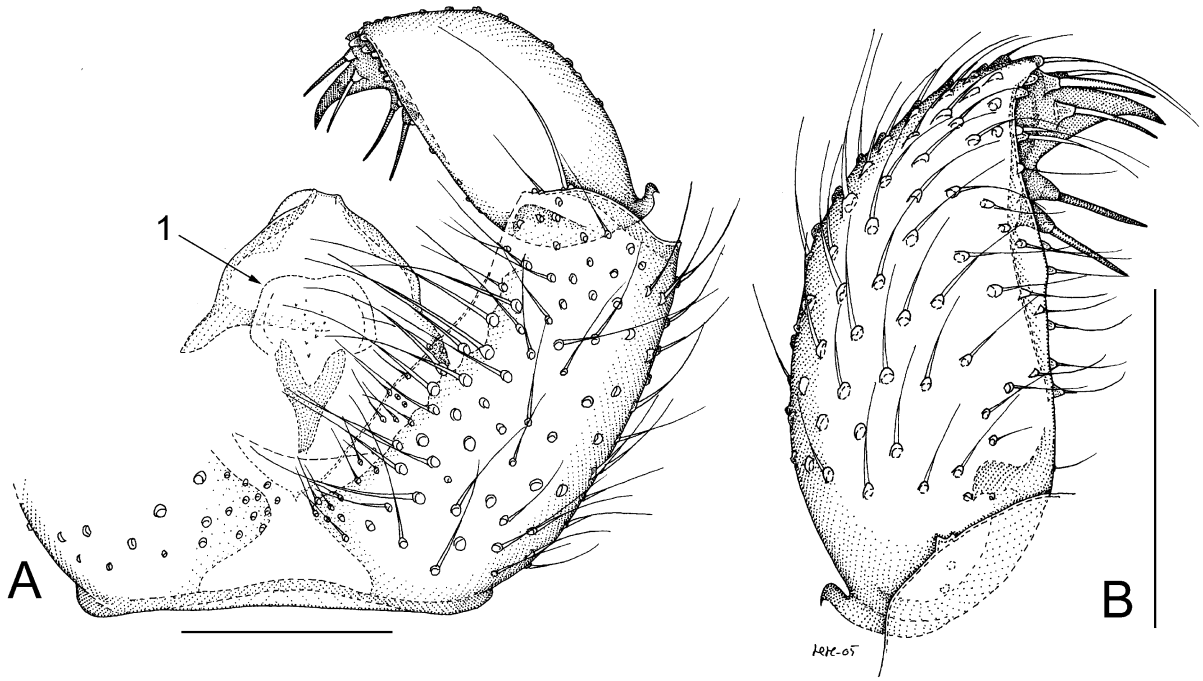

FIGURE 45. *Corynoptera subtetrachaeta* Komarova (from Russia, Altay region). **A.** Part of hypopygium, ventral view. **B.** Gonostylus, ventral view. Scale 0.1 mm. 1 = aedeagal margin.

Discussion. *Corynoptera subtetrachaeta* was described from the holotype male only (Komarova 1995b). We have not seen the type but have studied three males from the same sample from which the holotype was found, not mentioned in the original description.

Corynoptera subtetrachaeta is similar to *C. plusiochaeta* and *C. primoriensis*, the distinguishing characters are discussed under the two species. *Corynoptera subtetrachaeta* also resembles *C. tetrachaeta*, but has a more slender gonostylus and the gonostylar megasetae, and has a distinct aedeagal margin instead of a unambiguous one. See also under *C. decepta*.

Distribution. **Finland** (this study), **Italy** (this study), **Russia, Altay region** (Komarova 1995b), **Russia, Moscow region** and **Russia, Tuva** (this study).

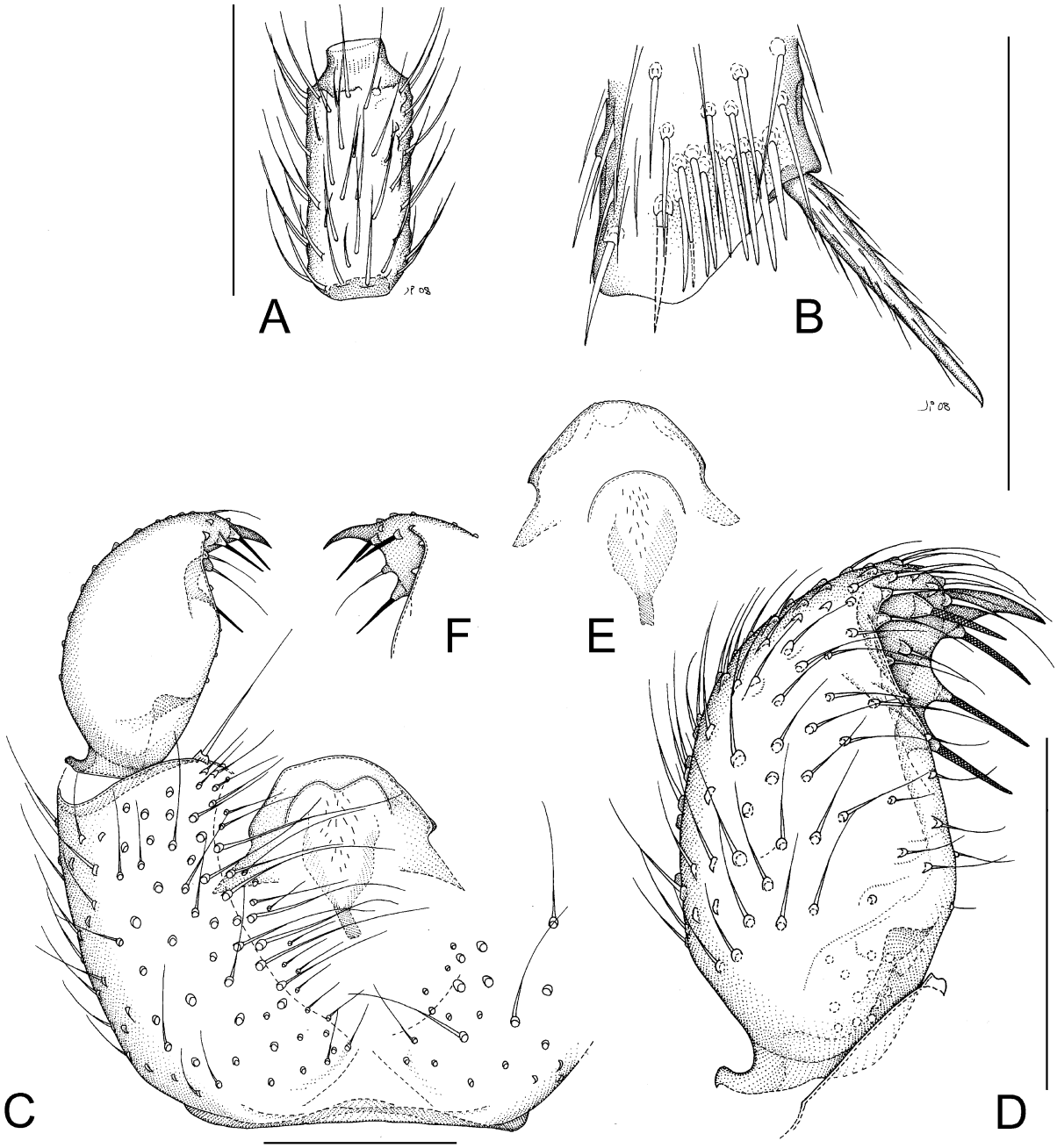

FIGURE 46. *Corynoptera subtetrachaeta* Komarova (from Russia, Tuva). **A.** Antennal flagellomere 4.**B.** Apical part of front tibia, prolateral view. **C.** Part of hypopygium, ventral view. **D**. Gonostylus, ventral view. **E.** Tegmen and aedeagus, ventral view. **F.** Apical part of gonostylus, ventral view. Scale 0.1 mm, for E and F as C.

***Corynoptera tetrachaeta* Tuomikoski, 1960**
Figs. 47 A, B, C

Corynoptera tetrachaeta Tuomikoski, 1960: 57.

Material studied. 1 male, **CZECH REPUBLIC**, Bohemia, Horni Lomná, nr. Mionši, edge of wood, 550 m, YPWT, 49º33'N 18º40'E, Barták (in SDEI); 12 males, 1 female, **FINLAND**, Ab, Vihti, Vihtijärvi, 25–26.vii.1959, R. Tuomikoski (on 4 slides, lectotype male and paralectotypes, hereby designated to fix the name of the species, in MZH); 2 males, same data as previous but 24.vii.1959 (paralectotypes, in MZH); 7 males, 3 females, same data as previous but Vihtijärvi, garden lawn, 26.vii.1959 (paralectotypes, in MZH); 1 male, same data again but end of vii.1959 (paralectotype, in MZH); 20 males, 2 females, same data again but 24.vii.1960 (in MZH); 1 male, same data again but 11–13.viii.1961 (in MZH); 1 male, Ab, Lojo, R. Frey (syntype of *Chaetosciara signhildae* Frey, no. 8356 in MZH); 1 male, Ta, Kangasala, R. Frey (in MZH); 1 male, Ta, Kangasala, Ponsa (683:35), 22.vi.1985, J. Tuiskunen (in MZH); 7 males, Ka, Virolahti, Salajärvi-Lehtomäki, 25.v–19.ix.1970, S. Kännö (in MZH); 1 male, Ka, Vehkalahti, Paijärvi (672:51), 20.vi.1986, J.Tuiskunen (in MZH); 1 male, Ob, Tornio, Karunki, Kukkolankoski (732:36), 14.viii.1985, J. Tuiskunen (in MZH); 2 males, Oa, Ilmajoki, Harjunmäki (6972:274), J. Salmela (in MZH); 1 male, Lk, Ylitornio, on the river Tornionjoki (734:35), 14.viii.1985, J. Tuiskunen (in MZH); 2 males, N, Helsinki, Pikkukoski, 5.viii.1986, H. Hippa (in MZH); 1 male, **FRANCE**, Mandailles, meadow at river Jordanne, sweep-net, 30.vii.2003, K. Heller (no. 4073 in PKHH); 1 male, **GERMANY**, NW, Cologne, district Poll, garden, Malaise trap, 6–13.vi.1989, J. Franzen (no. 1304 in PKHH); 1 male, 1 female, same data as previous but 28.viii–4.ix.1990 (no. 2970 in PKHH); 1 male, 2 females, same data again but 13–20.viii.2002 (no. 2038, 2052, 2053 in ZSMC); 2 males, same data but 1–8.x.2002 (no. 4216 in PKHH, 2019 in ZSMC); 1 male, NW, Wermelskirchen, garden, K.Heller, 3.vii.1993 (no. 336 in PKHH); 1 male, SH, Radegast, field, photoeclector, 19.viii–2.ix.2002, S. Prescher (no. 114 in SNMB); 1 male, SH, Heikendorf, garden, Malaise trap, 28.vi–6.vii.1997, K. Heller (no. 2416 in PKHH); 1 male, same data as previous, but 20–27.viii.2000 (no. 3225 in PKHH); 1 male, SH, Hohn lake, meadow, photoeclector, 1–15.v.1995, K. Heller (no. 1351 in PKHH); SH, Honigsee, dry meadow, photoeclector, 28.viii–11.ix.1993; K. Heller (no. 459 in PKHH); 1 male, SH, Kiel University, garden, Malaise trap, 11–16.viii.1996, K. Heller (no. 1706 in PKHH); 1 male, SH, Meggerdorf, Alte Sorge Nature Reserve, wet meadow, photoeclector, 15.vii–18.viii.1994, K. Heller, (no. 806 in PKHH); 1 male, SH, Schwentinental-Raisdorf, beech forest, sweep-net, 21.viii.2004, K. Heller, (no. 4320 in PKHH); 5 males, SH, Schierensee, meadow, photoeclector, 14–25.v.1991, J. Grabow (no. 441 in PKHH), 3 males, same data as previous but 28.v–11.vi.1991(no. 432–434 in PKHH); 1 male, same data again but 6–20.viii.1991 (no. 446 in PKHH); 1 male, same data again but 6–20.ix.1991, (no. 478 in PKHH); 1 male, **GREAT BRITAIN**, Coventry, West Midlands, Brandon Marsh Nature Reserve by Ryton-on-Dunsmorre (SE of Coventry), floodplain forest (willow, birch, maple), sweep-net, 22.viii.2002, F. Menzel (in SDEI); 1 male, Oxon, Wytham Woods by Wytham (NW of Oxford), deciduous forest beech/oak/maple/chestnut, sweep-net, 21.viii.2002, F. Menzel (in SDEI); 1 male, **ITALY**, South Tyrol, Dolomite Alps, Rotwand, alpine region, 2000 m, sweep-net, 26.vii.2002, K. Heller (no. 3810 in PKHH); 1 male, South Tyrol, Prags, lake, sweep-net, 22.vii.2002, K. Heller (no. 3862 in PKHH); 1 male, **NETHERLANDS**, Tilburg, Kaaistoep, Malaise trap, 27.vi–4.vii.1998. (no. 30 in NNKN); 1 male, **SLOVAKIA**, Cingov, Slovensky raj, river shore, sweep-net, 27.vii.2007, K. Heller (no. 5616 in PKHH); 1 male, **SLOVENIA**, Lesce, meadow near Šobec camping area, white pan trap, 1–3.viii.2009, K. Heller (no. 7214 in PKHH); 1 male, **UKRAINE**, Zakarpatye near Rakhiv, sweep-net, 17.vii.1963, B. Mamaev (no. 1585 in PWMP).

Description. See Tuomikoski (1960), for hypopygium, see Figs. 47 A, B and C.

Discussion. Corynoptera tetrachaeta was described from large but imprecisely documented number of males from southern Finland (Tuomikoski 1960). We have found 21 specimens in MZH, all apparently conspecific, which fit the data given by Tuomikoski (1960) and selected one of them as the lectotype.

Corynoptera tetrachaeta is similar to *C. aequispina*, but has four (in some specimens five) gonostylar megasetae instead of three, and lacks a finger-like process dorsally on the tegmen. *Corynoptera tetrachaeta* resembles *C. primoriensis* and *C. subtetrachaeta* but differs from both by a more tumid gonostylus with thicker megasetae and quite unmodified tegmen, from *C. subtetrachaeta* by lacking a prominent aedeagal margin and from *C. primoriensis* by having all the four gonostylar megasetae in a longitudinal row instead of having three of them in an apically placed transverse row. *Corynoptera tetrachaeta* is quite similar to *C. tarda* but the latter lacks an apical tooth on the gonostylus and has only three gonostylar megasetae.

Distribution. **Austria** (Menzel 2001), **Czech Republic** (Menzel *et al*. 2000), **Finland** (Salmela & Vilkamaa 2005, Tuomikoski 1960), **France** (Heller & Menzel 2004), **Germany** (Fritz 1982, Heller 1996, 2000, 2002a, Hövemeyer 1992, Menzel *et al*. 2003, Metzner & Menzel 1996, Rudzinski 2003, 2006, Weber 1993), **Great Britain** (Menzel *et al*. 2006, Smith & Menzel 2007), **Italy** (Heller & Menzel 2004), **Netherlands** (Heller & Menzel 2004), **Slovakia** (Rudzinski 2009), **Slovenia** (this study), **Sweden** (Heller *et al*. 2009), **Ukraine** (this study).

Remark: The Central American records from **Costa Rica** and **Honduras** (Mohrig 2003) are probably wrong and need to be verified.

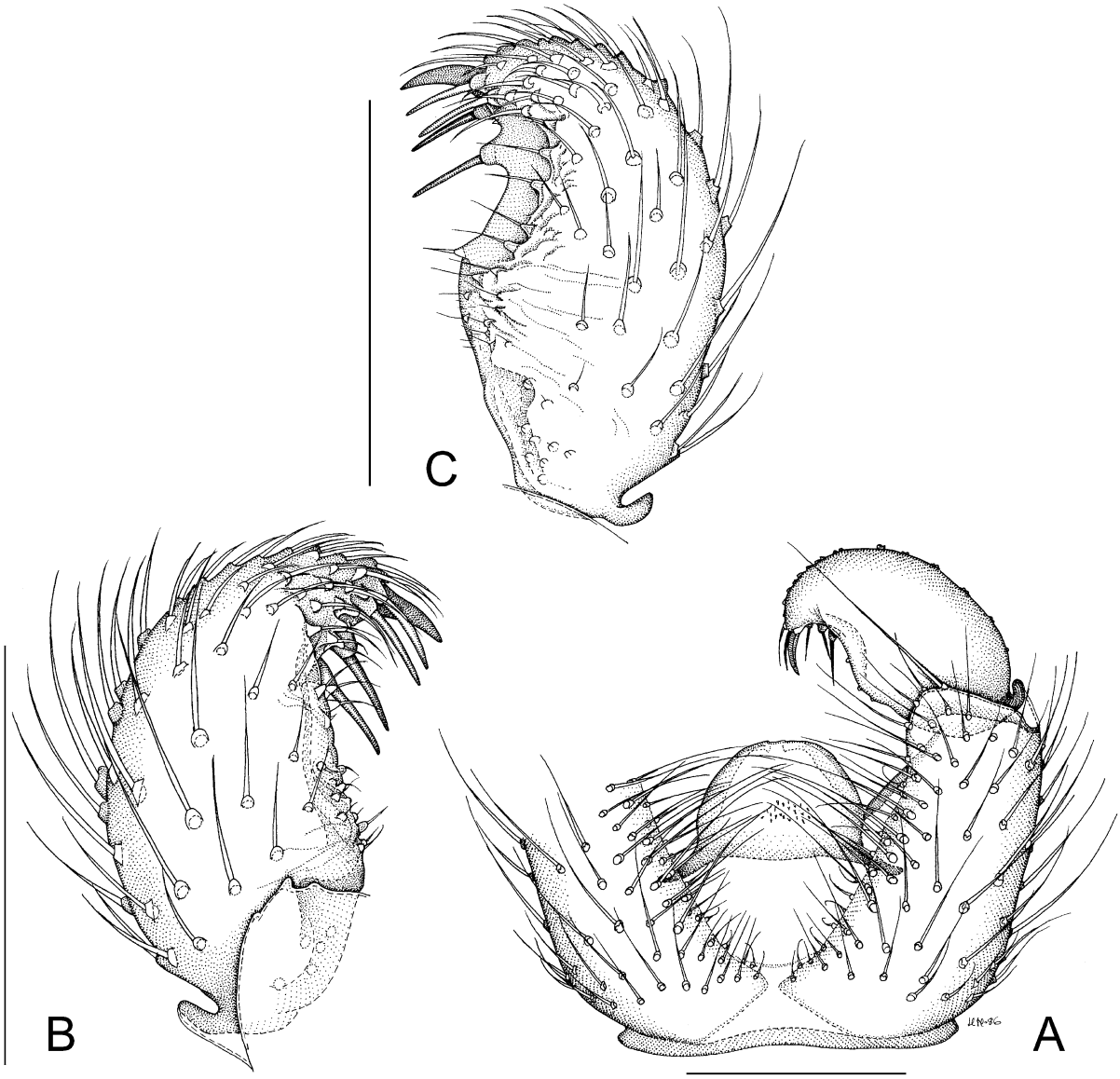

FIGURE 47. *Corynoptera tetrachaeta* Tuomikoski (from Finland, B lectotype). **A.** Part of hypopygium, ventral view (aedeagal apodeme omitted). **B, C.** Gonostylus, ventral view. Scale 0.1 mm.

***Corynoptera decepta* sp. n.**
Figs. 48 A, B, C

Material studied. Holotype male. **RUSSIA**, **Primorsk region**, Ussuriysk Nature Reserve, sweep-net, 30.vi.1991, P. Vilkamaa (in MZH). *Paratypes.* 1 male, same data as holotype (in MZH); 1 male, same data again but 25.viii.1962, Kovalev (no. 2058 in PWMP).

Description. Male. **Head**. Brown, maxillary palpus very pale brown, antenna paler than face. Eye bridge 3 facets wide. Face with 6–7 strong scattered dark setae. Clypeus with 1 dark seta. Maxillary palpus with 3 palpomeres;

palpomere 1 longer than palpomere 3, palpomere 2 shortest; palpomere 1 with 1 long sharp seta, with dorsal patch of sensilla, palpomere 2 with 1 long sharp seta and 5 shorter truncate setae, palpomere 3 with 5–7 short truncate setae. Antennal flagellomere 4 2.8–2.9 times as long as wide, the neck shorter than the width of flagellomere, the longest setae longer than width of flagellomere. **Thorax**. Unicolorous brown, setae dark. Anterior pronotum with 1–4 setae. Episternum 1 with 6–7 setae. **Wing**. Length 1.5 mm. Width/length 0.40. R1/R 0.60–1.0. c/w 0.80. r-m longer than bM, r-m/bM 1.20, r-m and bM non-setose. **Legs**. Pale yellowish brown. Fronttibial organ with dark and strong vestiture, forming a comb-like row. Front tibial spur longer than the tibial width. **Abdomen**. Pale brown. Setae dark. **Hypopygium,** Figs. 48 A, B, C. Brown, concolorous with abdomen. Gonocoxa slightly longer than gonostylus. The ventral setosity of gonocoxa rather dense, many setae on apical half of the mesial margin strongly elongated. Gonostylus rather tumid, broadest medially, mesially and apically impressed; the setosity sparse, apicomesially with a few elongated setae; with a sharp apical tooth; with three apical-subapical megasetae, slightly longer than apical tooth. Tegmen subtriangular, with basolateral shoulders.

Discussion. *Corynoptera decepta* is not especially similar to any other species. It resembles somewhat species such as *C. subtetrachaeta* and *C. plusiochaeta* in the general type of the hypopygium and especially in the tegmen which has rather basal, lobe-like lateral shoulders, and by the well-expressed aedeagal margin. *Corynoptera decepta* differs from all of these by only having three gonostylar megasetae. *Corynoptera decepta* also resembles somewhat *C. exerta* and *C. curvapex* but differs by having the gonostylus apically straight, not curved, by having the gonostylar megasetae smaller and by having a characteristic apico-ventral impression on the gonostylus.

Etymology. The name is Latin, *decepta,* cheated, referring to the difficulty the authors had in finding the identity of the species.

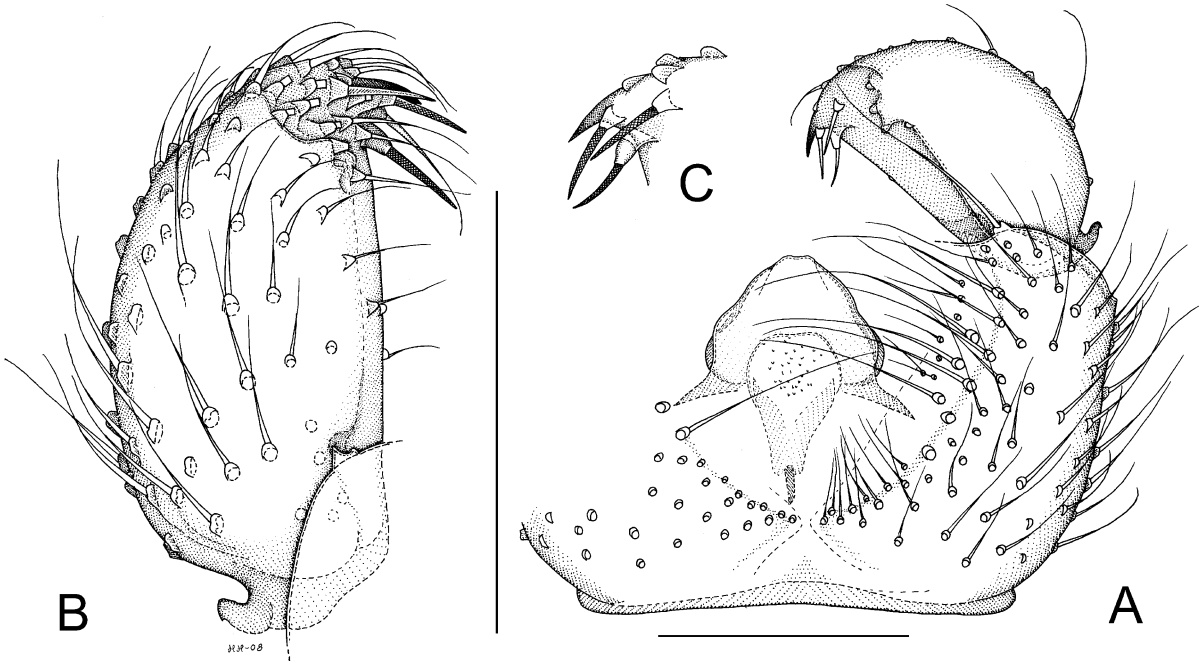

FIGURE 48. *Corynoptera decepta* sp. n. (holotype). **A.** Part of hypopygium, ventral view. **B.** Gonostylus, ventral view. **C.** Apical part of gonostylus, more enlarged. Scale 0.1 mm, for C as B.

***Corynoptera mediana* Mohrig & Mamaev, 1982**
Figs. 49 A, B, C

Corynoptera mediana Mohrig & Mamaev, in Mohrig *et al.*, 1982: 151.

Material studied. 5 males, **JAPAN**, Kyushu, Kumamoto Pref., Aso, Mt. Aso National Park, coniferous forest (*Cryptomeria japonica*), 700 m, exhaustor or sweep-net, 12–14.x.1995, 1 male, Shikoku, Kochi Pref., Yusuharacho, Takatori-yama Forest Reserve, mixed primary forest (*Abies firma, Chamaecyparis obtusa, Quercus* sp., *Cinnamomum* sp.), 300–500 m, sweep-net, 5.xi.1998, M. Jaschhof (in SDEI); 5 males, Shikoku, Kochi Pref., Kochi

City, Asakura, Asakura Shrine, dry evergreen deciduous forest, 100 m, sweep-net, 6.xi.1998, M. Jaschhof (3 in KUEC, 2 in SDEI); 2 males, Honshu, Osaka Pref., Mino, mixed forest (sclerophyll forest and *Cryptomeria japonica*), sweep-net, 29.ix.1995, M. Jaschhof (in KUEC); 1 male, Honshu, Hyogo Pref., Mt. Hyonosen, deciduous forest (*Fagus crenatus* and bamboo), 1200 m, sweep-net, 28.ix.1995, M. Jaschhof & Yagi (in SDEI), 1 male, **RUSSIA**, **Primorsk region**, Kunashir Island, field with dense bamboo vegetation, sweep-net, 19.ix.1972, Mamaev (holotype, no. 1475 in PWMP).

Description. See Mohrig *et al.* (1982); for antennal flagellomere 4, see Fig. 49 A, for hypopygium, see Figs. 49 B and C.

Discussion. Corynoptera mediana was described from the holotype male only from the Kunashir Island (Mohrig *et al.* 1982).

Corynoptera mediana is not especially similar to any other species. It is easily identified by its tumid gonostylus with an apical tooth and three megaseta of which the two dorsalmost ones arise from large partly fused basal bodies, the latter giving an impression of a special lobe bearing the megasetae. In another species of *Corynoptera*, *C. minax*, there is a similar lobe even if the lobe is larger. *C. minax* differs in lacking an apical tooth on the gonostylus. See also under *C. stellaris*.

Distribution. **Japan** (Sasakawa 2003), **Russia, Primorsk region,** Kunashir (Mohrig *et al.* 1982).

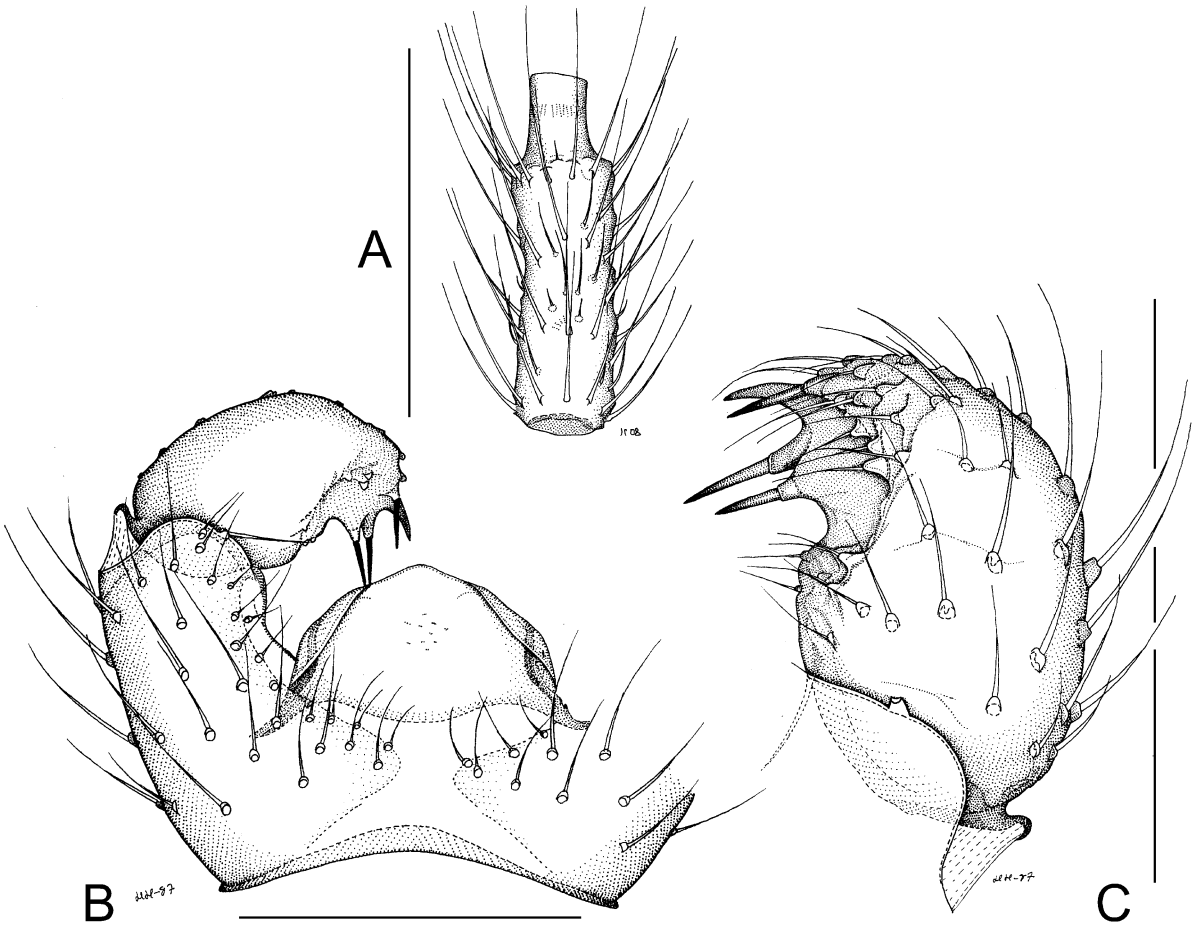

FIGURE 49. *Corynoptera mediana* Mohrig & Mamaev (holotype). **A.** Antennal flagellomere 4. **B.** Part of hypopygium, ventral view (aedeagal apodeme omitted). **C.** Gonostylus, ventral view. Scale 0.1 mm.

***Corynoptera tarda* sp. n.**
Figs. 50 A–D

Holotype male. **RUSSIA**, **Altay region**, Katun valley, 7 km W of Katanda, forest steppe, pitfall trap, 22.vi–26.vii.1983, H. Hippa (in MZH). *Paratypes.* 2 males, same data as holotype (in MZH).

Description. Male. **Head**. Dark brown, maxillary palpus very pale brown, antenna slightly paler than face. Eye bridge 3 facets wide. Face with 11–14 scattered dark longer and shorter setae. Clypeus with 1–3 dark setae. Maxillary palpus with 3 palpomeres; palpomeres 1 longer than palpomere 2, palpomere 3 shortest; palpomere 1 with one long sharp seta, with a distinct dorsal patch of sensilla; palpomere 2 with 1 long sharp seta and 3–5 shorter truncate setae, flagellomere 3 with 2–6 short truncate setae. Antennal flagellomere 4, Fig. 50 A, 2.4–3.0 times as long as wide, the neck shorter than the width of flagellomere, the longest setae about as long as the width of flagellomere. **Thorax**. Unicolorous dark brown, setae dark. Anterior pronotum with 2–5 setae. Episternum 1 with 9–10 setae. **Wing**. Length 1.4–1.8 mm. Width/length 0.35–0.45. R1/R 0.50–0.65. c/w 0.65. r-m longer than and bM, r-m/bM 1.10–1.60, both r-m and bM non-setose. Haltere pale brown. **Legs**. Yellowish brown. Apical part of front tibia, Fig. 50 B: tibial organ with dark vestiture, forming a short comb-like row with a few scattered elements. Front tibial spur slightly longer than the tibial width. **Abdomen**. Brown, paler than thorax. Setae dark. **Hypopygium,** Figs. 50 C, D. Brown, darker than abdomen. Gonocoxa longer than gonostylus. The ventral setosity of gonocoxa dense, a few of the setae at the apical part of the mesial margin greatly elongated. Gonostylus broad, apically narrowed, the mesial side slightly impressed on apical third; the setosity sparse, apicolaterally with dense and even vestiture, apicomesially with a few elongated setae; without an apical tooth, with 3 megasetae, in groups of 1+2, the megasetae subequal in size, straight. Tegmen simple, without a dorsal finger-like process.

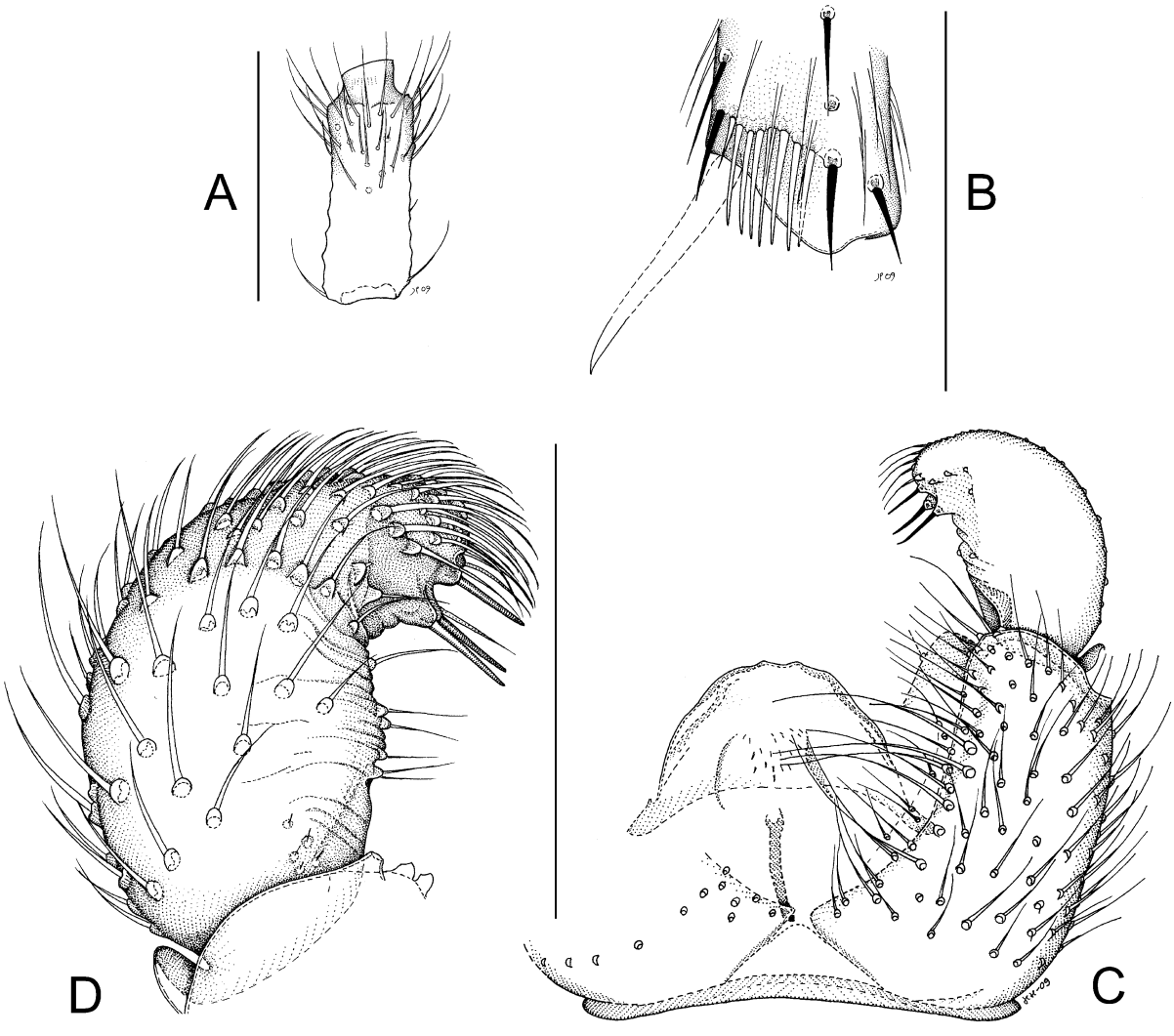

FIGURE 50. *Corynoptera tarda* sp. n. (holotype). **A.** Antennal flagellomere 4. **B.** Apical part of front tibia, prolateral view. **C.** Part of hypopygium, ventral view. **D.** Gonostylus, ventral view. Scale 0.1 mm.

Discussion. A tumid gonostylus which lacks an apical tooth and has three megasetae and which have greatly elongated setae at the ventral mesial margin of the gonocoxa associate *C. tarda* with a number of other *Corynoptera*, e.g. *C. adustula, C. distenta, C. marinae, C. paracantha, C. tumidula* and *C. voluptuosa* without

being especially similar to any of them. It differs from all of these by having a broad apical part of the gonostylus and curved mesiad, and by having the apical setosity of the gonostylus conspicuously dense. There is also at least a superficial resemblance to *C. tetrachaeta* but the gonostylus lacks the apical tooth, the apical part of the gonostylus is conspicuously more densely setose, broader and mesio-ventrally less impressed, and the number of the gonostylar megasetae is only three.

Etymology. The name is Latin, *tarda*, slow, late, given because we have only lately understood the characters of the species.

***Corynoptera distenta* sp. n.**
Figs. 51 A–D

Material studied. Holotype male. **JAPAN**, Shikoku, Kochi Pref., Ashizuri Peninsula, Tosashimizu City, Sata-yama Forest Reserve, 300–400 m, primary evergreen deciduous forest, dominated by *Castanopsis sieboldii*, sweep-net, 10.xi.1998, M. Jaschhof (in KUEC). *Paratypes*. 2 males, same data as holotype (in KUEC); 1 male, same data again but 9.xi.1998 (in KUEC).

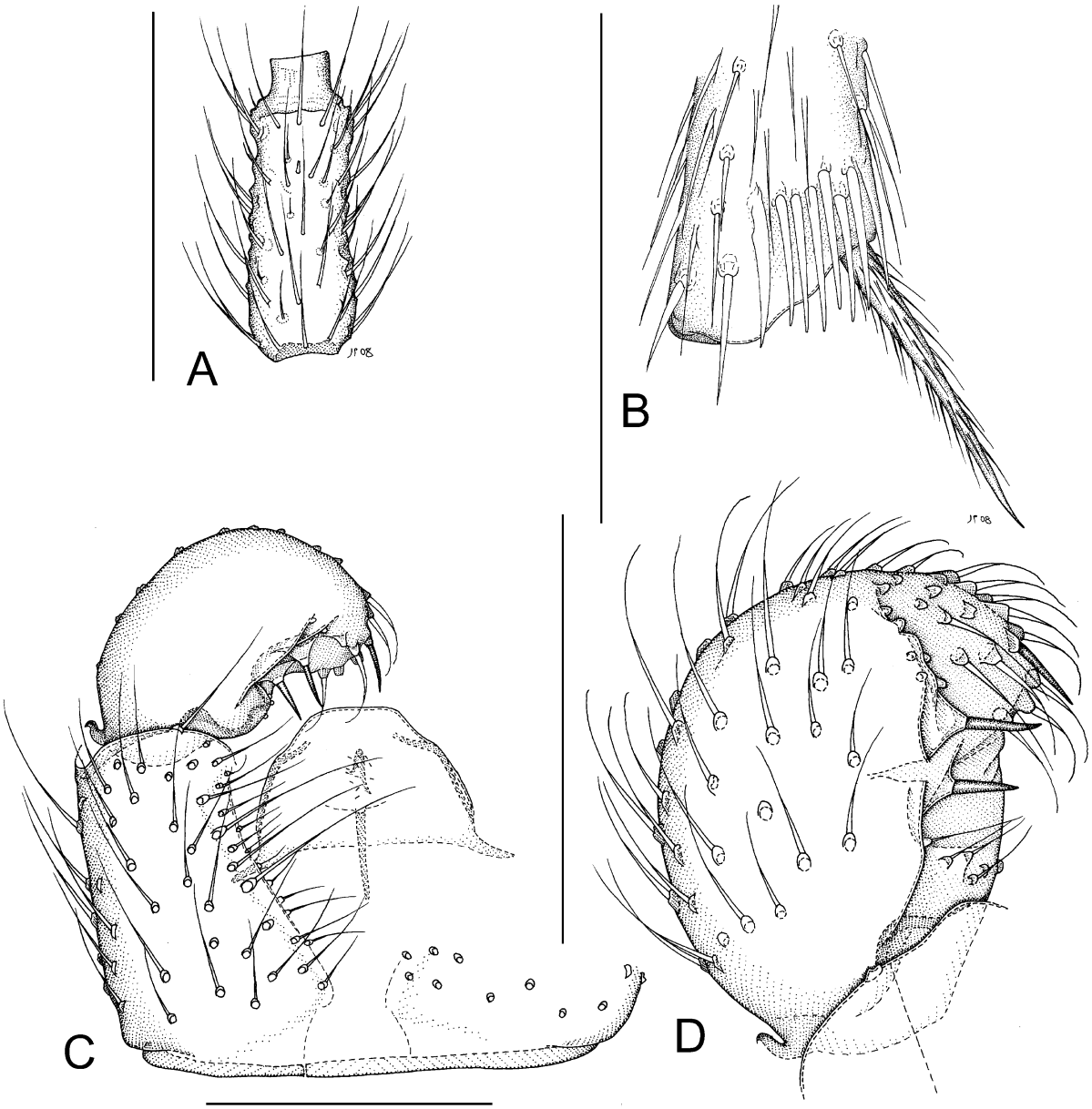

FIGURE 51. *Corynoptera distenta* sp. n. (A and C paratype, B and D holotype). **A.** Antennal flagellomere 4. **B.** Apical part of front tibia, prolateral view. **C.** Part of hypopygium, ventral view. **D.** Gonostylus, ventral view. Scale 0.1 mm.

Description. Male. **Head**. Brown, maxillary palpus very pale brown, scape and pedicel yellow, antennal flagellum paler than face. Eye bridge 3 facets wide. Face with 7–14 scattered dark longer and shorter setae. Clypeus with 1 dark seta. Maxillary palpus with 3 palpomeres; palpomere 1 longer than palpomere 3, palpomere 2 shortest; palpomere 1 with 1–2 long sharp setae, with a dorsal patch of sensilla; palpomere 2 with 1 long sharp seta and 4–6 shorter truncate setae, palpomere 3 with 4–6 short truncate setae. Antennal flagellomere 4, Fig. 51 A, 1.7–2.0 times as long as wide, the neck shorter than the width of flagellomere, the longest setae slightly shorter than the width of flagellomere. **Thorax**. Scutum pale brown, pleura yellowish, setae dark. Anterior pronotum with 2 setae. Episternum 1 with 3–5 setae. Length 1.1–1.2 mm. Width/length 0.50. R1/R 0.65–0.85. c/w 0.70–0.75. r-m and bM variable in length, r-m/bM 0.85–1.35, both r-m and bM non-setose. Haltere pale brown. **Legs**. Yellow. Apical part of front tibia, Fig. 51 B: tibial organ with dark vestiture, forming a comb-like row of a few setae. Front tibial spur slightly longer than the tibial width. **Abdomen**. Brown, concolorous with thorax. Setae dark. **Hypopygium,** Figs. 51 C, D. Yellowish, paler than abdomen. Gonocoxa and gonostylus of equal length. The ventral setosity of gonocoxa sparse, a few of the setae at the apical part of the mesial margin greatly elongated. Gonostylus tumid, the mesial side impressed; the setosity sparse, apicomesially with a few elongated setae; without an apical tooth, with 3 megasetae, the megasetae subequal in size, straight. Tegmen with, with a dorsal finger-like process.

Discussion. *Corynoptera distenta* is not especially similar to any other *Corynoptera*. By its greatly inflated gonostylus, which lacks an apical tooth and has three megasetae and by the greatly elongated setae at the ventral mesial margin of the gonocoxa *C. distenta* is similar to *C. voluptuosa*. *Corynoptera distenta* differs e.g. by having the gonostylar megasetae wide apart, not in a group, by having the ventro-mesial part of gonostylus impressed and by having a finger-like process dorsally on the tegmen. With *C. dioon* and *C. digemina*, *C. distenta* is the only species in *Corynoptera* s. str. in which the basalmost gonostylar megaseta is near the middle, not distinctly on the apical half of the gonostylus. *Corynoptera distenta* differs from both by having only three, not four or five megasetae, and from *C. digemina* also by lacking the apical tooth.

Etymology. The name is from Latin, *distenta*, swollen, referring to the inflated gonostylus.

Corynoptera voluptuosa Mohrig & Mamaev, 1987

Figs. 52 A, B, C

Corynoptera voluptuosa Mohrig & Mamaev, in Mohrig *et al.*, 1987: 101.

Material studied. 4 males, **FINLAND**, Ks, Kuusamo, Jäkälävuoma, 26.vi.1964, R. Tuomikoski (in MZH); 1 male, **RUSSIA**, **Tuva**, Ishtii-Khem, sweep-net, 10.vi.1964, B. Mamaev (paratype, no. 1477 in PWMP); 1 male, same data again (paratype, in SDEI).

Description. See Mohrig, Mamaev and Krivosheina (1987); for apical part of front tibia, see Fig. 52 A, for hypopygium, see Figs. 52 B and C.

Discussion. *Corynoptera voluptuosa* was described form the holotype male and five paratype males (Mohrig *et al.* 1987) but has not been recorded since. We have studied two of the paratypes.

By the swollen gonostylus, *C. voluptuosa* resembles *C. distenta* (see under that species) and *C. waltraudis*. It differs from the latter by lacking the apical tooth on the gonostylus and by having the megasetae placed more farther from the gonostylar apex.

Distribution. **Finland** (this study), **Russia, Tuva** (Mohrig *et al.*, 1987).

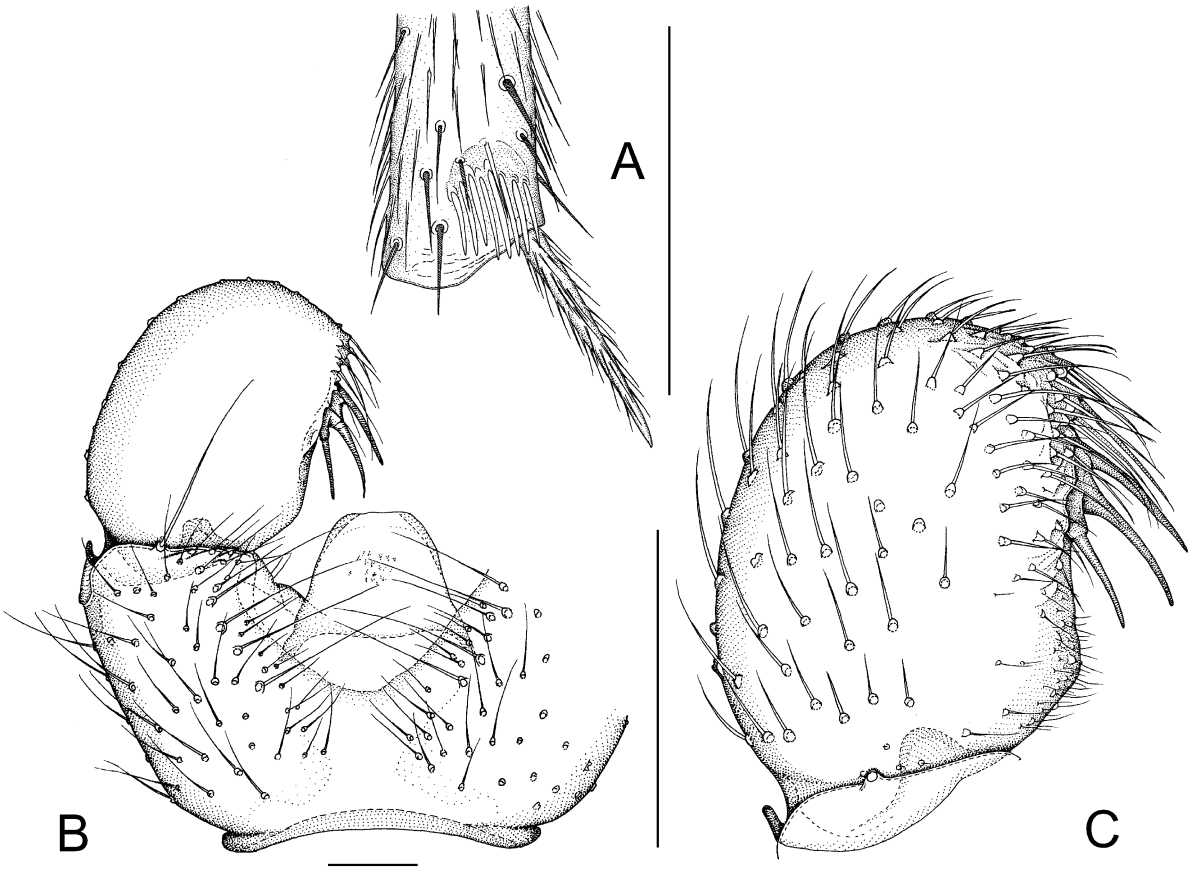

FIGURE 52. *Corynoptera voluptuosa* Mohrig & Mamaev (A paratype, B, C from Finland). **A.** Antennal flagellomere 4. **B.** Part of hypopygium, ventral view (aedeagal apodeme omitted). **C.** Gonostylus, ventral view. Scale 0.1 mm.

***Corynoptera digemina* sp. n.**
Figs. 53 A, B

Material studied. Holotype male. **JAPAN**, Honshu, Osaka Pref., Mino, mixed forest (sclerophyll plants and *Cryptomeria japonica*), sweep-net, 29.ix.1995, M. Jaschhof (in SDEI). *Paratypes.* 1 male, same data as holotype (in SDEI); 2 males, Kyushu, Kagoshima, Mt. Terayama, mixed forest, deciduous forest (*Cryptomeria japonica*), exhaustor, sweep-net, 17.ix.1995, M. Jaschhof (in SDEI); 2 males, Kagoshima, deciduous forest, exhaustor, 15.ix.1995, M. Jaschhof (in KUEC).

Description. Male. **Head**. Brown, maxillary palpus very pale brown, scape and pedicel yellow, flagellum darker than face. Eye bridge 3 facets wide. Face with 6 scattered dark longer and shorter setae. Clypeus with 1 dark seta. Maxillary palpus with 3 palpomeres; palpomere 1 longer than palpomere 3, palpomere 2 shortest; palpomere 1 with one long sharp seta, with a dorsal patch of sensilla; palpomere 2 with 1 long sharp seta and 3–4 shorter truncate setae, palpomere 3 with 4–5 short truncate setae. Antennal flagellomere 4 2.5–3.0 times as long as wide, the neck long, almost as long as the width of flagellomere, the longest setae distinctly longer than the width of flagellomere. **Thorax**. Yellow, setae dark. Anterior pronotum with 2 setae. Episternum 1 with 4–6 setae. **Wing**. Length 1.1–1.3 mm. Width/length 040–0.45. R1/R 0.60–0.70. c/w 0.65–0.80. r-m and bM of variable length, r-m/bM 0.65–1.25, both r-m and bM non-setose. Haltere pale brown. **Legs**. Yellow. Front tibial organ with dark vestiture, forming a comb-like row with a few scattered elements. Front tibial spur slightly longer than the tibial width. **Abdomen**. Yellow, tergites brownish. Setae dark. **Hypopygium,** Figs. 53 A, B. Pale brown, as abdomen. Gonocoxa and gonostylus subequal in length. The ventral setosity of gonocoxa sparse, a few of the setae at the apical part of the mesial margin greatly elongated. Gonostylus tumid, the mesial side impressed; the setosity sparse, apicomesially with a few elongated setae; with sharp apical tooth, with 4 megasetae, the megasetae subequal in size, nearly straight. Tegmen modified, higher than broad, with sharp lateral teeth, without a dorsal finger-like process.

Discussion. *Corynoptera digemina* is not similar to any other species of *Corynoptera*. Its long tegmen with sharp lateral tooth-like lobe is unique among *Corynoptera*. By the inflated gonostylus with more than three megasetae arising from conspicuous basal bodies *C. digemina* resembles *C. dioon* but *C. dioon* lacks the apical tooth and the number of megasetae is five. *Corynoptera digemina* and *C. dioon* are also similar in having the basalmost megaseta near the middle of the gonostylus instead of being well along its apical half. Of *Corynoptera* s. str., only *C. distenta* is similar in this respect. *Corynoptera distenta* differs from both by having only three gononostylar megasetae, which do not arise from large basal bodies.

Etymology. The name is an artificial combination of letters to resemble a Latin adjective.

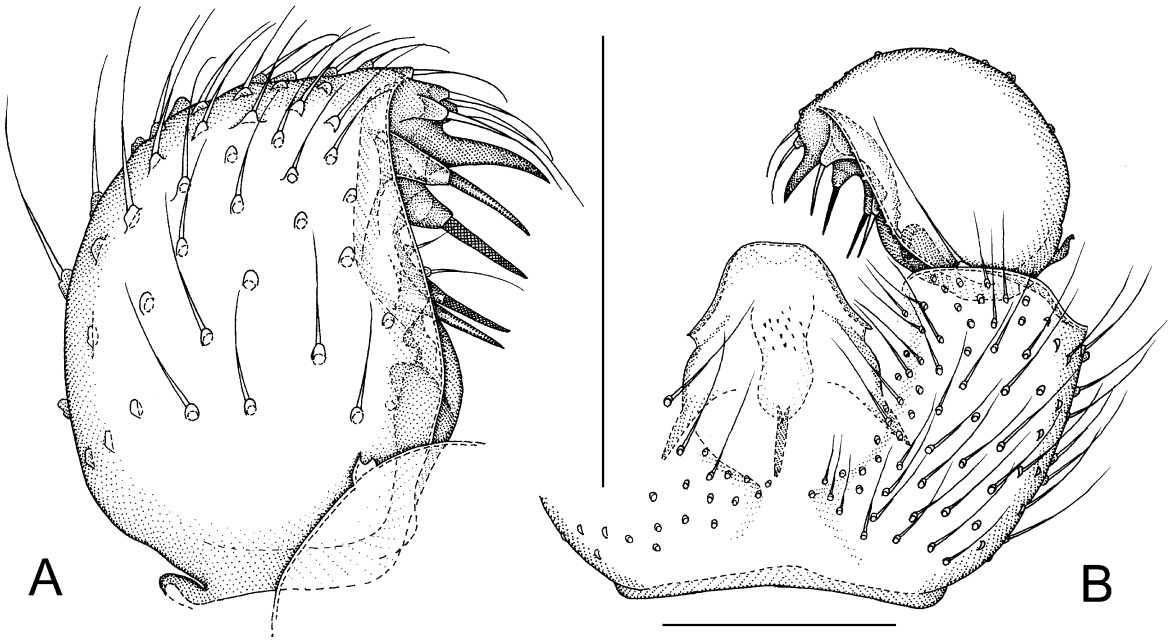

FIGURE 53. *Corynoptera digemina* sp. n. (holotype). **A.** Part of hypopygium, ventral view. **B.** Gonostylus, ventral view. Scale 0.1 mm.

Corynoptera melanochaeta **Mohrig & Menzel, 1992**
Figs. 54 A–E

Corynoptera melanochaeta Mohrig & Menzel, 1992: 3.

Material studied. 1 male, **CANADA**, **Nova Scotia**, Lackeport, 26.vii.1958, J.R. Vockeroth (in CNC); 1 male, **FINLAND**, A, Lemland, Flaka, 11.vi.1962, R. Tuomikoski (in MZH); 2 males, Ab, Nauvo, Stenskär, 27.vii–10.x.1967, P.T. Lehtinen (in MZH); 1 male, Ab, Parainen, Strandby, Kalkholm, 28.viii–9.xi.1968, P.T. Lehtinen (in MZH); 2 males, Ab, Taivassalo, Orikvuori, Malaise trap, 11.vi–18.vii.2003, Mukkala & Haarto (in MZH); 1 male, Ab, Salmi, bushes along forest edge, sweep-net, 27.v.2004, M. Jaschhof (no. 6470 in PKHH); 1 male, N, Vantaa, Tikkurila, Tullgren funnel, 23.viii.1976, P. Vilkamaa (in MZH); 1 male, N, Sipoo, Hindsby, forest, malaise trap, 10–16.vi.2006, N. Laurenne (in MZH); 1 male, Ta, Somero, Koisthuhta, 14–15.vi.1986, H. Hippa (in MZH); 2 males, Oa, Kauhajoki, Kauhaneva, Malaise trap, 8.vi–13.vii.2003, J. Salmela (in MZH); 2 males, same data but 13.viii–4.x.2003 (in MZH); 2 males, Oa, Ilmajoki, Harjunmäki (6972:274), J. Salmela (in MZH); 2 males, St, Ikaalinen, Seitseminen National Park, Multiharju, 61.54ºN 23.25ºE, 120 m, spruce/aspen/birch forest, Malaise trap, 2–24.viii.2004, M. & C. Jaschhof (in MZH); 5 males, Tb, Toivakka, Ruostesuo (688:3443), Malaise trap, 29.vii–30.viii.2003, J. Salmela (in MZH); 1 male, Sb, Kangaslampi, forest, Malaise trap, 17.vii–29.vii.2004, N. Laurenne (in MZH); 1 male, Ob, Muhos, forest, Malaise trap, 18.viii–3.ix.2005, N. Laurenne (in MZH); 1 male, Obb, Tornio, Kiviranta (73103:3707), malaise trap, 30.vi–4.vii.2005, A. Haarto (in MZH); 3 males, Kl, Lake Siikalahti, birch/alder, swamp forest, 19.viii.2004, sweep-net, M. Jaschhof (no. 6348 in PKHH, 9074 in MZH); 1 male, same data as previous but 24.vi.2004 (no. 6427 in PKHH); 2 males, **GERMANY**, TH, Thuringian Forest, Luisenthal, barrage,

mountain meadow, 27.v.1989, Menzel (paratypes, in SDEI); 1 male, 1 female, BB, Altkünkendorf, nettle-meadow, photoeclector, 24.vi–24.vii.1995, R. Nötzold (no. 1127 in PKHH); BW, Bad Buchau, Federsee, Malaise trap, 5–24.v.2003, D. Doczkal (no. 4448 in PKHH); NW, Cologne, district Poll, garden, Malaise trap, 26.iii–2.iv.2002, J. Franzen (no. 2089 in ZSMC); 1 male, same data as previous but 9–16.iv.2002 (no. 2124 in ZSMC); 1 male, same data again but 16–23.vii.2002 (no. 4282 in PKHH); same data again but 15–22.x.2002 (no. 4218 in PKHH); 1 male, SH, Flensburg, forest "Marienhölzung", Malaise trap, 30.v–6.vi.1997, W. Barkemeyer, (no. 2896 in PKHH); 1 male, same data as previous but 8–15.viii.1997 (no. 2900 in PKHH); 1 male, same data again but 19–26.v.1999 (no. 3093 in PKHH); 1 male, same data again but 14–21.vii.1999 (no. 3084 in PKHH); 1 male, SH, Heikendorf, wayside, sweep-net, 15.v.1991, K. Heller (no. 175 in PKHH); 1 male, SH, Heikendorf, garden, sweep-net, 15.vii.2002, K. Heller (no. 3799 in PKHH); 1 male, SH, Honigsee, meadow, photoeclector, 25.viii–9.ix.1992, J. Grabow (429 in PKHH); 2 males, SH, Kiel, University, wet meadow, photoeclector, 15–29.viii.1994, K. Heller (no. 743, 744 in PKHH); 2 males, same data but Malaise trap, 28.iv–5.v.1995 (no. 954, 1041 in PKHH); 1 male, same data as previous but 23–30.vii.1995 (no. 1047 in PKHH); 1 male, same data again but 17–26.vii.1996 (no. 1622 in PKHH); 1 male, same data again but 21.viii–6.ix.1996 (no. 1744 in PKHH); 1 male, SH, Kremper Au, photoeclector, 2.vi.1990, J. Lietz (no. 168 in PKHH); 2 males, SH, Meggerdorf, Alte Sorge Nature Reserve, wet meadow, photoeclector, 14.v–1.vi.1994, K. Heller, (no. 741, 742 in PKHH); 2 females, same data as previous but 15.vii–15.viii.1994 (no. 803 in PKHH); 1 male, same data again but 1–16.v.1995 (no. 1300 in PKHH); 1 male, same data again but yellow dish, 1–16.viii.1995 (no. 929 in PKHH); 1 male, SH, Rade, wet meadow, photoeclector, 13–20.v.1999, K. Heller (no. 2853); 1 male, SH, Wankendorf, wet meadow, photoeclector, 13–27.viii.1996, R. Hingst (no. 2675 in PKHH); 1 male, **GREAT BRITAIN**, England, North Yorkshire, Deer Park SW Helmsley, 54º14'17''N 01º05'53''W, 90–100 m, mixed forest (*Thuja*, *Quercus robur*, *Fagus sylvatica*, *Betula* sp.), sweep-net, 7.viii.2005, F. Menzel (in SDEI); 1 male, **GREECE**, Kerkini mountains, Kerkini marsh, Malaise trap, 14–20.iii.2007, G. Ramel (no. 5770 in PKHH); 1 male, **ITALY**, Provincia di Roma, iii.1988, H. Hippa (in MZH); 1 male, Provincia di Roma, Villa Ada, 30.iii.1988, H. Hippa (in MZH); 1 male, Provincia di Roma, Villa Adriana, 26.iii.1988, H. Hippa (in MZH); 1 male, **RUSSIA**, **Karelia**, Kivach, *Populus* stand, window trap, 18–20.vi.1986, Yakovlev (in MZH); 1 male, same data as previous but 23–30.vi.1986 (in MZH); 1 male, same data again but 25–27.vi.1985 (in MZH); 1 male, same data again but 16–18.vi.1986 (in MZH); 3 males, same data again but pitfall trap, 23–30.vi.1986 (in MZH); 2 males, same data again but 9–11.vii.1987, (in MZH); 2 males, same locality but Malaise trap, 23,–30.vi.1986, Yakovlev (in MZH); 1 male, **SLOVAKIA**, Sturovo, 27.vi.1986, M. Barták (holotype, in PWMP). 1 male, **SWEDEN**, Bo, Stenungsund, Ödsmål, Hällsberget, broad leaf deciduous forest in southern slope, Malaise trap, 30.vii–11.viii.2004, Swedish Malaise Trap Project (no. 943 in SMNH); 1 male, Dr, Ludvika, Gonäs, garden, Malaise trap, 1–5.vii.1999, K.D. Hilger (no. 3403 in PKHH); 1 male, Sm, Nybro, Bäckebo, Grytsjöns Nature Reserve: old moist hay-making meadow; Malaise trap, 2–12.vii.2005, Swedish Malaise Trap Project (no. 1353 in SMNH); 1 male, same data as previous but 18.v–15.vi.2006; 1 male, Up, Stockholm, Djurgården park, Malaise trap, 31.v–13.vi.1994, A. Heinakroon (no. 1803 in SMNH); 1 male, Vr, Munkfors, Ransäter, sandy railway embankment through pasture land, Malaise trap, 13–23.vii.2005, Swedish Malaise Trap Project (no. 1436 in SMNH); 8 males, Öl, Mörbylånga, Skogsby, Gamla Skogsby, meadow with bushes, Malaise trap, 20.v–28.vi.2006, Swedish Malaise Trap Project (no. 2361, 2362, 2459, 2516–2519, 2645 in SMNH).

Description. See Mohrig and Menzel (1992); for hypopygium, see Figs. 54 A–E.

Discussion. Corynoptera melanochaeta was described from the holotype male and five paratype males (Mohrig & Menzel 1992). We have studied the holotype and two of the paratypes.

Corynoptera melanochaeta is very similar to *C. phili*. It differs by having a finger-like process dorsally on the tegmen, by having the apical tooth of gonostylus smaller and the gonostylar megasetae shorter and less massive. Both these species are similar to *C. waltraudis* but the latter has the gonostylus more inflated, the gonostylar megasetae much longer and more slender and the apical tooth of gonostylus smallest among the three species. All these species resemble *C. subtilis*. For further discussion, see under that species.

Distribution. **Bulgaria** (Mohrig, Dimitrova & Mamaev 1992), **Canada** (this study), **Czech Republic** (Rudzinski 1998), **Finland** (this study), **Germany** (Heller 2000, 2002a, Hennicke *et al.* 1997, Mohrig & Menzel 1992, Rudzinski 2006), **Great Britain** (Menzel *et al.* 2006, Smith & Menzel 2007), **Greece** (this study), **Italy** (this study), **Russia, Karelia** (this study), **Slovakia** (Mohrig & Menzel 1992, Rudzinski 2009), **Spain** (Heller & Menzel 2004), **Sweden** (Heller & Menzel 2004, Heller *et al.* 2009).

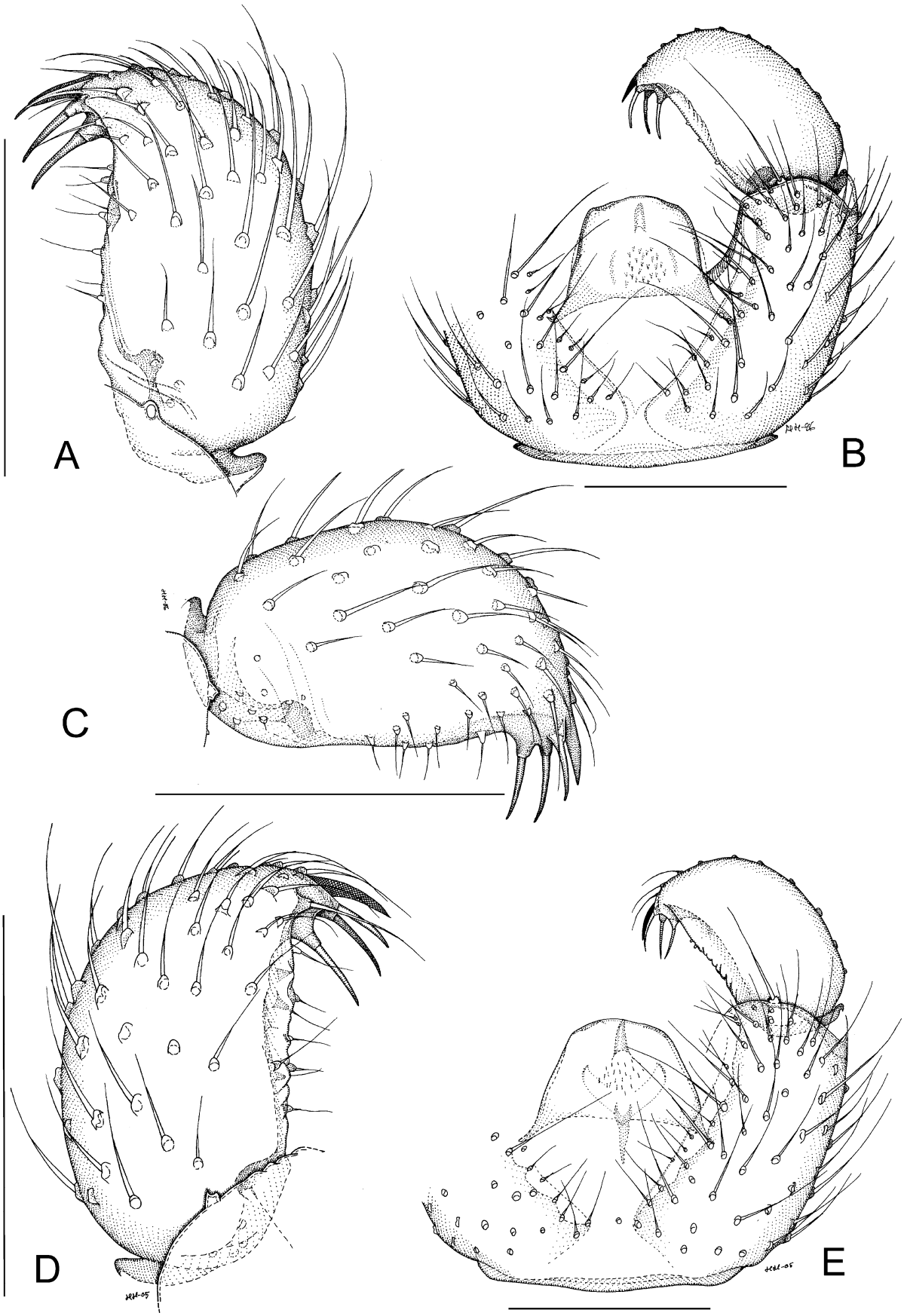

FIGURE 54. *Corynoptera melanochaeta* Mohrig & Menzel (A, B from Finland, C from England, D paratype from Germany, Thüringerwald). **A, C, D.** Gonostylus, ventral view**. B, E.** Part of hypopygium, ventral view (aedeagal apodeme omitted in B). Scale 0.1 mm.

***Corynoptera phili* sp. n.**
Figs. 55 A–E

Material studied. Holotype male. **CANADA**, **Quebec,** Gatineau Park, King Mountain, 45°29’20’’N 75°51’45’’W, summit, 354 m, Malaise trap, 11–16.vi.2005, P. Vilkamaa (in CNC). *Paratypes*. 2 males, same data as holotype (in MZH); 3 males, same data as previous but 16–21.vi.2005 (in MZH); 2 males, **Ontario**, Algonquin, primary forest, sweep-net, 1.vi.1991, Barták (in SDEI); 2 males, **Quebec**, La Roddic, 16 km S Maniwaki, sweep-net, 23.vi.1991, Barták (in SDEI).

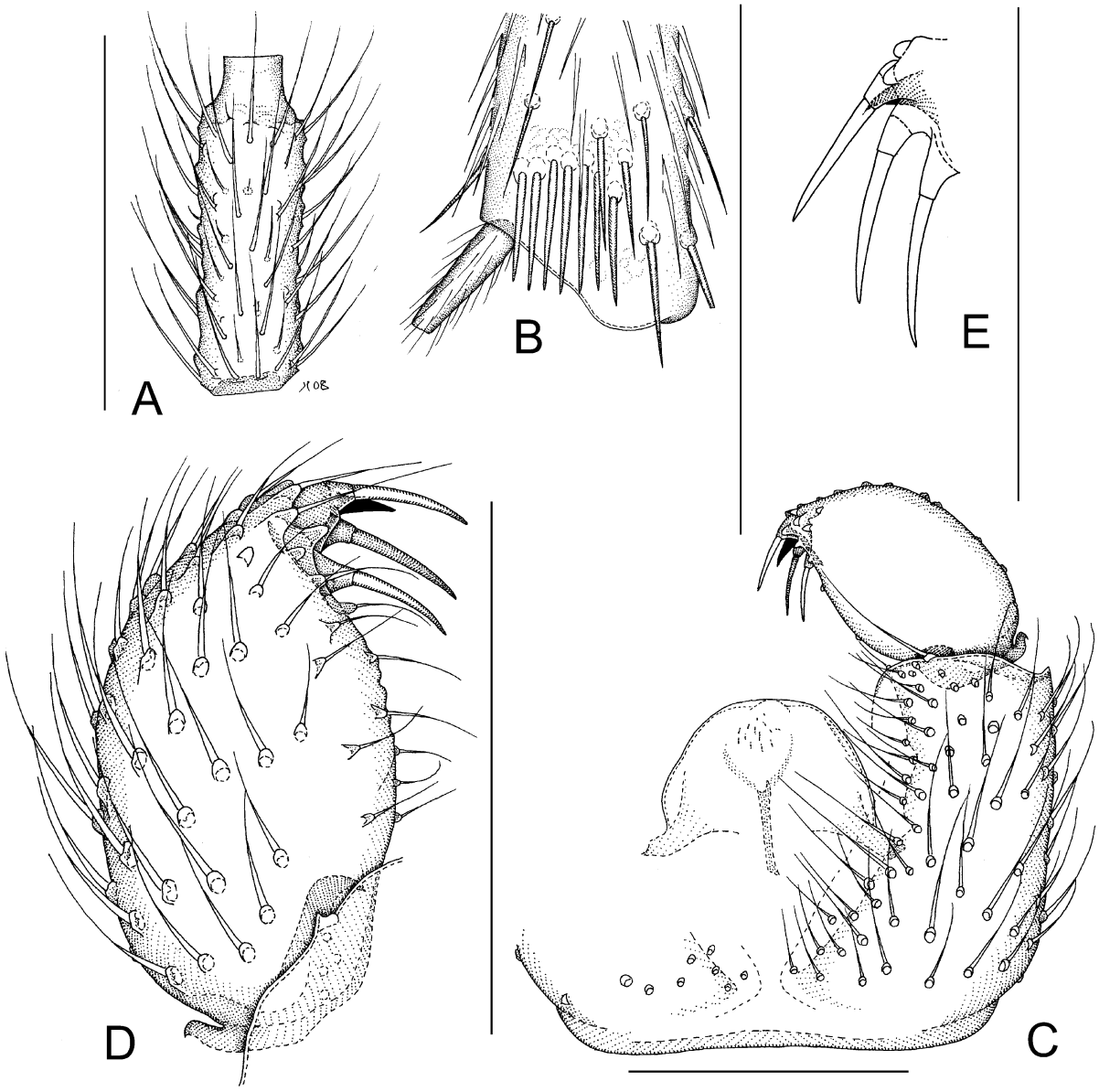

FIGURE 55. *Corynoptera phili* sp. n. (A, B, E paratype from Canada, Gatineau Park, C, D holotype). **A.** Antennal flagellomere 4. **B.** Apical part of front tibia, prolateral view. **C.** Part of hypopygium, ventral view. **D.** Gonostylus, ventral view. **E.** Apex of gonostylus, ventral view. Scale 0.1 mm.

Description. Male. **Head**. Brown, maxillary palpus very pale brown, antenna concolorous with face. Eye bridge 2–3 facets wide. Face with 7–12 scattered dark longer and shorter setae. Clypeus with 1dark seta. Maxillary palpus with 3 palpomeres; palpomere 1 longer than 3, palpomere 2 shortest; palpomere with 1(2) long sharp seta, with a dorsal patch of sensilla; palpomere 2 with 1 long sharp seta and 2–6 shorter truncate setae, palpomere 3 with 5–6 short truncate setae. Antennal flagellomere 4, Fig. 55 A, 2.1–3.1 times as long as wide, the neck shorter than

the width of flagellomere, the longest setae slightly longer than the width of flagellomere. **Thorax**. Unicolorous brown, setae dark. Anterior pronotum with 2–3 setae. Episternum 1 with 2–6 setae. **Wing**. Length 1.3–1.4 mm. Width/length 0.45–0.50. R1/R 0.60–0.75. c/w 0.60–0.85. r-m slightly longer than bM, r-m/bM 1.15, both r-m and bM non-setose. Haltere pale brown. **Legs**. Yellow. Apical part of front tibia, Fig. 55 B: tibial organ with dark vestiture, forming a comb-like row of with a few scattered elements. Front tibial spur slightly longer than the tibial width. **Abdomen**. Brown. Setae dark. **Hypopygium,** Figs. 55 C, D, E. Brown, paler than abdomen. Gonocoxa longer than gonostylus. The ventral setosity of gonocoxa sparse, a few of the setae at the apical part of the mesial margin greatly elongated. Gonostylus oval, the mesial side slightly impressed on apical third; the setosity sparse, apicomesially with a few elongated setae; with a short apical tooth, with 3 megasetae, the megasetae subequal in size, long and almost straight. Tegmen simple (in some specimens with lateral shoulders seen), broader than long, without a dorsal finger-like process.

Discussion. Corynoptera phili is similar to C. *melanochaeta* and *C. waltraudis*. For further discussion, see under *C. melanochaeta*.

Etymology. The species is named after Dr. Phillip Merrill Youngman, a Canadian friend and zoologist.

***Corynoptera waltraudis* Mohrig & Mamaev, 1987**

Figs. 56 A, B, C

Corynoptera waltraudis Mohrig & Mamaev, in Mohrig *et al.*, 1987: 101.

Material studied. 1 male, **FINLAND**, Ks, Kuusamo, Merenoja (7364088:3605383), by a brook, 3.viii.2005, J. Salmela (in MZH); 1 male, **NORWAY**, STI, Oppdal, Kongsvoll, Sprenbekken, 1250 m, yellow tray, 19.vii–1.viii.1994, J. Skartveit (in MZH); 2 males, Finnmark, Svanvik, mixed forest pine/birch, 13–16.vii.1994, M. Jaschhof (no. 2188, 2189 in PWMP); 1 male, Finnmark, Varanger Peninsula, Kjölnes fyr, meadow at coast, sweep-net, 9.vii.1991, M. Jaschhof (no. 2190 in PWMP); 1 male, **RUSSIA**, **Tuva**, Ishtii-Khem, 8.vii.1974, sweep-net, Mamaev (holotype, no. 2183 in PWMP); 1 male, same data but 13.vii.1974 (paratype, no. 2184 in PWMP); 1 male, same data as previous but 4.vii.1974 (paratype, no. 2184 in PWMP); 4 males, **RUSSIA**, **Polar Ural**, Europe-Asia Pass, 300 m, tundra heather, pitfall trap, 4–15.vii.1994, S. Koponen (in MZH); 2 males, **Yamal Peninsula**, Khadyta, 27.vii.1981, Olschwang (no. 2177, 2188 in PWMP); 2 males, **SWEDEN**, To, Kiruna, Abisko, birch forest northern slope, yellow dish, 13–17.vii.1991, M. v. Tschirnhaus (no. 2186, 2187 in PWMP).

Description. See Mohrig *et al.* (1987); for hypopygium and gonostylus, see Figs. 56 A, B and C.

Discussion. *Corynoptera waltraudis* was described from the holotype male and one paratype male, and three additional males were mentioned from the type locality (Mohrig *et al.* 1987).

For additional discussion, see under *C. melanochaeta*.

Distribution. **Finland** (this study), **Germany** (Menzel *et al.* 2003), **Great Britain** (Menzel *et al.* 2006), **Norway** (this study), **Russia, Tuva** (Mohrig *et al.* 1987), **Russia, Polar Ural** and **Yamal Peninsula** (this study), **Sweden** (this study), **Turkey** (Rudzinski 1996).

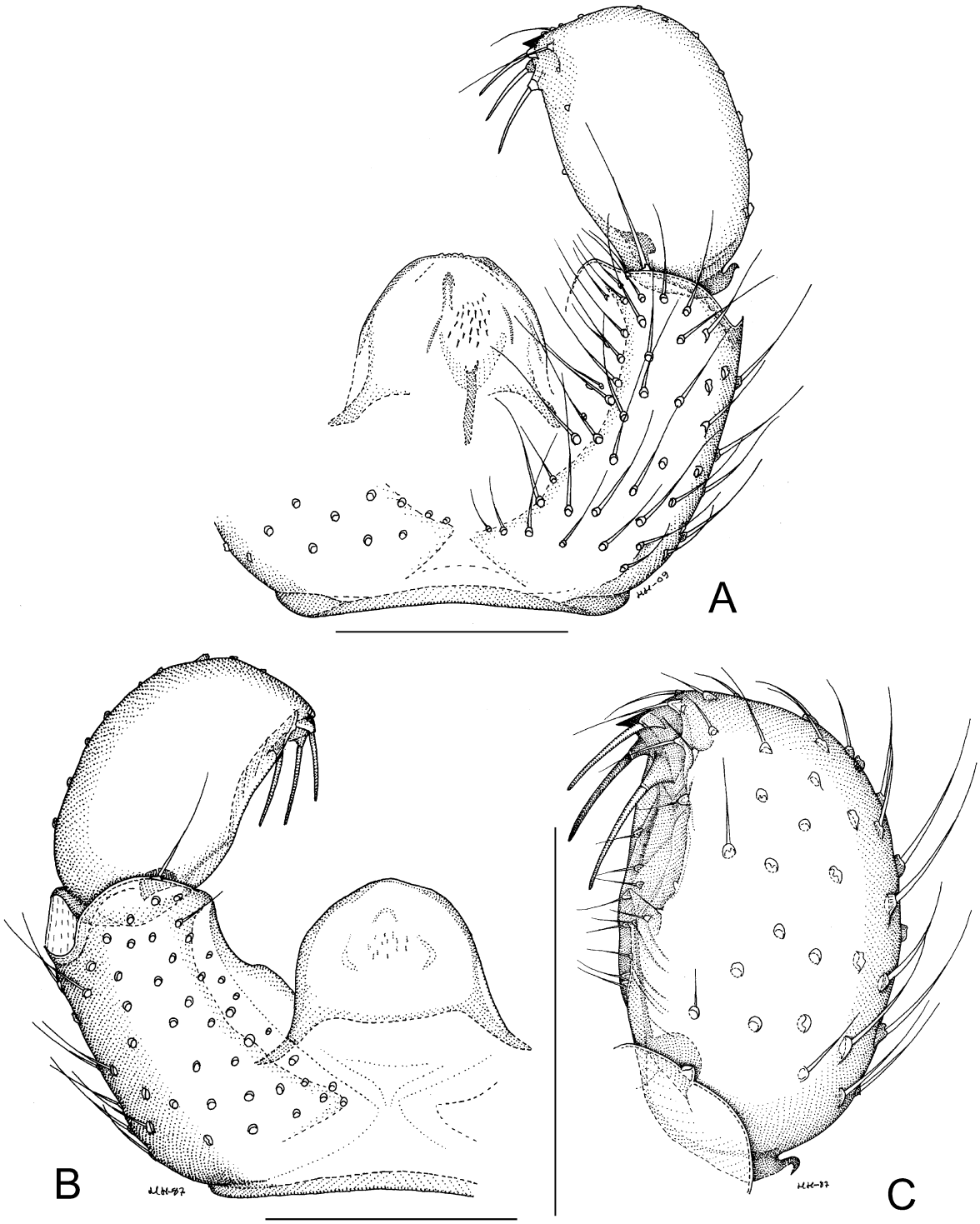

FIGURE 56. *Corynoptera waltraudis* Mohrig & Mamaev (A from Finland, B, C from Ishtii- Khem). **A, B.** Part of hypopygium, ventral view (aedeagal apodeme omitted in B). **C.** Gonostylus, ventral view. Scale 0.1 mm.

***Corynoptera subtilis* (Lengersdorf, 1929)**
Figs. 57 A, B, C

Sciara subtilis Lengersdorf, 1929: 111.
Neosciara longicornis Bukowski & Lengersdorf, 1936: 110. Synonymy by Menzel and Mohrig (2000: 228).
Bradysia (Chaetosciara) signhildae Frey, 1948: 61. Synonymy by Tuomikoski (1960: 57).
Corynoptera longicornis, Tuomikoski, 1960: 57.
Corynoptera subtilis, Menzel & Mohrig, 2000: 228.

Material studied. 1 male, **AUSTRIA**, T, Matrei, Maria Waldrast, subalpine spruce forest, pitfall trap, 1–28.viii.1976, K. Thaler (no. 2232 in PWMP); 5 males, Grossglockner, pitfall trap, 29.vii–15.ix.1979, K. Thaler (no. 2225–2229 in PWMP); 1 male, same data as previous but 15.ix–20.x.1979 (no. 2230 in PWMP); 3 males, same data again but 20.vii–13.viii.1980 (no. 2222–2224 in PWMP);1 male, Salzburg, Hofgastein, Schlossalm, pitfall trap, 1–13.viii.1982, K. Thaler, (no. 2220–2221 in PWMP); 4 males, same data as previous but 1–15.ix.1982 (no. 2216–2219 in PWMP); 1 male, **FINLAND**, Ab, Lojo, 355 (lectotype of *Bradysia signhildae* Frey, in MZH), 1 male, same data as previous but Lojo 369 (paralectotype of *Bradysia signhildae* Frey, in MZH); 1 male, same data again but Lojo 346 (paralectotype of *Bradysia signhildae* Frey, in MZH); 1 male, A, Lemland, Flaka, 14.vi.1962, R. Tuomikoski (in MZH); 1 male, same data as previous but 6.vi.1962 (in MZH); 8 males (on 4 slides), Ab, Korppoo, Åvensör, 27.iv–28.vi.1962, P.T. Lehtinen (in MZH); 2 males (on same slide), Ab, Korppoo, Jurmo, grassy bog, 28.v–26.vi.1969, P.T. Lehtinen (in MZH); 1 male, Ab, Korppoo, Hevonkack, pitfall trap, 27.vi–24.viii.2005, P.T. Lehtinen (in MZH); 2 males (on same slide), Ab, Nauvo, Stenskär, 27.vii–10.x.1967, P.T. Lehtinen (in MZH); 1 male, N, Sipoo, Hindsby, rich mixed forest, malaise trap, 14.vii–18.viii.2005, P. Vilkamaa (in MZH); 2 males, Ta, Lammi, Biological Station, 12.viii.1986, J. Tuiskunen (in MZH); 1 male, Ta, Lammi, black alder forest, photoeclector, 27.vii–26.viii.2005, Yakovlev (in MZH); 1 male, Ta, Urjala, Kivijärvi Nature Reserve (60°59'N 23°26'E; the square 6770:308), Malaise trap, 3.vi–6.vii.2003, Salmela & Härmä (in MZH); 2 males, same data as previous but 3.viii–15.ix.2003 (in MZH); 1 male, same data again but 20.iv–5.x.2003 (in MZH); 1 male, Li, Tsarmitunturi, mesoeutrophic fen, by a spring, Malaise trap, 6.vii–1.viii.2004, J. Salmela (in MZH); 1 male, **FRANCE**, Col de la Lombard, Isola 2000, 2400 m, 24.vii.1993, Stark (in SDEI); 1 male, **GERMANY**, BW, Belchen, Malaise trap, 7–28.v.2003, D. Doczkal (no. 2288 in ZSMC); 2 males, same data as previous but 28.v–3.vii.2003 (no. 4845 in PKHH, 2244 in ZSMC); 2 males, BW, Todtnau, Wilhelmer Hütte, Malaise trap, 8–30.v.2003, D. Doczkal (no. 5128, 5150 in PKHH), 1 male, same data as previous but 22.ix–26.xi.2003 (no. 4574 in PKHH); 5 males, BY, Oberstdorf, Nebelhorn, 2000 m, alpine vegetation, sweep-net, 21.viii.2001, K. Heller (no. 3592–3596 in PKHH); 3 males, BY, Ramsau, Mittereisalm, sweep-net, 31.v.1999, K. Heller (no. 2836–2838 in PKHH);3 males, NS, Göttingen, Drakenberg, 23.vii.1986, K. Hövemeyer (no. 2683–2685 in PWMP); 1 male, SH, Rübeland, Kaltes Tal, meadow, sweep-net, 23.v.2006, K. Heller (no. 4767 in PKHH); 4 males, SH, Sylt, Braderup, heather, photoeclector, 23.iv–7.v.1992, N. Voigt (no. 508, 510–512 in PKHH); 2 males, SH, Sylt, Rantum, dunes, sweep-net, 3.v.2005, K. Heller (no. 4349, 4350 in PKHH); 1 male, TH, Apfelstädter Ried Nature Reserve, *Cirsium oleracea* meadow, 30.v.1985, Weipert (in SDEI); 1 male, TH, Steudnitz, ruderal grassland, SE slope, photoeclector, 19.iv–3.v.1996, K. Metzner (no. 3041 in PKHH); 1 male, **ITALY**, South Tyrol, St. Magdalena, spruce forest at Spielbühl, 1600 m, sweep-net, 23.vii.2002, K. Heller (no. 3824 in PKHH); 1 male, **LATVIA**, Darzini, 22.iv.1977, W. Spungis (no. 2239 in PWMP); 1 male, same data as previous but 5.vi.1978 (no. 2238 in PWMP); 1 male, **NETHERLANDS**, Terschelling, dunes, photoeclector, 3–17.iv.2002, J. Vogels (no. 4095 in PKHH); 1 male, **NORWAY**, Nessna, 7.vii.1986, J. Tuiskunen (in MZH); 2 males, Finnmark, Vardsø, birch forest with shrubs, sweep-net, 11.vii.1994, M. Jaschhof (no. 2205, 2256 in PWMP); 3 males, Finnmark, Svanvik, mixed forest, pine/birch, 16.vii.1994, M. Jaschhof (no. 2189, 2214, 2215 in PWMP); 4 males, Finnmark, Varanger peninsula, Ytre, Syltefjord, 35 km SE Batsfjord, dwarf shrub tundra, exhaustor, 7.vii.1994, M. Jaschhof (no. 2210–2213 in PWMP); 1 male, **RUSSIA**, **Moscow region**, Pavlovskaya, sweep-net, 22.viii.1963, B. Mamaev (no. 2240 in PWMP); 1 male, **Voronesh region**, 9.viii.1989, Tellerman (no. 2237 in PWMP); 2 males, **SWEDEN**, Bl, Ronneby, Tromtö, beech and oak forest, Malaise trap, 22.vii–25.ix.2004, Swedish Malaise Trap Project (no. 5833 in PKHH, no. 970 in SMNH); 1 male, Go, Gotland, Roleks, border between wood and open pasture, grazed calcareous pine forest, Malaise trap, 2–19.viii.2004, Swedish Malaise Trap Project (no. 6854 in PKHH); 4 males, Sk, Höganäs, Mölle, Kullabergs Nature Reserve, oak forest in southern slope, Malaise trap, 9.viii–20.ix.2005, Swedish Malaise Trap Project (no. 6869 in PKHH, 2781–2783 in SMNH); 2 males, Sm, Nybro, Alsterbro, mixed forest, Malaise trap, 30.iv–5.v.2005, Swedish Malaise Trap Project (no. 6687, 6688 in PKHH); 1 male, Sm, Nybro, Bäckebo, Grytsjöns Nature Reserve, old moist hay-making meadow, Malaise trap, 18.v–16.vi.2006, Swedish Malaise Trap Project (no. 2948 in SMNH); 4 males, Öl, Mörbylånga, Skogsby, Gamla Skogsby, meadow with bushes, Malaise trap, 20.v–28.vi.2006, Swedish Malaise Trap Project (no. 2352, 2543–2545 in SMNH); 1 male, **UKRAINE**, Crimea, beech forest, 500–1000 m, 17.viii.1930, Bukowski (lectotype of *Neosciara longicornis* Bukowski & Lengersdorf), des. Menzel, in Menzel & Mohrig 2000, in ZFMK); 1 male, same data as previous but 28.v.1930 ((paralectotype of *Neosciara longicornis* Bukowski & Lengersdorf, des. Menzel, in Menzel & Mohrig2000, in ZFMK).

Description. See Menzel and Mohrig (2000); for hypopygium and gonostylus, see Figs. 57 A, B and C.

Discussion. We have not studied the lectotype of *Corynoptera subtilis* (des. Menzel & Mohrig 2000) from Poland and follow Menzel and Mohrig (2000) concerning its identity and synonyms.

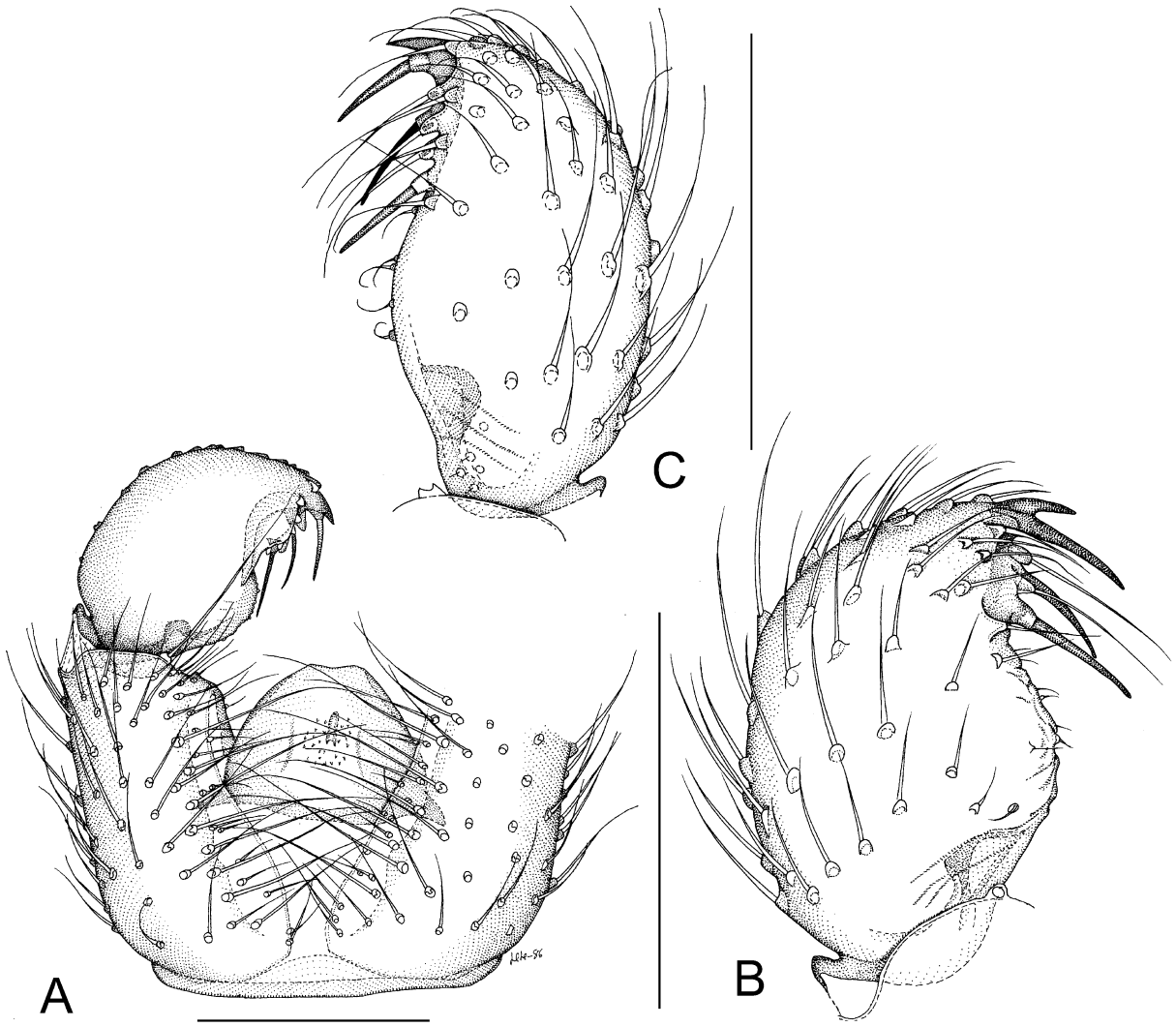

FIGURE 57. *Corynoptera subtilis* (Lengersdorf) (A, B from Finland, C from Yukon). **A.** Part of hypopygium, ventral view (aedeagal apodeme omitted). **B, C.** Gonostylus, ventral view. Scale 0.1 mm.

Corynoptera subtilis is similar to and easily confused with a number of species, e.g. *C. irmgardis, C. melanochaeta, C. phili, C. subclinochaeta, C. trepida and C. waltraudis*. It is distinguished from *C. melanochaeta, C. phili* and *C. waltraudis* e.g. by having much longer gonostylar megasetae and with longer spaces between so that the basalmost one is approximately at about the apical third of gonostylus instead of near the apical fifth and by very long setosity at the ventral mesial margin of the gonostylus. It differs from *C. subclinochaeta* and *C. trepida* by having the gonostylar megasetae with equal spaces and same direction, not having the two apicalmost ones close to each other as a pair and not having the basalmost megaseta more inclined towards the base of the gonocoxa as the others. It differs from *C. irmgardis* e.g. by having the gonostylus longer than the gonocoxa and by having the gonocoxal megasetae subequal in size.

Distribution. **Austria** (this study), **Bulgaria** (Dimitrova & Mohrig 1993: as *C. longicornis*), **Czech Republic** (Menzel *et al.* 2000), **Finland** (Frey 1948: as *Bradysia signhildae*), (Tuomikoski 1960: as *C. longicornis*), (Vilkamaa *et al.* 2007), **France** (this study), **Germany** (Hövemeyer 1996b, 1996a, Menzel & Mohrig 1991, Menzel *et al.* 1990: as *C. longicornis*), (Hövemeyer 1996b: also as *C. irmgardis*), (Heller 2004, Menzel *et al.* 2003, Rudzinski 2006), **Great Britain** (Menzel *et al.* 2006, Smith & Menzel 2007), **Ireland** (Menzel *et al.* 2006), (Menzel 1998: as *C. longicornis*), **Italy** (Menzel 1992: as *C. longicornis*), **Latvia** (this study), **Netherlands**, (Heller & Menzel 2004),

Norway (this study), **Poland** (Lengersdorf 1929a), **Russia, Moscow region** and **Voronesh region** (this study), **Sweden** (Heller *et al*. 2009), **Ukraine** (Bukowski & Lengersdorf 1936: as *Sciara longicornis*).

***Corynoptera trepida* (Winnertz, 1867)**
Figs. 58 A, B

Sciara trepida Winnertz, 1867: 127.
Neosciara subflava Lengersdorf, 1941: 70. Synonymy by Menzel & Mohrig (2000: 230).
Corynoptera clinochaeta Tuomikoski, 1960: 52. Synonymy by Menzel and Mohrig (2000: 230).
Corynoptera campylodonta Komarova, s1995b: 121. Synonymy by Menzel and Komarova (in press).
Corynoptera trepida, Menzel & Mohrig, 2000: 230.

Material studied. 1 male, **AUSTRIA**, K, Grossglockner, ramp of glacier Pasterze, 1900 m, moss lawn, 17.vii.1940, H. Franz (holotype of *Neosciara subflava* Lengersdorf, in SDEI); 1 male, **CANADA**, **Ontario**, Crieff Bog 3 km W Puslinch, forest edge, hummock, 2.iv–3.v.1988, D. Blades (in SMNH); 1 male, Ontario, Wylde Lk. bog 6 km E Arthur, sedge meadow, hummock, 28.vii–5.ix.1987, D. Blades (in SMNH); 6 males, **Quebec**, Kuujjuarapik 55°17'N 77°48'W, partly burned *Picea glauca* forest, yellow trap, 14.vii–1.viii.1990, S. Koponen (in MZH and SMNH); 1 male, Kuujjuarapik, window trap, 13–27.vii.1990, S. Koponen (in MZH); 1 male, Mont Jacques-Cartier, 48˚59'N 65˚57'W, 1150 m, 26.vi–12.ix.1991, S. Koponen (in MZH); 1 male, **British Columbia**, Vancouver I., Upper Carmanah Valley, Malaise trap, 12–27.viii.1991, N. Winchester (in MZH); 1 male, Munn creek, spruce forest, Malaise trap, 11.vi–23.vii.1994, E. Fuller (no. 1591 in PWMP); 1 male, **FINLAND**, Ab, Vihti, Vihtijärvi, end of viii.1958, R. Tuomikoski (lectotype of *C. clinochaeta* Tuomikoski, hereby designated in order to fix the name of the species, in MZH); 12 males, same data as lectotype (paralectotypes of *C. clinochaeta*, in MZH); 1 male, Ab. Vihti, Vihtijärvi, 23.vii.1960, R. Tuomikoski (in MZH); 1 male, same data as previous but 5–7.viii.1961 (in MZH); 1 male, Ab, Korppoo, Jurmo, Juniper stand, 16.v–17.vii.1968, P.T. Lehtinen (in MZH); 2 males, Ab, Korppoo, Jurmo, 28.vi–13.viii.1969, P.T. Lehtinen (in MZH); 1 male, same data as previous but 28.vi–14.viii.1969 (in MZH); 1 male, Ab, Korppoo, Björkö, maritime deciduous forest, 15.v–16.vii.1968, P.T. Lehtinen (in MZH); 1 male, Korppoo, Hevonkack, pitfall trap, 27.vi–24.viii.2005, P.T. Lehtinen (in MZH); 2 males, Ab, Houtskari, Björkö, Sundholm, bog, 24.viii–24.x.1968, P.T. Lehtinen (in MZH); 2 males, Ab, Turku, Ruissalo, 15–28.vi.1977, P.T. Lehtinen (in MZH); 1 male, Ab, Parainen, Strandby, Kalkholm, 26.vii–28.viii.1968, P.T. Lehtinen (in MZH); 1 male, N, Espoo, Nuuksio, pitfall trap, 24.vii–1.ix.1989, Biström & Vilkamaa (in MZH); 1 male, N, Tuusula, Ruotsinkylä, 2.vi–1.vii.1969, V. Huhta (in MZH); 1 male, N, Helsinki, Sillböle, 31.viii.1959, R. Tuomikoski (in MZH); 2 males, Oa, Ilmajoki, Kivistönmäki, Malaise trap, 26.iv–3.vi.2003, J. Salmela (in MZH); 3 males, same data as previous but 12.vii–6.ix.2003 (in MZH); 1 male, Ta, Teisko, Taulaniemi, 15.viii.1987, H. Hippa (in MZH); 1 male, Ta, Kangasala, Ponsa, 10.viii.1986, J. Tuiskunen (in MZH); 1 male, Tb, Konnevesi, Kalajanvuori (6941:484), 26.ix.2003, J. Salmela (in MZH); 1 male, Kb, Kitee, 12.vii–5.x.1968, S. Koponen (in MZH); 1 male, Ks, Kuusamo, Kiutaköngäs, 1–2.vii.1958, R. Tuomikoski (in MZH); 1 male, Obb, Rovaniemi mlk, spruce mire, Malaise trap, 13.vi–11.vii.2005, J. Salmela (in MZH); 1 male, Obb, Tervola, Sompujärvi, 1–28.viii.2004, J. Salmela (in MZH); 2 males, Li, Inari, Laanila, 2.vii.1964, R. Tuomikoski (in MZH); 2 males, Li, Utsjoki, Kevo, 5.vii.1967, L.J. Tuominen (in MZH); 1 male, Le, Kilpisjärvi, Saana, SW-slope (7675141:3253341), calcareous grove, malaise trap, 1–15.vii.2006, Penttinen & Yakovlev (in MZH); 2 males, Ou, Hiidenportti National Park, Uroporvaara, spruce/birch/aspen forest, sweep-net, 10.vii.2004, M. Jaschhof (no. 6457 in PKHH); 3 males, Kb, Koivusuo Strict Nature Reserve, spruce/birch/aspen forest, sweep-net, 15.vii.2004, M. Jaschhof (no. 6527 in PKHH); 1 male, Kb, Koli, Pielisjärvi, grassy birch forest at former slash and burn site, sweep-net, 10.vi.2004, M. Jaschhof (no. 6246 in PKHH); 1 male, Kb, Pudasjärvi, Syöte National Park, Sotivaara, spruce/aspen forest, sweep-net, 22.vii.2004, M. Jaschhof (no. 6440 in PKHH); 1 male, **DENMARK**, Bornholm, Donedalen, sweep-net, 30.vii.2004, K. Heller (no. 4312 in PKHH); 1 male, **ESTONIA**, Maakond, Saastna, sweep-net, 12.vi.1996, P. Vilkamaa (in MZH); 2 males, **FRANCE**, Mandailles, Puy Griou, sweep-net, 22.vii.2003, K. Heller (no. 4061, 4062 in PKHH); 2 males, **GERMANY**, BW, Bad Buchau, Federsee, Malaise trap, 24.v–14.vii.2003, D. Doczkal (no. 4516 in PKHH, no. 16 in PDDG); 1 male, BW, Belchen, Malaise trap, 28.v–3.vii.2003, D. Doczkal (no. 4873 in PKHH); 3 males, BW, Beuren near Isny, Taufach-Fetznach-Moos, Malaise trap, 3.vi–14.vii.2003, D. Doczkal (no. 61 in PDDG, no. 4621 in PKHH, no. 39 in PASS); 1 male, BW, Todtnau, Zastler, eastern side, Malaise trap, 8–30.v.2003, D. Doczkal (no.

4781 in PKHH); MV, Carwitz, spruce/birch forest, sweep-net, 24.iv.1994, M. Jaschhof (no. 5272 in PKHH); 3 males, MV, Greifswald, forest, sweep-net, 1994, M. Jaschhof (no. 5301, 5383, 5384 in PKHH); 1 male, MV, Potthagen near Greifswald, beech/alder/birch forest, sweep-net, 28.v.1994, M. Jaschhof (no. 5360 in PKHH); 1 male, NW, Cologne, district Poll, garden, Malaise trap, 12–19.iii.2002, J. Franzen (no. 2005 in ZSMC); 1 male, same data as previous but 2–9.iv.2002 (no. 4214 in PKHH); 1 male, same data again but 20–27.viii.2002 (no. 2049 in ZSMC); 2 males, SH, Albersdorf, alder swamp forest, yellow dish, 14–30.ix.1997, K. Heller (no. 2532 in PKHH); 1 male, SH, Schönwalde, Bungsberg, beech forest, sweep-net, K. Heller (no. 2664 in PKHH); 1 male, SH, Meggerdorf, Alte Sorge Nature Reserve, bog, Malaise trap, 14.vii–1.viii.1996, K. Heller, (no. 1649 in PKHH); 5 males, SH, Segeberg Forest, oak forest, photoeclector, 1–15.v.1987, T. Tischler (no. 130, 135, 136 in PKHH); 3 males, SH, Siggen, beech/oak forest, photoeclector, 15–29.iv.1985, T. Tischler (no. 493 in PKHH); same data but 12–26.v.1985 (no. 492 in PKHH); 4 males, SH, Trappenkamp, spruce forest, sweep-net, 7.iv.2002, K. Heller (no. 3731–3734 in PKHH); 2 males, SH, Wankendorf, alder swamp forest, photoeclector, 1–15.iv.1989, R. Hingst (no. 166, 405 in PKHH); 3 males, same data as previous but 1–15.ix.1988 (no. 131–133 in PKHH); 2 males, same data again but beech forest, 15.vii–1.viii.1988 (no. 134 in PKHH); 1 male, **ITALY**, South Tyrol, St. Magdalena, spruce forest at Spielbühl, 1600 m, sweep-net, 23.vii.2002, K. Heller (no. 3825 in PKHH); 2 males, **LUXEMBOURG**, Waldbredimus, beech forest, sweep-net, 3.viii.2003, K. Heller (no. 4042, 4045); 1 male, **NORWAY**, RY, Finnøy, Ledsteinvatnet, Malaise trap, 28.iv–15.v.1994, J. Skartveit (in MZH); 1 male, Ljørdal, way to Fulufjället, sweep-net, 5.viii.2008, K. Heller (no. 4990); 3 males, **POLAND**, Laskoviec, Biebrza valley, alder swamp forest, v.1994, Lippert (no. 5415 in PKHH); 1 male, **RUSSIA**, **Karelia**, Kivach, *Cladonia*-pine forest, pitfall trap, 17–18.vi.1986, Yakovlev (in MZH); 1 male, **Polar Ural**, Krasnyi Kamen, *Aconitum* grove, 230 m, pitfall trap, 3–17.vii.1994, S. Koponen (in MZH); 1 male, **Moscow region**, 150 km W Moscow, forest, 15.viii.1996, M. Krivosheina (in MZH); 1 male, **Altay region**, Bertkum, N-slope, 2000 m, 9–13.vii.1993, H. Hippa (in MZH); 1 male, Artybash, pine forest, sweep-net, 3.vii.2005, K. Heller (no. 4444 in PKHH); 1 male, Verkh-Biysk, spruce-aspen-grass forest, sweep-net, 17.vii.2003, L. Komarova (holotype of *C. campylodonta* Komarova, no. 305 in CTU); 1 male, **SLOVAKIA**, Jasna valley, birch forest, riverside, sweep-net, 13.vii.2007, K. Heller (no. 5662 in PKHH); 1 male, **SLOVENIA**, Podhom, Vintgar creek, sweep-net, 30.vii.2009, K. Heller (no. 7168 in PKHH); 2 males, **SWEDEN**, Ån, Örnsköldvik, Skuleskogen National Park, Långrå, brook ravine in mixed forest, Malaise trap, 29.viii–1.x.2003, Swedish Malaise Trap Project (no. 1263, 1264 in SMNH); 2 males, same data as previous but 9–23.viii.2004 (no. 1218–1219 in SMNH); 1 male, Dr, Orsa, Österåberget Nature Reserve, 500 m, mixed forest (spruce, birch, willow), Malaise trap, M. & C. Jaschhof (no. 5987 in PKHH); 3 males, Hr, Härjedalen, Nyvallen, Nyvallens fäbod, alpine birch and spruce wood, 7–4.viii.2004, Swedish Malaise Trap Project, (no. 1664–1666 in SMNH); 1 male, Pi, Arjeplog, L. Sädvajaure (northern end), 500 m, subalpine birch forest, Malaise trap, 7.vii–12.viii.2005, M. & C. Jaschhof (no. 5871 in PKHH); 4 males, Pi, Arjeplog, Kungsleden SW Jäkkvik, 350 m, subalpine birch forest, Malaise trap, 7–12.viii.2005, M. & C. Jaschhof (no. 6007, 6008 in PKHH, 1046, 1048 in SMNH); 3 males, Up, Stockholm, Djurgården park, Malaise trap, 4–16.v.1994, A. Heinakroon (no. 389, 390 in SMNH); 7 males, same data as previous but 16–31.v.1994 (in SMNH); 2 males, same data again but 30.v–13.vi.1994 (no. 504 in SMNH); 1 male, Up, Stockholm, N. Djurgården, pitfall trap, 1–15.vi.1992, T. Kronestedt & B. Viklund (in SMNH); 1 male, Up, Lövstabruk, Malaise trap, 3–4.vi.1992, H. Hippa & B. Gustavsson (in SMNH); 1 male, same data as previous but 12–15.vi.1992 (in SMNH); 74 males, Ög, Ödeshög, Omberg, Storpissan, old Norway spruce wood, Malaise trap, 3.iii–28.v.2005, Swedish Malaise Trap Project (no. 1805–1817, 1869–1929 in SMNH); 1 male, same data again but 28.v–5.vii.2005 (no. 2145 in SMNH); 8 males, Lu, Kåbdalis, Suorke, Malaise trap, 31.v–23.ix.1993, B. Viklund (in SMNH); 1 male, **SWITZERLAND** ZH, Sihlwald near Zurich, window trap, 9–18.vii.1996, K. Schiegg (no. 1768, 1772 in PKHH); 1 male, **UKRAINE**, Zakarpatye near Rakhiv, sweep-net, 29.vi.1963, B. Mamaev (no. 2616 in PWMP); 1 male, **USA**, **Alaska**, 11 mi S Anderson Jct, Rte 3, mi 270, alder-poplar-spruce, malaise trap, 23.vi–11.viii.1984, S & J. Peck (in MZH).

Description. See Tuomikoski (1960); for hypopygium and gonostylus, see Figs. 58 A and B.

Discussion. We have not seen Winnertz' (1867) type material of *Corynoptera trepida*, only the type material of *Neosciara subflava* Lengersdorf, 1941, *C. clinochaeta* Tuomikoski, 1960 and *C. campylodonta* Komarova, 1995, and rely on the synonymizations on Menzel and Mohrig (2000). *Corynoptera trepida* is very similar to *C. subclinochaeta.* For further discussion, see under *C. adustula, C. subclinochaeta* and *C. subtilis.*

Distribution. **Albania** (Lengersdorf 1926a), **Austria** (Lengersdorf 1941, Menzel 2001), **Bulgaria** (Dimitrova & Mohrig 1993), **Canada** (this study), **Czech Republic** (Rudzinski 1994b), **Denmark** (this study), **Estonia** (this

study), **Finland** (Salmela & Vilkamaa 2005, Tuomikoski 1960), **France** (Rudzinski 1992b), **Germany** (Heller 1996, 2002a, Holstein & Funke 1993, Hövemeyer 1997, 1992, Irmler *et al.* 1996, Menzel 2006, Menzel & Mohrig 1991, Menzel *et al.* 1990, 2003, Rudzinski 1989a, 1992d, 1993b, 2003, 2006, Schulz 1996, Winnertz 1867), **Great Britain** (Menzel *et al.* 2006), **Italy** (Heller & Menzel 2004),), **Latvia** (Menzel 1992), **Luxembourg** (Heller & Menzel 2004), **Netherlands** (Mohrig 1996), **Norway** (Thunes *et al.* 2004), **Poland** (Lengersdorf 1929a), **Russia, Kaliningrad region** (Lengersdorf 1929b), **Russia, Altay region** (Komarova 1995b), **Russia, Karelia** (this study), **Slovakia** (this study), **Slovenia** (this study), **Sweden** (Heller *et al.* 2009, Rudzinski 1992c), **Switzerland** (Heller & Menzel 2004), **Ukraine** (this study), **USA, Alaska** (this study).

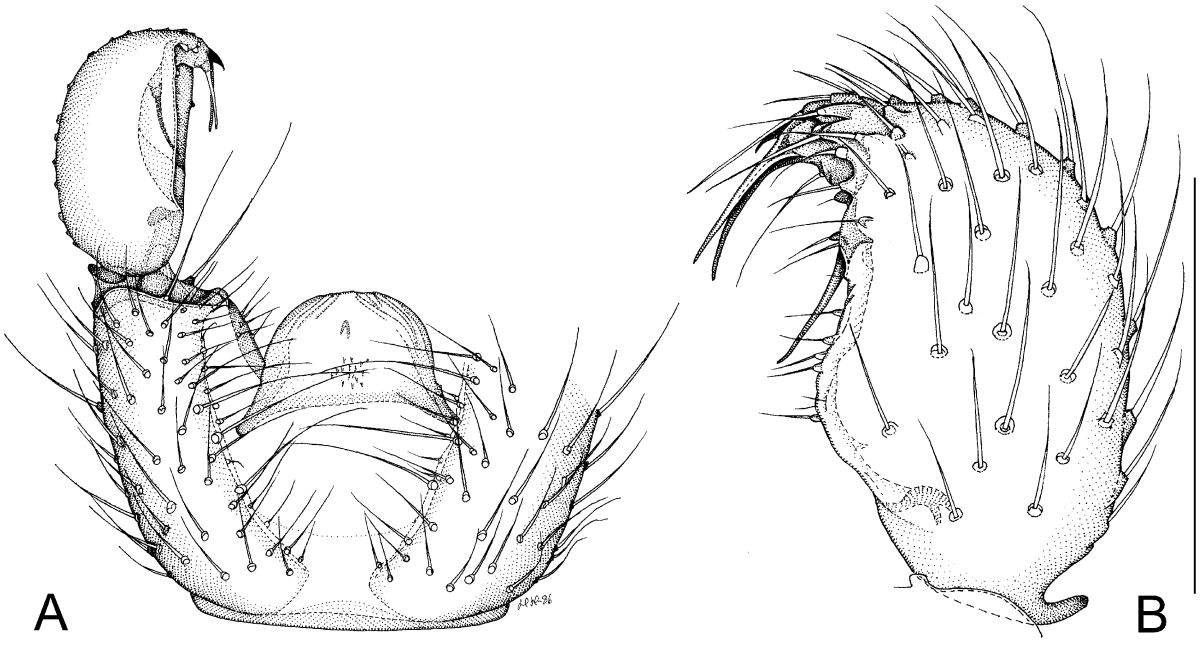

FIGURE 58. *Corynoptera trepida* (Winnertz) (from Finland). **A.** Part of hypopygium, ventral view (aedeagal apodeme omitted). **B.** Gonostylus, ventral view. Scale 0.1 mm.

***Corynoptera subclinochaeta* sp. n.**
Figs. 59 A–D

Material studied. *Holotype male*. **RUSSIA**, **Krasnodar region**, Krasnaya Polyana, 10.ix.1966, Mamaev (no. 2173 in PWMP). *Paratypes.* 3 males, same data as holotype but 8.vii.1967 (no 1965, 1966, 2174 in PWMP); 1 male, same data as previous but 25.vii.1971 (no. 1967 in PWMP); 3 males, **Adygeya Republic**, Guzeripl, forest at shore of River Belaya, sweep-net, 30.vii.1994, W. Mohrig (no. 2175 in PWMP); 3 males, **GERMANY**, BW, Beuren near Isny, Taufach-Fetznach-Moos, Malaise trap, 3.vi–14.vii.2003, D. Doczkal (no. 4621 in PKHH, no. 61 in PDDG, no. 39 in PASS); 2 males, SH, Speicherkoog, embankment area, photoeclector, 30.vi–14.vii.1995, T. Tischler (no. 7034, 7042 in PKHH); 2 males, 1 female, same data as previous but 1.vii–1.viii.1996 (no. 3067 in PKHH); 1 male, TH, Kleinvargula, brook, 5.vii.1986, R. Bellstedt (no. 2270 in PWMP); 1 male, **GREECE**, Kerkini marsh, Malaise trap, 11–17.iv.2007, G. Ramel (no. 6090 in PKHH).

Description. Male. **Head**. Dark brown, maxillary palpus very pale brown, antenna concolorous with face. Eye bridge 3 facets wide. Face with 6–7 scattered dark longer and shorter setae. Clypeus with 1–2 dark setae. Maxillary palpus with 3 palpomeres; palpomeres not well seen in the specimens studied, palpomere 2 with 1 long sharp seta and 2 shorter truncate setae, flagellomere 3 with 4 short truncate setae. Antennal flagellomere 4, Fig. 59 A, 2.4–3.0 times as long as wide, the neck shorter than the width of flagellomere, the longest setae slightly longer than the width of flagellomere. **Thorax**. Unicolorous pale brown, setae dark. Anterior pronotum with 2–3 setae. Episternum 1 with 3–4 setae. **Wing**. Length 1.1–1.3 mm. Width/length 0.35–0.50. R1/R 0.50–0.75. c/w 0.75–0.80. r-m as long as bM or bM longer, r-m/bM 0.60–1.10, both r-m and bM non-setose. Haltere pale brown. **Legs**. Yellow. Apical part of front tibia, Fig. 59 B: tibial organ with dark vestiture, forming a short comb-like row with a few scattered

elements. Front tibial spur slightly longer than the tibial width. **Abdomen**. Brown, paler than thorax. Setae dark. **Hypopygium,** Figs. 59 C, D. Brown, darker than abdomen. Gonocoxa longer than gonostylus. The ventral setosity of gonocoxa sparse, a few of the setae at the apical part of the mesial margin greatly elongated. Gonostylus broad, apically narrowed, the mesial side impressed on apical third; the setosity sparse, apicomesially with a few elongated setae; with a strong curved apical tooth, with 3 megasetae, in groups of 2+1, two apicalmost oblique, basalmost perpendicular, the megasetae subequal in size, slightly curved. Tegmen simple, with a small dorsal finger-like process.

Discussion. Corynoptera subclinochaeta is similar to *C. trepida*. It is distinguished by having a larger apical tooth and thicker megasetae on the gonostylus and the two apicalmost megasetae are divergent whereas they are nearly parallel in *C. trepida*. Furthermore, the gonostylus is darker than the gonocoxa unlike in *C. trepida*, although the difference may not be visible in bleached specimens. For further discussion, see under *C. irmgardis* and *C. subtilis*.

Etymology. The name is derived by the Latin prefix sub-, somewhat, from the name of the closely similar *Corynoptera clinochaeta = C. trepida*.

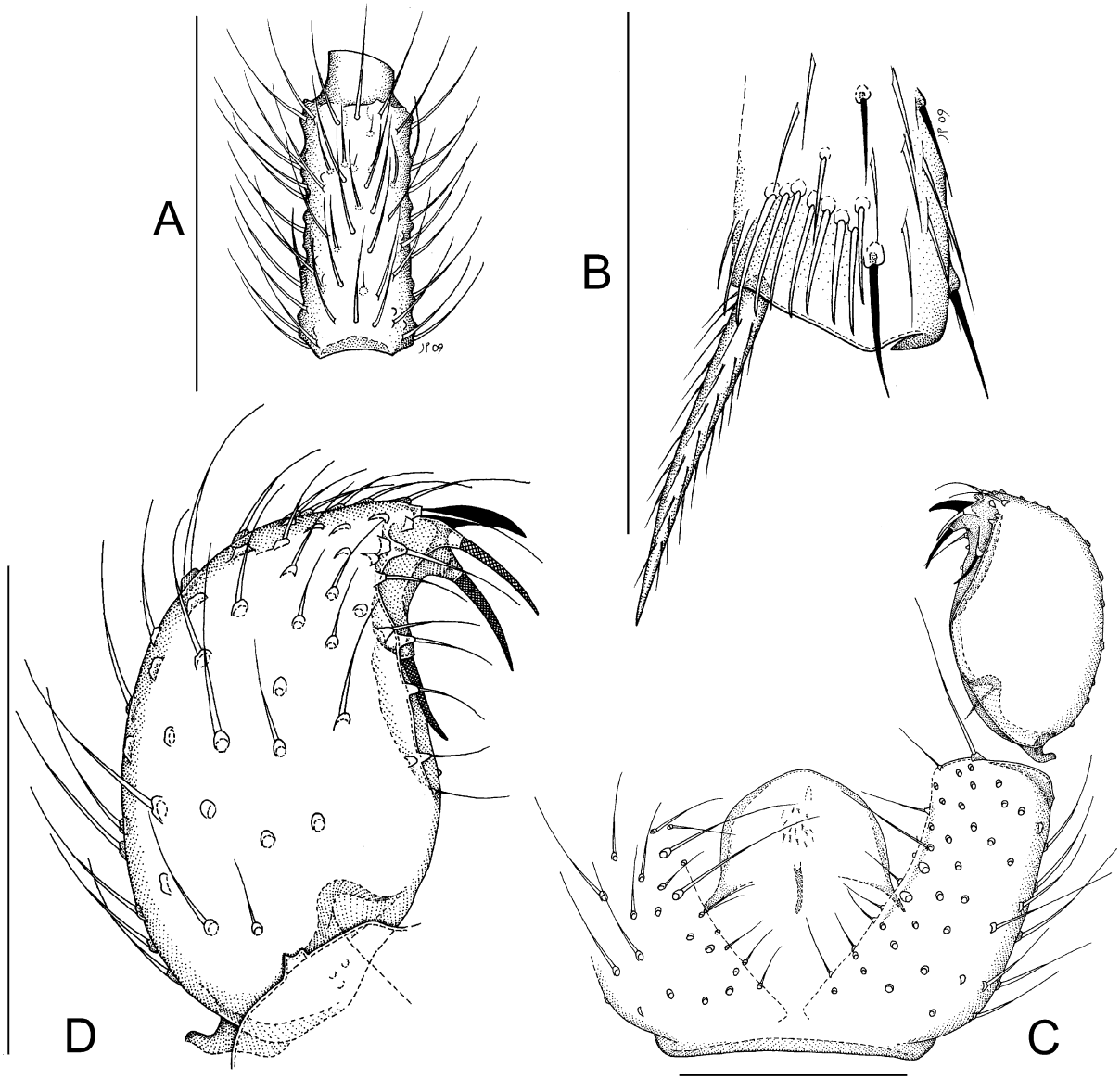

FIGURE 59. *Corynoptera subclinochaeta* sp. n. (holotype). **A.** Antennal flagellomere 4. **B.** Apical part of front tibia, prolateral view. **C.** Part of hypopygium, ventral view. **D.** Gonostylus, ventral view. Scale 0.1 mm.

***Corynoptera stellaris* sp. n.**
Figs. 60 A, B, C

Material studied. *Holotype male*. **GERMANY**, BY, Oberstdorf, Nebelhorn, alpine region, 2000 m, sweep-net, 26.v.2004, K. Heller (no. 4188 in SDEI). *Paratypes*. 9 males, same data as holotype (no 4186, 4787, 4189–4194 in PKHH, MZH, SMNH and SDEI); 1 male, **AUSTRIA**, V, Baad, Walmendinger Horn, 2000 m, alpine meadows, sweep-net, K. Heller, 18.viii.2001 (no. 3552 in PKHH).

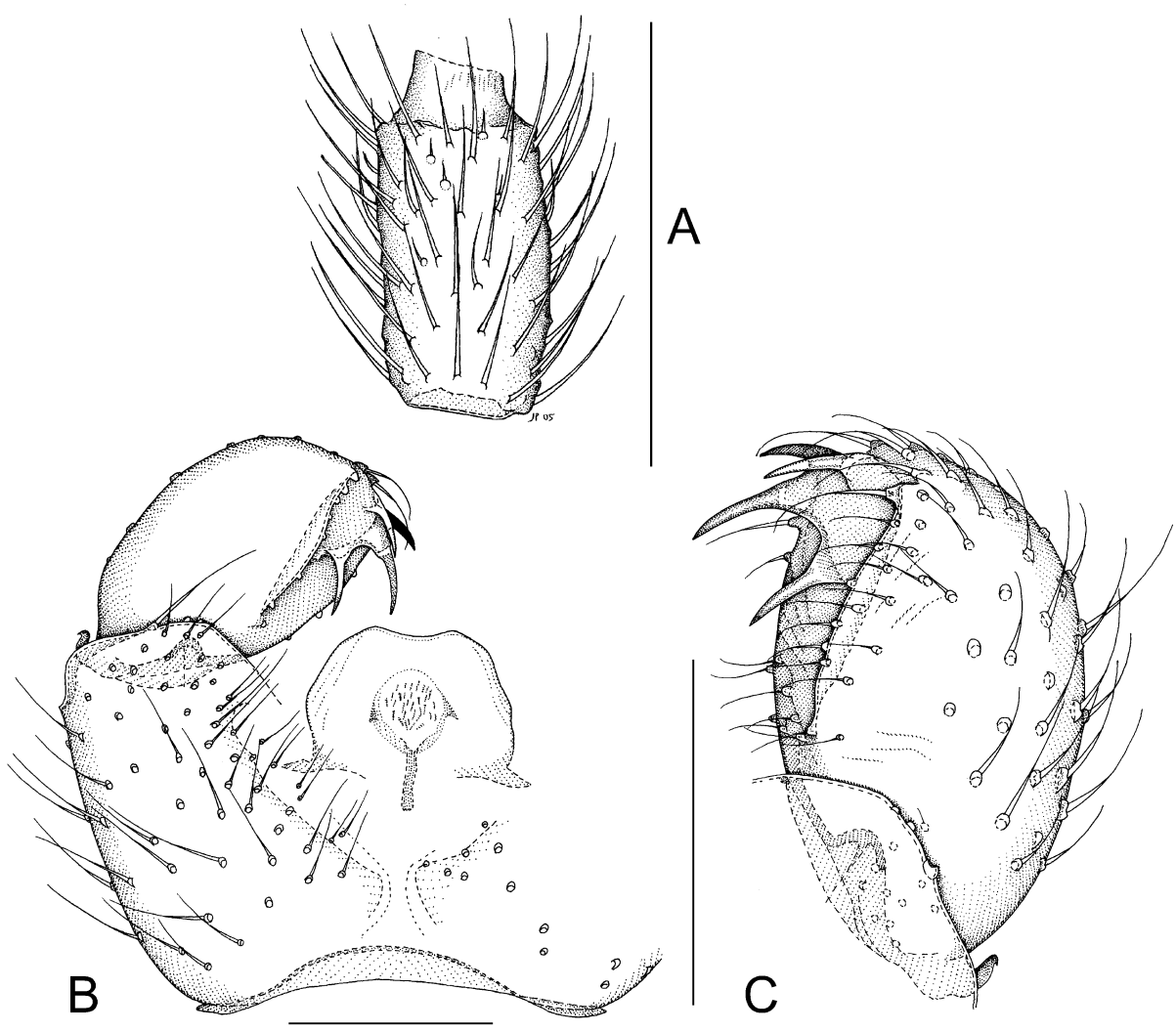

FIGURE 60. *Corynoptera stellaris* sp. n. (holotype). **A.** Antennal flagellomere 4. **B.** Part of hypopygium, ventral view. **C.** Gonostylus, ventral view. Scale 0.1 mm.

Description. Male. **Head**. Brown, maxillary palpus very pale brown, antenna concolorous with face. Eye bridge 3–4 facets wide. Face with 5–9 scattered dark longer and shorter setae. Clypeus with 1dark seta. Maxillary palpus with 3 palpomeres; palpomeres 1 and 3 subequal in length, palpomere 2 shorter; palpomere 1 with one long sharp seta, with a dorsal patch of sensilla; palpomere 2 with 1(2) long sharp seta and 2–3 shorter truncate setae, palpomere 3 with 5 short truncate setae. Antennal flagellomere 4, Fig. 60 A, 1.8–2.1 times as long as wide, the neck shorter than the width of flagellomere, the longest setae slightly shorter than the width of flagellomere. **Thorax**. Unicolorous pale brown, setae dark. Anterior pronotum with 2–3 setae. Episternum 1 with 3–4 setae. **Wing**. Length 1.0 mm. Width/length 0.40. R1/R 0.65–0.75. c/w 0.70–0.85. r-m shorter than bM, r-m/bM 0.50–0.60, both r-m and bM non-setose. Haltere pale brown. **Legs**. Yellow. Front tibial organ with dark vestiture, forming a comb-like row with a few scattered elements. Front tibial spur slightly longer than the tibial width. **Abdomen**. Brown, paler than

thorax. Setae dark. **Hypopygium,** Figs. 60 B, C. Yellow. Gonocoxa longer than gonostylus. The ventral setosity of gonocoxa sparse, a few of the setae at the apical part of the mesial margin elongated. Gonostylus tumid, the mesial side impressed; the setosity sparse, apicomesially with a few elongated setae; with an apical tooth, with 3 megasetae, the megasetae strong and curved, the medial megaseta strongest. Tegmen subquadrangular, without a dorsal finger-like process.

Discussion. Corynoptera stellaris retains an overall resemblance to *C. irmgardis* but lacks the excessively long setae at the ventral mesial margin of gonocoxa and has a less massive gonostylus, which is shorter than the gonocoxa. Also, the megasetae are more equal in size, although in *C. irmgardis* there is variation in size and types rather similar to *C. stellaris*. The gonostylus of *C. stellaris* and *C. mediana* are similar, but the former is broader and the bases of the two basalmost megasetae are scarcely lobe-like.

Etymology. The name is Latin, *stellaris*, of stars, referring to the high altitude of the type locality. The name *stellaris* (in German, *Sternmücke*) was proposed for this species by Ms Greta Heller at the age of seven years.

Corynoptera irmgardis (Lengersdorf, 1930)

Figs. 1 A, 61 A–D

Lycoria (*Neosciara*) *irmgardis* Lengersdorf, 1930: 61.
Bradysia (Chaetosciara) subtilissima Frey, 1948: 61. Synonymy by Tuomikoski (1960: 57).
Corynoptera spungisi Mohrig & Krivosheina, 1985, in Mohrig *et al.*, 1985b: 305. **New synonymy**.
Corynoptera globulifera Komarova, 1995b: 118. Synonymy by Menzel and Komarova (in press).
Corynoptera irmgardis, Tuomikoski, 1960: 57.

Material studied. 1 male, **CZECH REPUBLIC**, Bohemia, Duchcov, Krinec, 50º36’50’’N 13º45’18’’E, dump restoration SW, 240 m, 23–30.iv.1997, Barták (in SDEI); 1 male, **FINLAND**, Ab, Lojo, Vaanila, 26.vii.1941, R. Frey (lectotype of *Bradysia* (*Chaetosciara*) *subtilissima* Frey, des. Menzel, in Menzel & Mohrig 2000,in MZH)); 1 male, Al, Lemland, Flaka, 14.vi.1962, R. Tuomikoski (in MZH); 1 male, Al, Nåtö, Biol. Sta., Malaise trap, 1–16.ix.2004, G. Ståhls (in MZH); 1 male, Al, Kökar, Idö, 59º52’N 20º55’E, 1964, K. Mikkola (in MZH); 1 male, Ab, Parainen, Lapplahti, 1967, P.T. Lehtinen (in MZH); 3 males, Ab, Vihti, Vihtijärvi, 20.vi.1959, R. Tuomikoski (in MZH); 1 male, same data as previous but end vii.1959 (in MZH); 3 males, same data but 23–28.viii.1957 (in MZH); 2 males, same data again but 31.viii.1959 (in MZH); 1 male, same data but 3.vi.1962 (in MZH); 1 male, same data again but 18.vi.1962 (in MZH); 2 males, Ab, Vihti, Salmi, 60.23°N 24.30°E, <100 m; birch/alder swamp forest, aspirator, 28.v.2004, M. Jaschhof (in MZH); 1 male, Ab, Karkkila, Lililampi, 6.vi.2004, J. Salmela (in MZH); 1 male, same data but rich fen, 17.v.2004 (in MZH); 1 male, N, Hanko, Russarö, 663:27, light trap, 7–25.x.1989, J. Kullberg (in MZH); 1 male, N, Helsinki, Pikkukoski, 5.viii.1986, H. Hippa (in MZH); 1 male, N, Helsinki, Sillböle, 31.viii.1959, R. Tuomikoski (in MZH); 1 male, N, Helsinki, Vestersundom, 1.vi.1960, R. Tuomikoski (in MZH); 1 male, N, Espoo, Nuuksio, Haukkalampi, sweep-net, 31.v.2006, P. Vilkamaa (in MZH); 1 male, N, Espoo, Central Park, sweep-net, 9.vii.2008, P. Vilkamaa (in MZH); 1 male, Ka, Vehkalahti, Pieni Mäntjärvi, 5.vi.1985, J. Tuiskunen (in MZH); 1 male, Ta, Tammela, Liesjärvi National Park, 60.39°N 23.54°E, <100 m, birch/spruce swamp forest, Malaise trap, 28.v–26.vi.2004, M. & C. Jaschhof (in MZH); 3 males, Oa, Ilmajoki, Kivistönmäki, Malaise trap, 26.iv–3.vi.2003, J. Salmela (in MZH); 2 males, same data as previous but 17.vii–6.ix.2003 (in MZH); 1 male, Oa, Kuortane, 25.v.1980, P. Laitakari (in MZH); 1 male, Tb, Rautalampi (6941:484), window, on dead aspen 10.v–3.vi.2003, J. Salmela (in MZH); 1 male, Sb, Nilsiä, Ala-Hippa, bog and spruce stand, 8.viii.1986, J. Tuiskunen (in MZH), 1 male, Sb, Nilsiä, Köyritynjoki (702:57), spruce stand by river, 8.viii.1986, J. Tuiskunen (in MZH); 2 males, Ks, Kuusamo, Kotioja (7367629:3608877), by a brook, Malaise 31.v.–20.vi.2005, J. Salmela (in MZH); 2 males, Ks, Kuusamo, Saaripuro (7357336:3611517), by a brook, Malaise trap, 31.5–20.vi.2005, J. Salmela (in MZH); 1 male, Ks, Kuusamo, Rytipuro (7367608:3603444), by a brook, Malaise trap, 31.v–20.vi.2005, J. Salmela (in MZH); 1 male, Ks, Kuusamo, Palopuro (7366138: 3609861), by a brook, Malaise trap, 31.v–20.vi.2005, J. Salmela (in MZH); 2 males, Ks, Kuusamo, Vansseli (7349184:3607737), by a brook, Malaise trap, 31.v–20.vi.2005, J. Salmela (in MZH); 1 male, Ks, Kuusamo, Vuosseli (7344744:3607988), by a brook, Malaise trap, 1.vii–3.viii.2005, J. Salmela (in MZH); 1 male, Lk, Tervola, Pisavaara, *Scorpium* fen, 28.vi.2004, J. Salmela (in MZH); 2 males, Li, Inari, Tsarmitunturi (7623483:3555297), 340 m, spring brook, Malaise trap, 3.vi–6.vii.2004, J. Salmela (in MZH); 1 male, Kb, Koli, Pielisjärvi, grassy birch forest at former slash and burn site,

sweep-net, 10.vi.2004, M. Jaschhof (no. 6246 in PKHH); 2 males, Kb, Outokumpu, Lake Sysmäjärvi, birch/alder forest, exhaustor, 18.vi.2004, M. Jaschhof (no. 6525 in PKHH); 1 male, Ta, Seitseminen National Park, Multiharju, spruece/pine forest, sweep-net, 4.vi.2004, M. Jaschhof (no. 6611 in PKHH); 1 male, **GERMANY**, (syntype, Coll. Lengersdorf in ZFMK); 1 male, BW, Mannheim det. (in SDEI); 3 males, BW, Isny, Adelegg, Malaise trap, 15.ix–27.xi.2003, D. Doczkal (no. 4592 in PKHH, no. 52 in PDDG, no. 32 in PASS); 1 male, BY, Oberstdorf, Buchenrainalm, 1100 m, sweep-net, 24.v.2005, K. Heller (no. 4178 in PKHH); 3 males, SH, Achterwehr, alder swamp forest, sweep-net, 19.v.1996, K. Heller (1398, 1399); 2 males, SH, Flensburg, Marienhölzung, forest, Malaise trap, 4–11.x.1996,W. Barkemeyer, (no. 2053 in PKHH); 1 male, 1 female, same data as previous but 18–25.iv.1997 (no. 2914 in PKHH); 1 male, same data again but 1–8.v.1997 (no. 2912 in PKHH); 1 male, same data again but 4–11.vii.1997 (no. 2913 in PKHH); 1 male, same data again but 14–21.vii.1999 (no. 3082 in PKHH); 1 male, SH, Kiel, Rönne, mixed forest, sweep-net, 6.x.1996, K. Heller (no. 1797 in PKHH); 1 male, SH, Gudow, Sarnekow lake, alder forest, sweep-net, 19.v.1991, K. Heller (no. 164 in PKHH); 1 male, SH, Heikendorf, Kitzeberg, moist beech forest, sweep-net, 23.iv.1994, K. Heller (no. 657 in PKHH); 1 male, SH, Heikendorf, Korügen, beech forest, sweep-net, 1.v.1994, K. Heller (no. 661 in PKHH); 7 males, 1 female, SH, Kiel, Gaarden, Tröndelsee, wayside, sweep-net, 3.v.1996, K. Heller (no. 1407-1414 in PKHH); 2 males, same data but 7.v.1996 (no. 1415, 1416 in PKHH); 1 male, SH, Malente, Lake Ukleisee, beech forest, sweep-net, 2.iii.2002, K. Heller (3729 in PKHH); 1 male, SH, Meggerdorf, Alte Sorge Nature Reserve, wet meadow, photoeclector, 14.iv–1.v.1995, K. Heller, (no. 1209 in PKHH); 1 male, SH, Wankendorf, alder swamp forest, photoeclector, 1–15.vii.1988, R. Hingst (no. 165 in PKHH); 1 male, same data but 1–15.iv.1989 (no. 167 in PKHH); 1 male, same data as previous but wet meadow, 18.iv–2.v.1995 (no. 2720 in PKHH); 1 male, TH, Apfelstädter Ried Nature Reserve, soil, *Cirsium oleracea* meadow, 1.v.1985, Weipert (in SDEI);1 male, **GREAT BRITAIN**, England, Coventry West Midlands, Ryton Wood Nature Reserve by Bubbenhall SE Coventry, deciduous forest (*Quercus*, *Betula*, *Corylus*, *Tilia*), sweep-net, 25.viii.2002, Menzel (in SDEI); 1 male, **MOROCCO**, Quirgane, garden, Malaise trap, 3–10.xii.1994 (no. 1587 in PKHH); 1 male, **NETHERLANDS**, Tilburg, Kaaistoep, Malaise trap, 9–16.v.1998. (no. 43 in NNKN); 1 male, **POLAND**, Laskoviec, Biebrza valley, alder swamp forest, v.1994, Lippert (no. 5404 in PKHH); **RUSSIA, Karelia**, Kivach, *Populus* stand, window trap, 20–22.viii.1985, Yakovlev (in MZH); 2 males, same data as previous but 11–13.vi.1986 (in MZH); 1 male, same data again but pitfall trap (in MZH); 1 male, same data again but window trap, 16–18.vi.1986 (in MZH); 2 males, same data again but 23–30.vi.1986 (in MZH); 1 male, same data again but 26–28.viii.1986 (in MZH); 1 male, same locality but pine forest, pitfall trap, 9–11.vi.1987, Yakovlev (in MZH); 1 male, same data as previous but 17–19.vi.1987 (in MZH); 1 male, **Moscow region**, Pavlovskaya, mixed forest, sweep-net, 23.v.1963, B. Mamaev (holotype of *C. spungisi*, no. 1572 in PWMP); 7 males, 150 km W Moscow, forest, 15.vii.1995, M. Krivosheina (in MZH), 1 male, **Krasnodar region**, Krasnaya Polyana, sweep-net, 5.x.1988, P. Vilkamaa (in MZH); 2 males, **Altay region**, Artybash, pine forest, sweep-net, 4.vii.2005, K. Heller (no. 4373, 4374 in PKHH); 1 male, **Altay Republic**, Turochak District, Verkh-Biysk, spruce-aspen-grass forest, sweep-net, 17.vii.2003, L. Komarova (holotype of *C. globulifera*, no. 293 in CTU); 6 males, **SWEDEN**, Sm, Nybro, Bäckebo, Grytsjöns Nature Reserve, old moist hay-making meadow, Malaise trap, 2–12.vii.2005, Swedish Malaise Trap Project (no. 1336–1341 in SMNH); 2 males, same data as previous, but 13–24.viii.2005 (no. 5962 in PKHH, no. 1102 in SMNH); 1 male, Up, Lövstabruk, Malaise trap, 2–4.vi.2002, H. Hippa, (no. 22 in SMNH); 1 male, same data again but 12–15.vi.1992 (no. 161 in SMNH); 3 males, same data again but 19–23.vi.1992 (no. 178, 192, 193 in SMNH); 9 males, Vr, Munkfors, Ransäter, sandy railway embankment through pasture land, Malaise trap, 13–23.vii.2005, Swedish Malaise Trap Project (no. 1376–1384 in SMNH); 1 male, same data as previous but 12–24.viii.2005 (no. 6864 in PKHH); 1 male, Öl, Mörbylånga, Skogsby, Gamla Skogsby, meadow with bushes, Malaise trap, 20.v–28.vi.2006, Swedish Malaise Trap Project (no. 2552 in SMNH); 2 males, **SWITZERLAND**, ZH, Sihlwald near Zurich, photoeclector, 24.iv–23. v.1996, K. Schiegg (no. 2450, 2477 in PKHH); 1 male, same data as previous but window trap, 6–19.vi.1996 (no. 1829 in PKHH); same data again but 9–18.vii.1996 (no. 1768 in PKHH).

Description. See Lengersdorf (1930) and Tuomikoski (1960); for thorax, see Fig. 1 A, for hypopygium, see Figs. 61 A–D.

Discussion. Corynoptera irmgardis was obviously described from many specimens, as the type locality was described in extremely vague terms such as 'Central and northern Europe´ (Lengersdorf 1930). The type material seems to be lost as no type specimens were mentioned by Menzel and Mohrig (2000). *Corynoptera spungisi* was described from the Moscow region, Russia (Mohrig and Krivosheina 1985) on the basis of the holotype only and

has not been recorded since. It was stated to be similar to *C. irmgardis* by the gonostylus, but differing in the character of the front tibial organ which was of the type found in the *C. forcipata* group. We have studied the holotype and regard it conspecific with *C. irmgardis*. In the holotype the gonostyli are asymmetrical, the right side being like in *C. irmgardis*, but the left side having an extra fourth megaseta (Figs. 61 C, D). The characters of the front tibial organ fit well within the variation range in our large material of *C. irmgardis*. *Bradysia (Chaetosciara) subtilissima* was synonymized with *C. irmgardis* by Tuomikoski (1960).

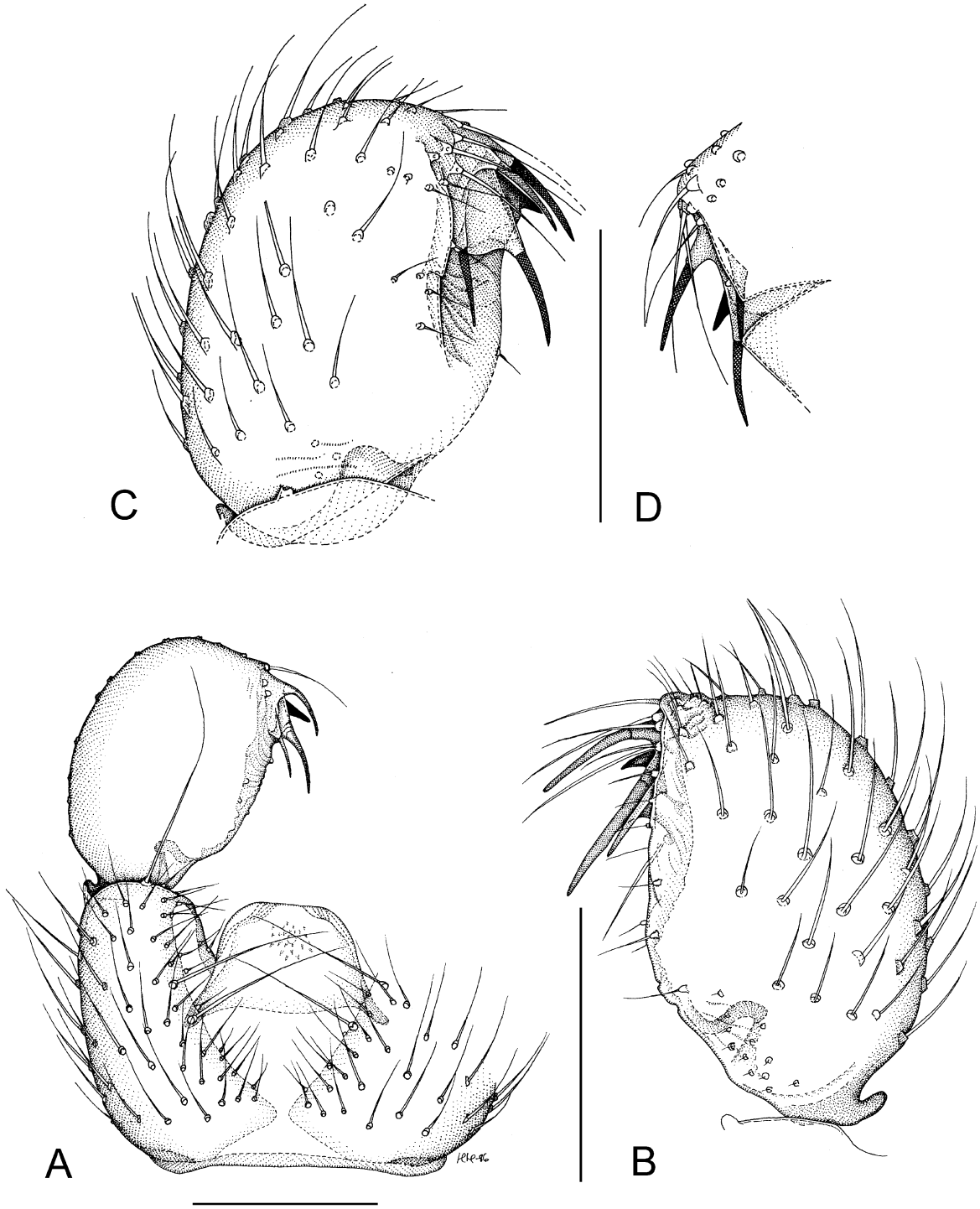

FIGURE 61. *Corynoptera irmgardis* (Lengersdorf) (A, B from Finland, C, D holotype of *C. spungisi* Mohrig & Krivosheina). **A.** Part of hypopygium, ventral view (aedeagal apodeme omitted). **B, C.** Gonostylus, ventral view, **D.** Apical part of gonostylus, ventral view. Scale 0.1 mm.

Corynoptera irmgardis is similar to *C. subclinochaeta*, *C. subtilis* and *C. trepida*. It differs from all by having a very large gonostylus, longer than the gonocoxa and by having one gonostylar megasetae than the two others. It differs from *C. subclinochaeta* and *C. trepida* by having none of the gonostylar megasetae inclined to the mesial side of the gonostylus. *Corynoptera irmgardis* resembles also *C. stellaris*, of which it differs also by having one of the gonocoxal megasetae much larger than the two others, and by having a couple of excessively long setae at the ventral mesial margin of the gonocoxa. See also under *C. subtilis*.

Distribution. **Austria** (Röschmann & Mohrig 1993), **Bulgaria** (Dimitrova & Mohrig 1993, Mohrig, Dimitrova & Mamaev 1992), **Czech Republic** (Rudzinski 1994b), **Finland** (Tuomikoski 1960), **Germany** (Heller 1996, 1999, Hennicke *et al.* 1997, Hövemeyer 1996a, 1998, Lengersdorf 1930, Rudzinski 1993b, 2003, 2006, Menzel 2006, Menzel *et al.* 1990, 2000, 2003), **Great Britain** (Freeman 1987, Menzel *et al.* 2006, Smith & Menzel 2007), **Greece** (Rulik *et al.* 1999), **Ireland** (Menzel *et al.* 2006, Withers 2002), **Morocco** (this study), **Netherlands** (Mohrig 1996), **Poland** (this study), **Russia, Altay region** (Komarova 1995b: as *C. globulifera*), **Russia, Moscow region** (Mohrig *et al.* 1985a: as *C. spungisi*), **Russia, Karelia** (this study), **Slovakia** (Rudzinski 2009), **Sweden** (Heller *et al.* 2009), **Switzerland** (Heller & Menzel 2004).

***Corynoptera tumidula* sp. n.**
Figs. 62 A–E

Material studied. *Holotype male*. **FINLAND**, Ks, Taivalkoski, Kalliojoki (7344909:3610594), Malaise trap, 31.v–20.vi. 2006, J. Salmela (in MZH). *Paratypes*. 1 male, same data as holotype (in MZH); 1 male, Ab, Vihti, Vihtijärvi, 28–29.v.1960, R. Tuomikoski (in MZH); 3 males, Kb, Outokumpu, Lake Sysmäjärvi, birch/alder forest, exhaustor, 18.vi.2004, M. Jaschhof (no. 6525, 6550 in PKHH and 9146 in MZH); 1 male, Kl, Parikkala, Lake Siikalahti, swamp forest with birch and alder, 24.vi.2004, sweep-net, M. Jaschhof (no. 6426 in PKHH); 1 male, **SWEDEN**, To, Abisko, birch forest, northern slope, yellow dish, 13–17.vii.1991, M. v. Tschirnhaus (no. 2700 in PWMP).

Description. Male. **Head**. Brown, maxillary palpus very pale brown, antenna concolorous with face. Eye bridge 2–3 facets wide. Face with 7 scattered dark longer and shorter setae. Clypeus with 1 dark seta. Maxillary palpus with 3 palpomeres; palpomeres 1 and 3 subequal in length, palpomere 2 shorter; palpomere 1 with one long sharp seta, with a dorsal patch of sensilla; palpomere 2 with 1 long sharp seta and 4 shorter truncate setae, palpomere 3 with 5 short truncate setae. Antennal flagellomere 4, Fig. 62 A, 2.5–3.0 times as long as wide, the neck shorter than the width of flagellomere, the longest setae slightly longer than the width of flagellomere. **Thorax**. Unicolorous brown, setae dark. Anterior pronotum with 2–3 setae. Episternum 1 with 2–4 setae. **Wing**. Length 1.3–1.5 mm. Width/length 0.40–0.45. R1/R 0.60–0.85. c/w 0.65–0.80. r-m and bM subequal in length, r-m/bM 0.80–1.15, both r-m and bM non-setose. **Legs**. Pale yellowish brown. Apical part of front tibia, Fig. 62 B: the modified vestiture dark, forming a comb-like row with a few scattered elements. Front tibial spur slightly longer than the tibial width. **Abdomen**. Brown. Setae dark. **Hypopygium,** Figs. 62 C, D, E. Brown, paler than abdomen. Gonocoxa and gonostylus subequal in length. The ventral setosity of gonocoxa rather sparse, a few of the setae at the apical part of the mesial margin greatly elongated. Gonostylus tumid, the mesial side slightly impressed on apical third; the setosity sparse, apicomesially with a few elongated setae; without an apical tooth, with 3 megasetae, the megasetae subequal in size, straight. Tegmen simple, with a dorsal finger-like process.

Discussion. *Corynoptera tumidula* is similar to *C. adustula* and the distinguishing characters are discussed under the latter. Both species are similar to *C. irmgardis*, *C. melanochaeta*, *C. phili*, *C. stellaris*, *C. subclinochaeta*, *C. subtilis*, *C. trepida* and *C. waltraudis* but differ by lacking any trace of an apical tooth on the gonostylus. From the numerous other species of *Corynoptera* that lack the apical tooth on the gonostylus, and have three gonostylar megasetae and elongated setae at the ventral mesial margin of the gonocoxa, the two species are distinguished as follows: from *C. distenta*, *C. marinae*, *C. paracantha*, *C. spicigera*, *C. roeschmanni*, *C. tridentata* and *C. warnckei* by having the basalmost megaseta separated, not in groups or in pair with others, and from *C. bisulca* by having the apicalmost megaseta at least as long as one of the others and not distinctly the smallest one.

Etymology. The name is Latin, *tumidula,* a little swollen, referring to the shape of gonostylus.

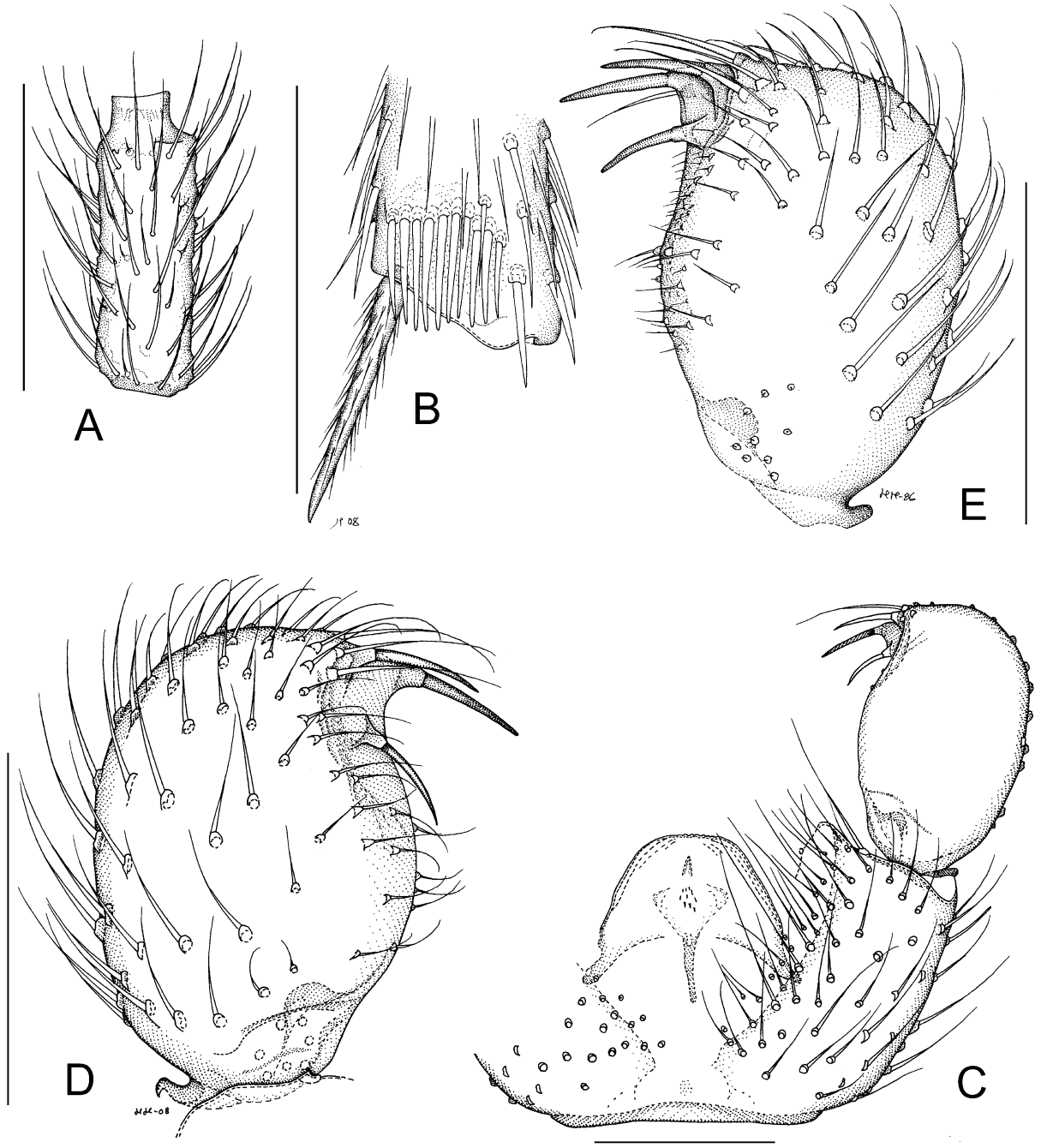

FIGURE 62. *Corynoptera tumidula* sp. n. (A, B, C, D holotype, E paratype from Vihtijärvi). **A.** Antennal flagellomere 4. **B.** Apical part of front tibia, prolateral view. **C.** Part of hypopygium, ventral view. **D, E.** Gonostylus, ventral view. Scale 0.1 mm.

***Corynoptera adustula* sp. n.**
Figs. 63 A, B

Material studied. *Holotype male*. **NEPAL**, Mt. Pulchoki, 27º36'N 85º25'E, 2200 m, pitfall trap, 10–24.v.1996, Expedition A. Albrecht, O. Biström, K. Mikkola & A. Wiklund (in MZH). *Paratypes*. 6 males, same data as holotype (in MZH).

Description. Male. **Head**. Brown, maxillary palpus very pale brown, antenna slightly paler than face. Eye bridge 2–3 facets wide. Face with scattered dark longer and shorter setae. Clypeus non-setose or with 1 dark seta.

Maxillary palpus with 3 (rarely 2) palpomeres; palpomere 1 longer than 3, palpomere 2 shortest; palpomere 1 with one1 long sharp seta, with a distinct dorsal patch of sensilla; palpomere 2 with 1 long sharp seta and 3–5 shorter truncate setae, palpomere 3 with 4–5 short truncate setae. Antennal flagellomere 4 2.6–3.0 times as long as wide, the neck shorter than the width of flagellomere, the longest setae longer than the width of flagellomere. **Thorax**. Unicolorous brown, setae dark. Anterior pronotum with 3 setae. Episternum 1 with 4–7 setae. **Wing**. Length 1.6–1.8 mm. Width/length 0.40–045. R1/R 0.65–0.85. c/w 0.80–0.85. r-m and bM of variable length, r-m/bM 0.85–2.15, r-m non-setose or with 1–2 setae, bM non-setose. **Legs**. Pale yellowish brown. Front tibial organ with pale modified vestiture, forming a comb-like row. Front tibial spur slightly longer than the tibial width. **Abdomen**. Pale brown. Setae dark. **Hypopygium,** Figs. 62 A, B. Brown, concolorous with abdomen. Gonocoxa slightly longer than gonostylus. The ventral setosity of gonocoxa rather dense, the setae at the apical part of the mesial margin elongated. Gonostylus tumid, the mesial side impressed on apical third; the setosity sparse, apicomesially with a few elongated setae; without an apical tooth, with 3 megasetae, the megasetae subequal in size, straight. Tegmen with indistinct basolateral shoulders, without a dorsal finger-like process.

Discussion. Corynoptera adustula is similar to *C. tumidula.* It is distinguished e.g. by having the gonostylus less inflated, by having the gonostylar megasetae nearly straight or slightly curved towards the apex of gonostylus instead of being curved towards the base of the gonostylus and by lacking a finger-like process dorsally on the gonostylus. The gonostylus of *C. adustula* and *C. trepida* are similar but the former lacks the apical tooth. For further discussion of reminiscent species, see under *C. tumidula*.

Etymology. The name is Latin, *adustula*, somewhat darkened, referring to the brownish general colour of the species.

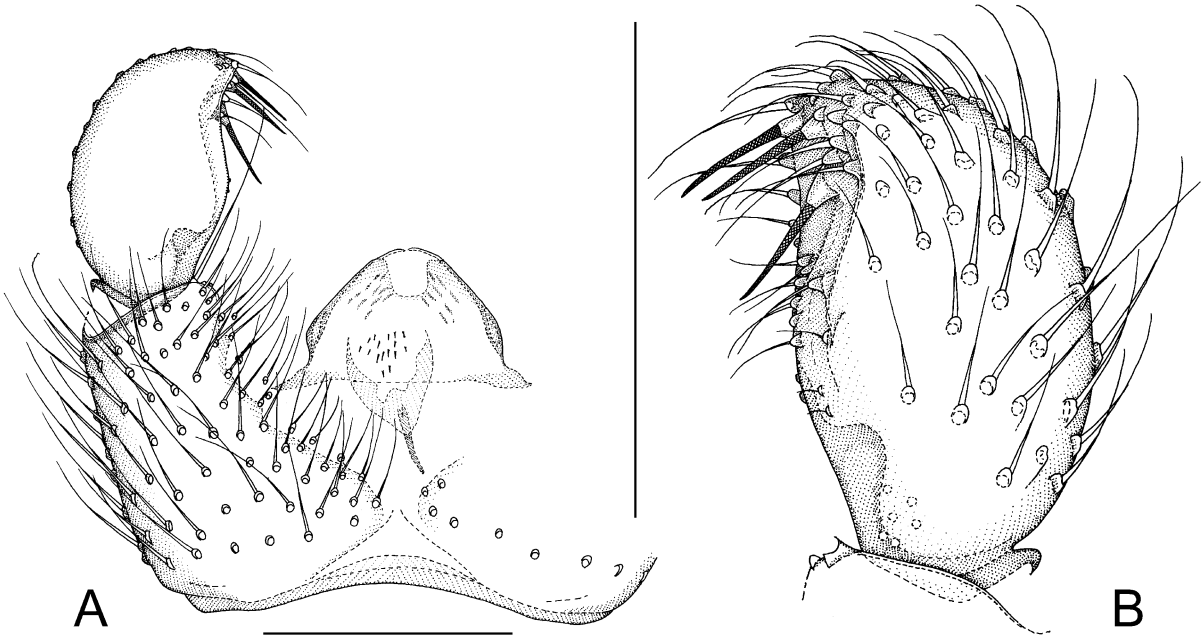

FIGURE 63. *Corynoptera adustula* sp. n. (holotype). **A.** Part of hypopygium, ventral view. **B.** Gonostylus, ventral view. Scale 0.1 mm.

Corynoptera anae Mohrig & Heller, 1992

Figs. 64 A–D

Corynoptera anae Mohrig & Heller, in Heller & Mohrig, 1992: 39.

Material studied. 1 male, **GERMANY**, SH, Hasenmoor, meadow, photoeclector, 1–17.viii.1987, Heller (holotype, in PWMP); 2 males, same data as previous (paratypes, no. 64, 74 in PKHH); 3 males, SH, Blockshagen, field, photoeclector, 4–18.vii.1987, Heller (no. 113–115 in PKHH); 2 males, **NETHERLANDS**, Tilburg, Kaaistoep, Malaise trap, 20–27.vi.1998, J.W. van Zuijlen (no. 37 in NNKN, no. 3579 in SDEI); 1 male, same data as previous but 8–

15.viii.1998 (no. 3786 in PKHH); 2 males, **SWEDEN**, Dr, Ludvika, Gonäs, garden, Malaise trap, 6–8.vii.1999, K.D. Hilger (no. 3203–3204 in PKHH); 1 male, same data as previous but 18–27.vii.2000 (no. 3391 in PKHH); 2 males, Vr, Munkfors, Ransäter, sandy railway embankment through pasture land, Malaise trap, 13–23.vii.2005, Swedish Malaise Trap Project (no. 1433–1434 in SMNH); 6 males, same data as previous but 23.vii–12.viii.2005 (no. 6627 in PKHH, no. 191 in PASS, no. 2859–2860 in SMNH, no. 2447–2448 in ZSMC).

Description. See Heller and Mohrig (1992); for antennal flagellomere 4, see Fig. 64 A, for apical part of front tibia, see Fig. 64 B, for hypopygium, see Figs. 64 C and D.

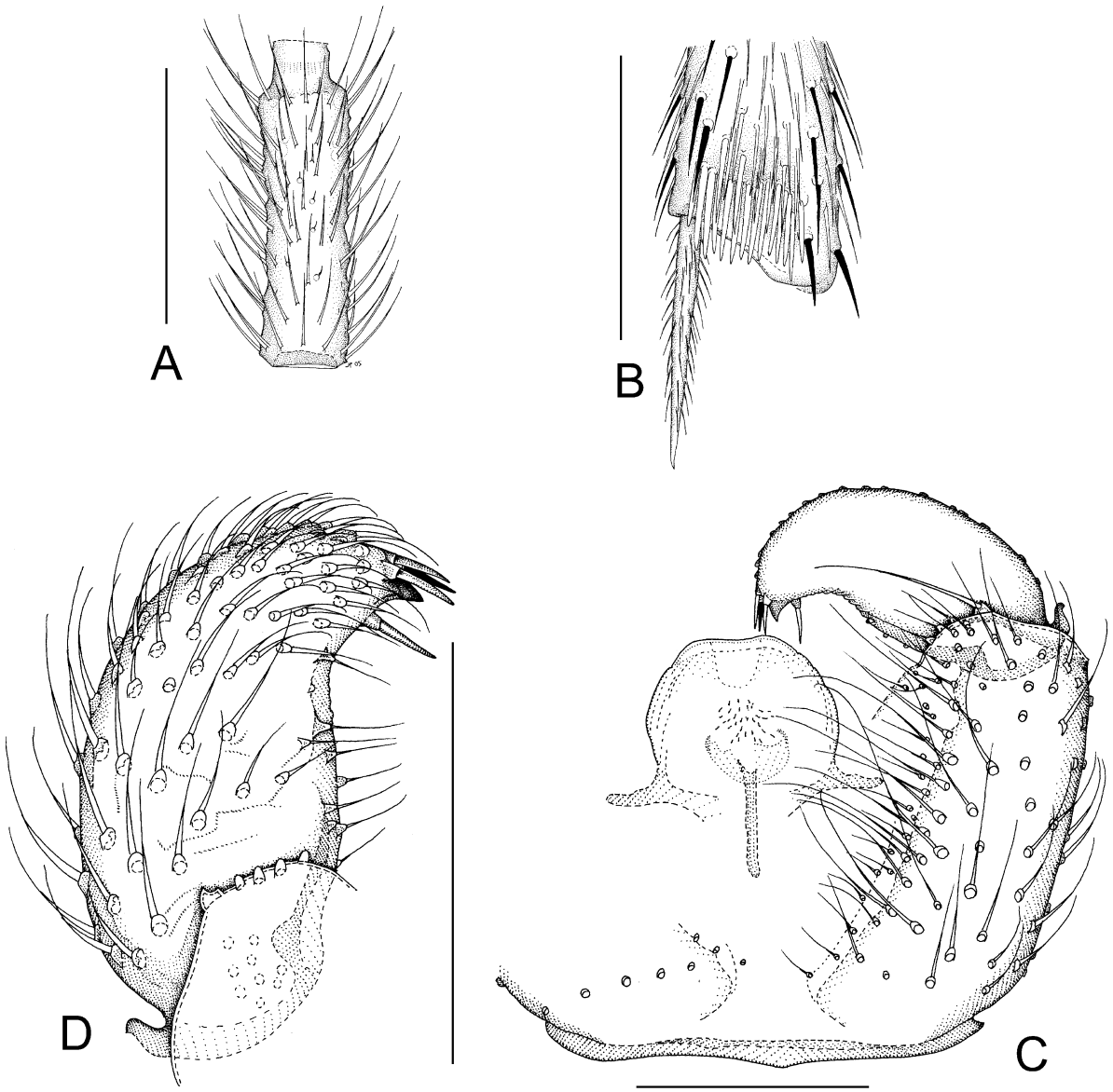

FIGURE 64. *Corynoptera anae* Mohrig & Heller (paratypes). **A.** Antennal flagellomere 4. **B.** Apical part of front tibia, prolateral view. **C.** Part of hypopygium, ventral view. **D.** Gonostylus, ventral view. Scale 0.1 mm.

Discussion. Corynoptera anae was described from the holotype male and five paratype males from Germany (Heller & Mohrig, 1992).

Corynoptera anae resembles *C. subsaccata* but is not very similar. The two species share a rare character, viz. there are megasetae apically beyond the apical tooth (actually on its lateral side). In both species the apical tooth of gonostylus is also shifted basad from the actual gonostylar apex. *Corynoptera anae* differs from *C. subsaccata* by having the apical tooth only slightly shifted; in *C. subsaccata* the shift is more striking so that the tooth is placed at the apical fourth of the gonostylus. *C. anae* differs also by having three instead of two gonostylar megasetae

beyond the apical tooth. In *C. anae* the three apical megasetae are stout and close together, in *C. subsaccata* the two apical megasetae are very slender and wide apart. There is a third species, *C. primoriensis*, in which the apical part of the gonostylus is similar to *C. anae* and *C. subsaccata*, especially the former, by having the apical tooth slightly shifted and by having three megasetae apically beyond it. *Corynptera primoriensis* differs from *C. anae* by having the apico-ventral part of the gonostylus strongly impressed. There are many *Corynoptera* in which one of the apical megasetae may in mounts harbour outside the lateral outline of the apical tooth, but in these species the megasetae are always ventral in position in relation to the apical tooth, similar to the ventralmost one in Figs. 64 C, D.

Distribution. **Germany** (Heller & Mohrig 1992), **Netherlands** (Heller & Menzel 2004), **Sweden** (Heller & Menzel 2004, Heller *et al*. 2009).

Remarks. The type localities and the repartition of the type specimens to the different localities were not correctly given in the original description. The locus typicus, Hasenmoor, is not a part of Kiel, but a village in southern Schleswig-Holstein near Bad Bramstedt, and the paratypes with date 18.vii.1989 come from Blockshagen near Kiel.

Corynoptera subsaccata Mohrig & Krivosheina, 1982

Figs. 65 A, B

Corynoptera subsaccata Mohrig & Krivosheina, in Mohrig *et al.*, 1982: 180.

Material studied. 1 male, **RUSSIA**, **Primorsk region**, Ussuriysk Nature Reserve, mixed forest, sweep-net, 24.vi.1969, Krivoshapov (holotype, in PWMP).

Description. See Mohrig *et al.* (1982); for hypopygium, see Figs. 65 A and B.

Discussion. Only the holotype male is known of *Corynoptera subsaccata*. *C. subsaccata* resembles *C. anae*. For further discussion and distinguishing characters, see under the latter.

Distribution. **Russia, Primorsk region** (Mohrig *et al.* 1982)

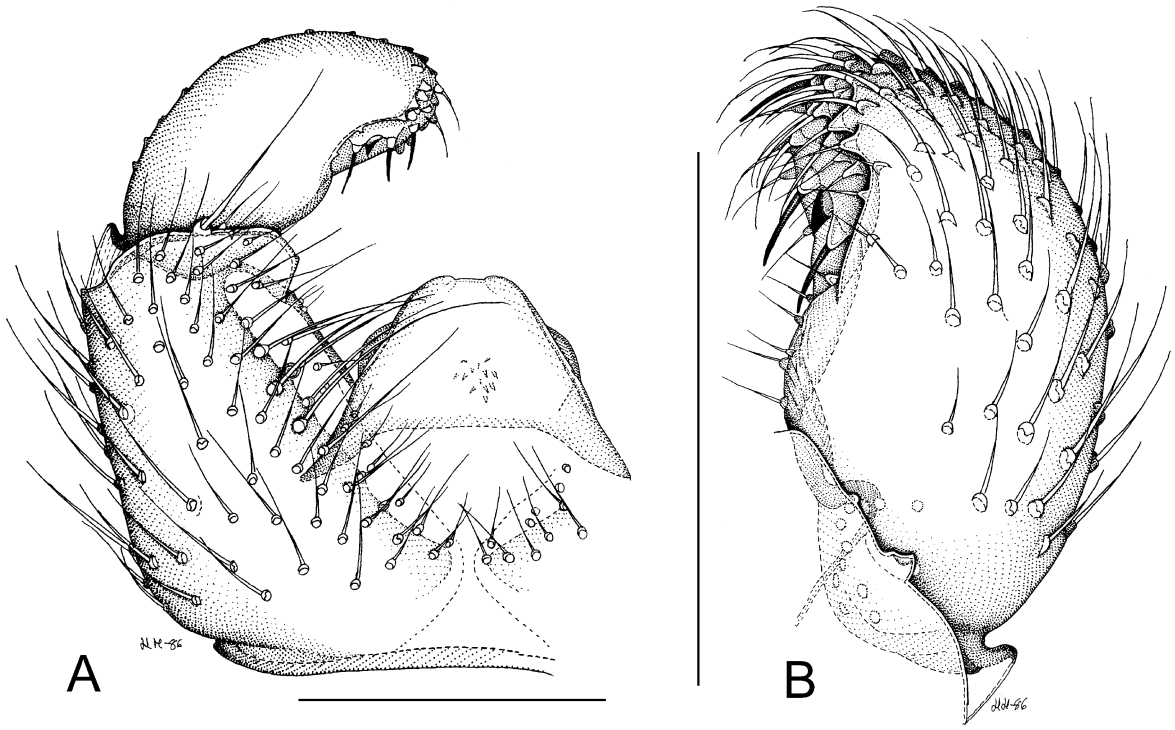

FIGURE 65. *Corynoptera subsaccata* Mohrig & Krivosheina (holotype). **A.** Part of hypopygium, ventral view (aedeagal apodeme omitted). **B.** Gonostylus, ventral view. Scale 0.1 mm.

***Corynoptera inexspectata* Tuomikoski, 1960**
Figs. 66 A–E

Corynoptera inexspectata Tuomikoski, 1960: 58.

Material studied. 1 male, **FINLAND**, Ab, Vihti, Vihtijärvi, 18.viii.1959, R. Tuomikoski (lectotype, hereby designated to stabilize the name of the species, in MZH); 2 males, N, Helsinki, Vestersundom, light trap, 18.ix.1958, R. Tuomikoski (paralectotypes, in MZH); 1 male, Ab, Vihti, Vihtijärvi, 11–19.vii.1959, R. Tuomikoski (in MZH); 2 males, Ab, Parainen, Lapplahti, 6.viii.1967, P.T. Lehtinen (in MZH); 1 male, Ta, Jämsä, Juokslahti (687:41), 7.viii.1986, J. Tuiskunen (in MZH); 1 male, Ta, Urjala, Kivijärvi Nature Reserve, Kalkkimäki (60°59'N 23°26'E = 6770:308), grove, Malaise trap, 3.viii–15.ix.2003, J. Salmela & O. Härmä (in MZH); 2 males, same data but 6.vii–3.viii.2003 (in MZH); 1 male, Ta, Lammi, Kotinen Nature Reserve, aspen, Malaise trap, 16.vi–22.vii.2004, I. Yakovlev (in MZH); 7 males, Oa, Ilmajoki, Kivistönmäki, Malaise trap, 12.vii–6.ix.2003, J. Salmela (in MZH); 1 male, Oa, Kauhajoki, Kauhaneva (6910078:3261767), bog, Malaise trap, 13.vii–18.viii.2003, J. Salmela (in MZH); 2 males, Sb, Kangaslampi, forest, Malaise trap, 17–29.vii.2004, N. Laurenne (in MZH); 3 males, same data but 19–28.viii.2006 (in MZH); 1 male, Kb: Ilomantsi, Maitopuro stream, 7 km N Kivilahti, 63.01°N 30.30°E, 110 m, grassy, young birch forest, sweep-net, 9.vi.2004, M. Jaschhof (in MZH) 1 male, Kb, Lieksa, Toivaanjärvi (704:65), 9.viii.1986 (in MZH); 1 male, Kb, Lieksa, Koivusuo Strict Nature Reserve, spruce/birch/aspen forest, Malaise trap, 16.vi–15.vii.2004, M. Jaschhof (no. 6282 in PKHH); 2 males, Ks, Kuusamo, Merenoja (7364088:3605383), by a brook, 1.vii–3.viii.2005, J. Salmela (in MZH); 1 male, Obb, Tervola, Liljalaki (7352877:3414520), 90 m, by a spring, Malaise trap, 1–28.viii.2004, J. Salmela (in MZH); 1 male, KemL, Kittilä, Pallastunturi, 12.vii.1964, R. Tuomikoski (in MZH); 1 male, **GEORGIA**, Batumi Botanical Garden, sieving, 20.v.1987, P. Vilkamaa (in MZH); 1 male, **GERMANY**, BW, Bad Buchau, Federsee, Malaise trap, 5–24.v.2003, D. Doczkal (no. 2274 in ZSMC); 1 male, BW, Belchen, Malaise trap, 7–28.v.2003, D. Doczkal (no. 5037 in PKHH); 5 males, BW, Malsch, Heckelbachklamm, Malaise trap, 3–17.v.2003, D. Doczkal (no. 4920, 4921, 4923 in PKHH, no. 122 in PDDG, no. 99 in PASS); 1 male, BW, Todtnau, Feldberg Nature Reserve, Immisberg, SW forest border, Malaise trap, 8–30.v.2003, D. Doczkal (no. 4954 in PKHH); 1 male, BW, Todtnau, Feldberg Nature Reserve, summit, Malaise trap, 8–30.v.2003, D. Doczkal (no. 5179 in PKHH); 1 male, **ITALY**, Verona, Malcesine, 100–600 m, sweep-net, 14.vii.1986, H. Hippa (in MZH); 1 male, **RUSSIA**, **Karelia**, Kivach, *Populus* forest, window trap, 15–17.vii.1987, Ye. Yakovlev (in MZH); 3 males, same data as previous but 28–30.vii.1987 (in MZH); 1 male, same data again but 6–8.viii.1987 (in MZH); 1 male, **Krasnodar region**, Sochi, Adler-Krasnaya Polyana road, sweep-net, 8.x.1988, P. Vilkamaa (in MZH); 1 male, Krasnaya Polyana, 15.v.1967, Mamaev (no. 2495 in PWMP); 1 male, same data but 18.v.1967 (no. 2496 in PWMP); 2 males, **SLOVAKIA**, Lipovec, beech forest, sweep-net, 3.viii.2007, K. Heller (no 5669, 5670 in PKHH); 2 males, **SWEDEN**, Ån, Örnsköldsvik, Skuleskogen, Långrå, brook ravine in mixed forest, 63º05.323'N 18º29.903'E, 24.vii–12.ix.2005, Swedish Malaise Trap Project (in SMNH); 1 male, same data as previous but 28.viii–1.x.2003 (no. 1269 in SMNH) and 5 males, same data again but 9–23.viii.2004 (no. 1203–1207 in SMNH); 2 males, Dr, Ludvika, Gonäs, garden, Malaise trap, 16–27.vii.1999, K.D. Hilger (no. 3203–3204 in PKHH).

Description. see Tuomikoski (1960); for apical part of front tibia, see Fig. 66 A, for hypopygium, see Figs. 66 B–E.

Discussion. *Corynoptera inexspectata* was described from five males from southern Finland (Tuomikoski 1960). We have found three of these males in the collections of MZH.

Corynoptera inexspectata together with *C. grothae*, *C. saetistyla* and *C. trichistylis* make a group of very similar species which in many cases may be difficult to distinguish. The group is characterized by the following characters: 1) the vestiture in the front tibial organ is at least partly in a transverse row, 2) the gonostylus is slightly to strongly inflated, 3) the apical tooth of the gonostylus is short, from half the length of the gonostylar megasetae to very small, not longer than the width of a megaseta, 4) the number of the gonostylar megasetae is four, 5) the gonostylar megasetae are long and slender, sometimes difficult to identify among the long subapical gonostylar setae, and 6) there is a finger-like process dorsally on the tegmen. *Corynoptera saetistyla* is distinguished from the others by its broadly oval form of gonostylus and a dense, strong and dark setosity of the gonocoxa. The three other species are very similar. *Corynoptera trichistylis* differs by having its gonostylus broadest on its apical half, then narrowed towards apex, whereas *C. inexspectata* and *C. grothae* have their gonostylus broadest on the basal half.

Corynoptera grothae can be distinguished from *C. inexspectata* by being larger, by having shorter flagellomeres, by having the gonostylus more densely setose, by having relatively shorter and stouter gonostylar megasetae, by having a broader tegmen, and by having the coxal setae pale, not dark, and by having the vestiture of the tibial organ less robust and in a less distinct row with many scattered elements. *Corynoptera fimbriata*, *C. secretas*, *C. sinedens* and *C. sphaerula* resemble all the above species, but lack the apical tooth in their gonostylus. For further discussion, see under *C. fimbriata*.

Distribution. **Czech Republic** (Rudzinski 1994b), **Finland** (Tuomikoski 1960), **Georgia** (this study), **Germany** (Hennicke *et al*. 1997, Hövemeyer 1997, 1992, Rudzinski 1992a), **Great Britain** (Menzel *et al*. 2006), **Italy** (this study), **Russia, Karelia** and **Krasnodar region** (this study), **Slovakia** (this study), **Sweden** (Heller *et al.* 2009).

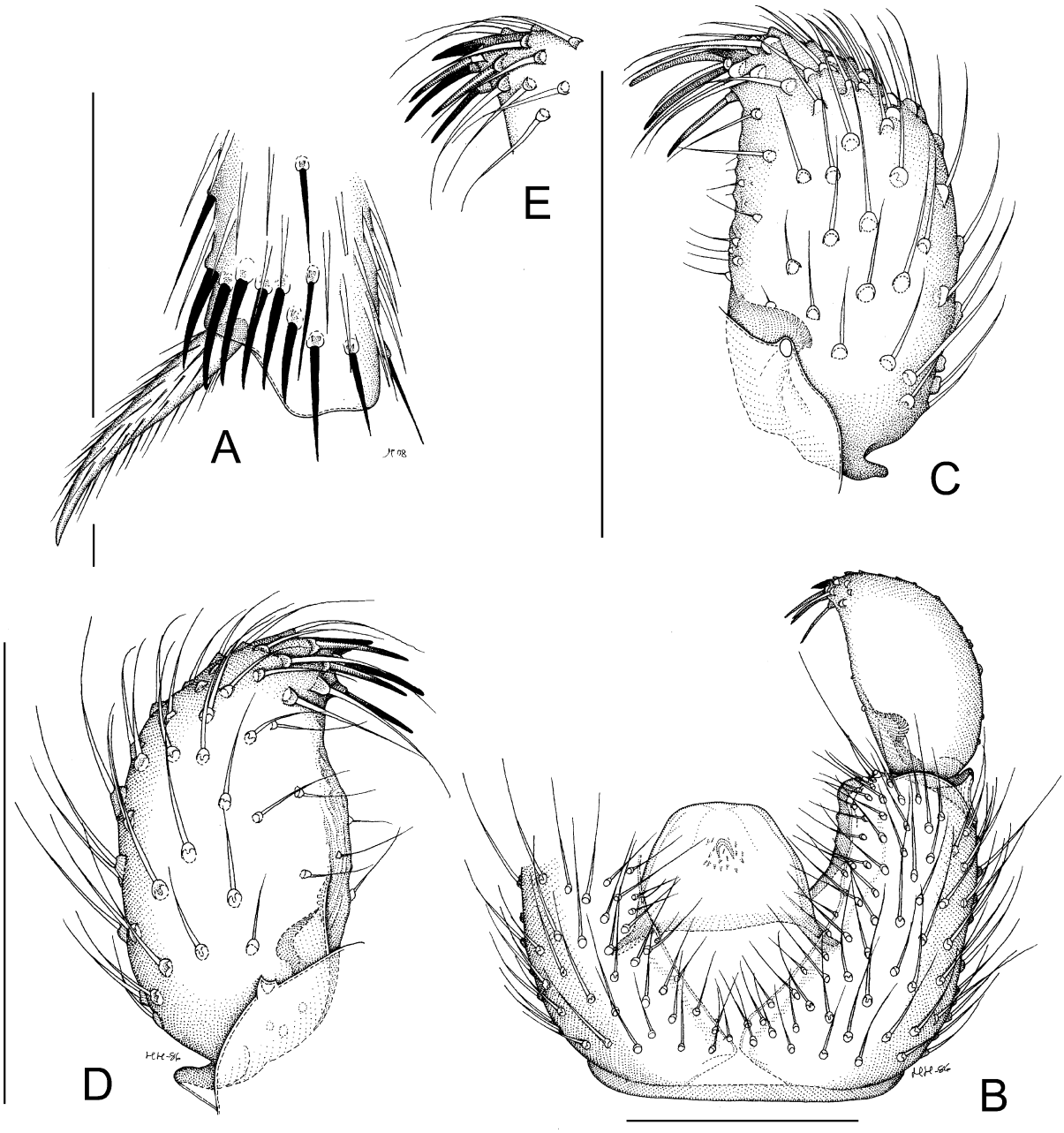

FIGURE 66. *Corynoptera inexspectata* Tuomikoski (from Finland). **A.** Apical part of front tibia, prolateral view. **B.** Part of hypopygium, ventral view (aedeagal apodeme omitted). **C, D.** Gonostylus, ventral view. **E.** Apical part of gonostylus, ventral view. Scale 0.1 mm.

***Corynoptera trichistylis* sp. n.**
Figs. 67 A, B

Material studied. Holotype male. **CANADA**, **British Columbia**, Vancouver Island, Upper Carmanah Valley, forest floor, Malaise trap, 30.vii.1991, N. Winchester (in CNC). *Paratypes*. 3 males, same data as holotype (in MZH); 1 male, same data as previous but 21.vi–3.vii.1991 (in CNC); 1 male, same data again but 12–27.viii.1991 (in MZH).

Description. Male. **Head**. Brown, maxillary palpus very pale brown, antenna slightly darker than face. Eye bridge 3 facets wide. Face with 8–9 scattered dark longer and shorter setae. Clypeus non-setose or with 1 dark seta. Maxillary palpus with 3 palpomeres; palpomere 1 longer than palpomere 3, palpomere 2 shortest; palpomere 1 with one long sharp seta, with a dorsal patch of sensilla; palpomere 2 with 1 long sharp seta and 2–3 shorter truncate setae, palpomere 3 with 5–6 short truncate setae. Antennal flagellomere 4 2.8–3.1 times as long as wide, the neck shorter than the width of flagellomere, the longest setae longer than the width of flagellomere. **Thorax**. Unicolorous brown, setae dark. Anterior pronotum with 3–4 setae. Episternum 1 with 5–7 setae. **Wing**. Length 1.7–1.9 mm. Width/length 0.45. R1/R 0.80–0.90. c/w 0.65–0.75. r-m and bM subequal in length or bM longer, r-m/bM 1.0–1.25, both r-m and bM non-setose. Haltere pale brown. **Legs**. Yellow. Front tibial organ with dark and fine vestiture, forming a comb-like row with a few scattered elements. Front tibial spur slightly longer than the tibial width. **Abdomen**. Brown, paler than thorax. Setae dark. **Hypopygium,** Figs. 67 A, B. Brown, paler than abdomen, stylus darker than gonocoxa. Gonocoxa longer than gonostylus. The ventral setosity of gonocoxa sparse, the setae of the mesial margin elongated. Gonostylus tumid, the mesial side not impressed; the setosity sparse, apicomesially with a few elongated setae; with an apical tooth, with 4 megasetae, the megasetae subequal in size, straight or slightly curved. Tegmen simple, with a short dorsal finger-like process.

Discussion. Corynoptera trichistylis is similar to *C. grothae, C. inexspectata* and *C. saetistyla*. For further discussion and distinguishing characters see under *C. inexspectata*.

Etymology. The name is derived from the Greek word *trichos,* hair**,** and the Greek *stylos* **(**Latin *stylus*), style, referring to the possession of a more richly setose gonostylus when compared with the similar *Corynoptera inexspectata*.

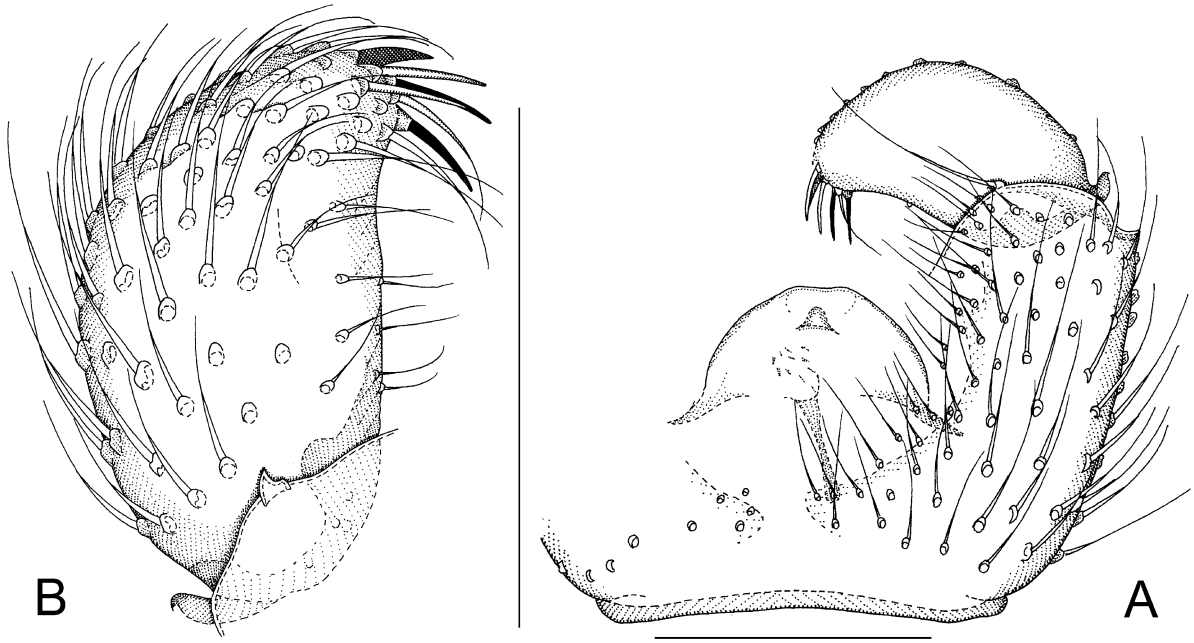

FIGURE 67. *Corynoptera trichistylis* sp. n. (holotype). **A.** Part of hypopygium, ventral view. **B.** Gonostylus, ventral view. Scale 0.1 mm.

***Corynoptera sinedens* sp. n.**
Figs. 68 A, B, C

Material studied. *Holotype male*. **JAPAN**, Kyushu, Kagoshima Pref., Mt. Kinpou near Kumamoto, sclerophyll for-

est, 600 m, sweep-net, 18.ix.1995, M. Jaschhof (in SDEI). *Paratypes*. 1 male, Kyushu, Oita Pref., Taketa, sclerophyll forest with bamboo, sweep-net, 13.x.1995, M. Jaschhof (in SDEI); 4 males, Honshu, Osaka Pref., Mino, mixed forest (sclerophyll plants and *Cryptomeria japonica*), sweep-net, 29.ix.1995, M. Jaschhof (1 in SDEI, 3 in KUEC).

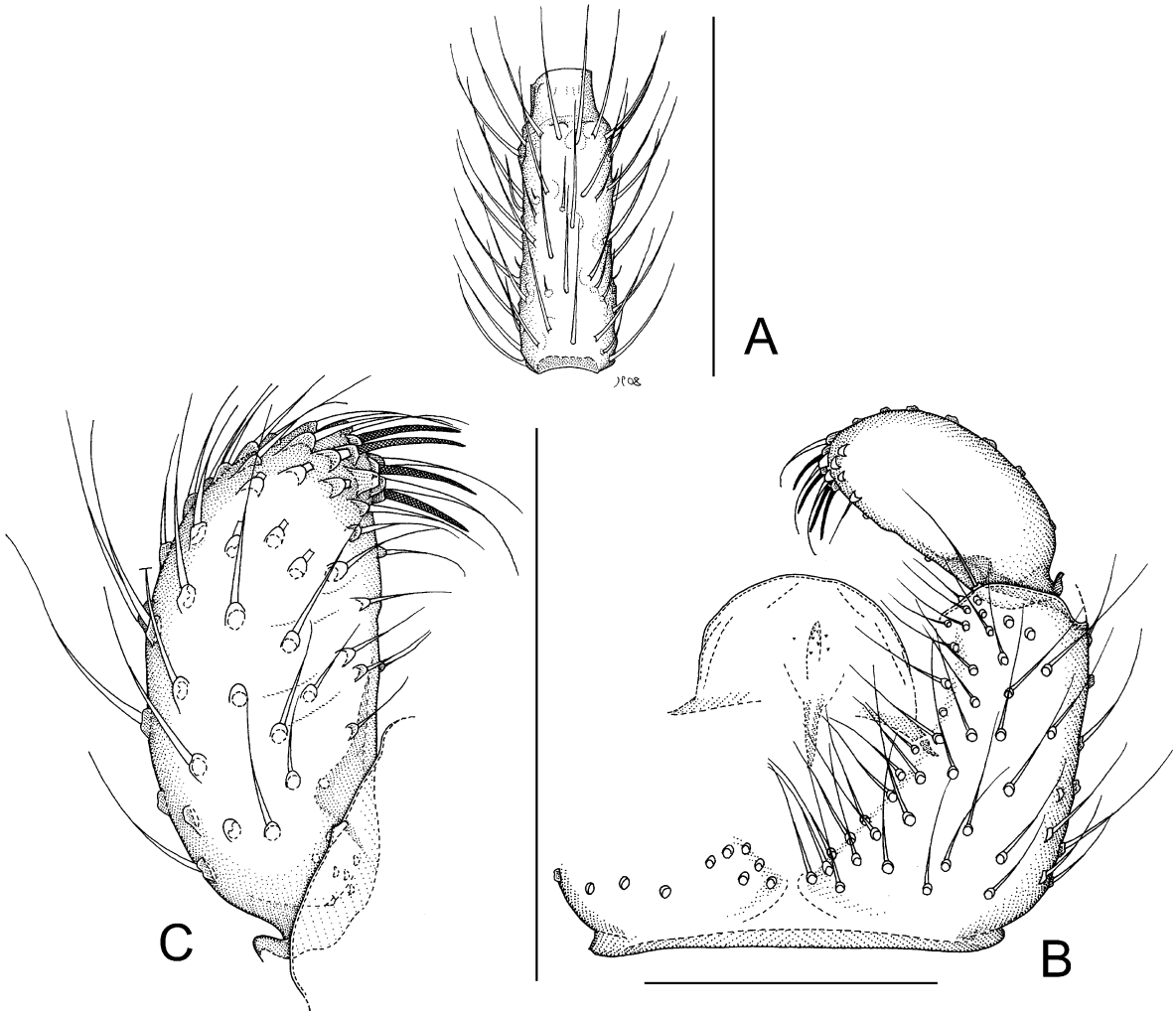

FIGURE 68. *Corynoptera sinedens* sp. n. (holotype). **A.**.Antennal flagellomere 4. **B.** Part of hypopygium, ventral view. **C.** Gonostylus, ventral view. Scale 0.1 mm.

Description. Male. **Head**. Brown, maxillary palpus very pale brown, antenna concolorous with face. Eye bridge 3 facets wide. Face with 7–10 scattered dark longer and shorter setae. Clypeus with 1 dark seta. Maxillary palpus with 3 palpomeres; palpomere 1 longer than palpomere 3, palpomere 2 shortest; palpomere 1 with one long sharp seta, with a dorsal patch of sensilla; palpomere 2 with 1 long sharp seta and 2–3 shorter truncate setae, palpomere 3 with 3–4 short truncate setae. Antennal flagellomere 4, Fig. 68 A, 2.4–2.9 times as long as wide, the neck shorter than the width of flagellomere, the longest setae slightly shorter than the width of flagellomere. **Thorax**. Yellowish brown, setae dark. Anterior pronotum with 2–4 setae. Episternum 1 with 3–6 setae. **Wing**. Length 1.1–1.2 mm. Width/length 0.45. R1/R 0.70–0.75. c/w 0.70–0.75. r-m and bM subequal in length, r-m/bM 1.0, both r-m and bM non-setose. Haltere pale brown. **Legs**.Yellow. Front tibial organ with dark vestiture, forming a comb-like row with a few scattered elements. Front tibial spur not well seen in the specimens studied. **Abdomen**. Yellowish brown, paler than thorax. Setae dark. **Hypopygium,** Figs. 68 B, C. Brown, paler than abdomen. Gonocoxaslightly longer than gonostylus. The ventral setosity of gonocoxa sparse, many setae at the apical part of the mesial margin greatly elongated. Gonostylus elongated, the mesial side slightly impressed on apical third; the setosity sparse, api-

comesially with a few elongated setae; without an apical tooth, with 4 megasetae, the megasetae subequal in size, slender, almost straight. Tegmen roundish apically, with a dorsal finger-like process.

Discussion. *Corynoptera sinedens* is very similar to *C. novexa* Rudzinski, 2008 from Taiwan, but differs according to the original description by having longer antennal flagellomeres and a slightly broader apex of tegmen. *Corynoptera sinedens* is also similar to *C. fimbriata* from which it is distinguished by a less inflated gonostylus and shorter gonostylar megasetae. These three species are similar to *C. grothae* and *C. inexspectata* but differ by lacking an apical tooth on the gonostylus. They are also similar to *C. sphaerula* but are distinguished by the elongated, not nearly spherical gonostylus. For further discussion, see under *C. inexspectata*.

Etymology. The name is composed of the Latin words *sine*, without and *dens*, tooth, referring to the lack of the apical tooth on the gonostylus.

Corynoptera grothae Mohrig & Menzel, 1990

Figs. 69 A–D

Corynoptera grothae Mohrig & Menzel, in Menzel *et al.* 1990: 383.
Corynoptera pinusia Komarova, 1998: 1202. Synonymy by Menzel and Komarova (in press).

Material studied. 1 male, **CZECH REPUBLIC**, Bohemia, Bilina-Holibka, small pond, 50º31’20’’N 13º49’40’’E, yellow pan trap, 8–9.viii.1998, Barták (in SDEI); 2 males, Bohemia, Bilina-Štipánov, waterside of stream Lutovský, 1 km NW of Štipánov, 380 m, 50º32’00’’N 13°51’30’’E, Malaise trap, 13–28.v.1998, Barták (in SDEI); 1 male, 2 km E Duchcov, 50º36’N 13º43’E, deciduous forest, sweep-net, 29.vii.1992, Barták (in SDEI); 2 males, **GERMANY**, BY, Sonthofen, Hinang, waterfall, sweep-net, 29.v.2004, K. Heller (no. 4167, 4168 in PKHH); 3 males, MV, Greifswald, central region, yellow pan, 6–9.v.1994, W. Mohrig (no. 2506, 2507 in PWMP); 1 male, MV, Grubenhagen near Greifswald, beech/ash/oak forest, 13.v.1988, Menzel (paratype, in SDEI); 1 male, RP, Gönnersdorf, Mäuerchenberg, dry grassland, Malaise trap, 27.vi–4.v.1991, K. Cölln (no. 1872 in PKHH); 1 male, RP, Kirchheimbolanden, Albertskreuz Nature Reserve, Malaise trap, 11.iv–2.v.2002, D. Doczkal (no. 5100 in PKHH); 1 male, ST, Rübeland, Kaltes Tal, meadow, sweep-net, 23.v.2006, K. Heller (no. 4768 in PKHH); 1 male, SH, Heikendorf, Korügen, beech forest, sweep-net, 10.v.1991, K. Heller (no. 398 in PKHH); 2 males, SH, Flensburg, Marienhölzung forest, Malaise trap, 19–26.v.1999 and 14–21.vii.1999, W. Barkemeyer, (no. 3094, 3093 in PKHH); 1 male, SH. Pohnsdorf, beech forest, sweep-net, 6.v.2001, K. Heller (no. 3420 in PKHH); 1 male, SH, Rade, wet meadow, Malaise trap, 12–19.viii.1999, K. Heller (no. 3052); 1 male, SN, Leipzig, Burgaue, 23.vii.1993, sweep-net, (in SDEI); 2 males, **GREECE**, Kerkini mountains, Ramna site, Malaise trap, 14–20.iv.2008 and 16–22.vi.2008, G. Ramel (no. 78 in PGRK and 6882 in PKHH); 2 males, **SLOVAKIA**, Martin, beech/spruce forest, sweep-net, 25.vii.2007, K. Heller (no. 5627, 5628 in PKHH); 2 males, **SWITZERLAND**, ZH, Sihlwald near Zurich, window trap, 23.iv–7.v.1997, K. Schiegg (no. 2743, 2744 in PKHH).

Description. See Menzel *et al.* (1990); for hypopygium, see Figs. 69 C and D.

Discussion. *Corynoptera grothae* was described from the holotype male and a paratype male from Germany and a paratype male from Bulgaria. We have only briefly seen the holotype and confirmed its identity with the material listed above. In our view, the German paratype of *C. grothae*, illustrated in Figs. 70 C, D, actually belongs to *C. saetistyla*. *Corynoptera pinusia* was described from the Altai region, Russia, from the holotype male only and has not been recorded since. According to Menzel and Komarova (pers._omm.) it is a junior synonym of *C. grothae*.

Corynoptera grothae is similar to *C. inexspectata* and *C. saetistyla*. For further discussion and distinguishing characters. See under *C. inexspectata*.

Distribution. **Bulgaria** (Menzel *et al.* 1990), **Czech Republic** (Menzel *et al.* 2000), (Rudzinski 1998, 2000), **Germany** (Heller 1999: as *Cratyna uliginosa* in part), (Heller 2002a, Menzel *et al.* 1990, Rudzinski 2003, 2006, Metzner & Menzel 1996), **Great Britain** (Menzel *et al.* 2006), **Greece** (this study), **Hungary** (Rulik *et al.* 2001), **Russia, Altay region** (Komarova 1998: as *C. pinusia*), **Slovakia** (Rudzinski 2009), **Switzerland** (this study).

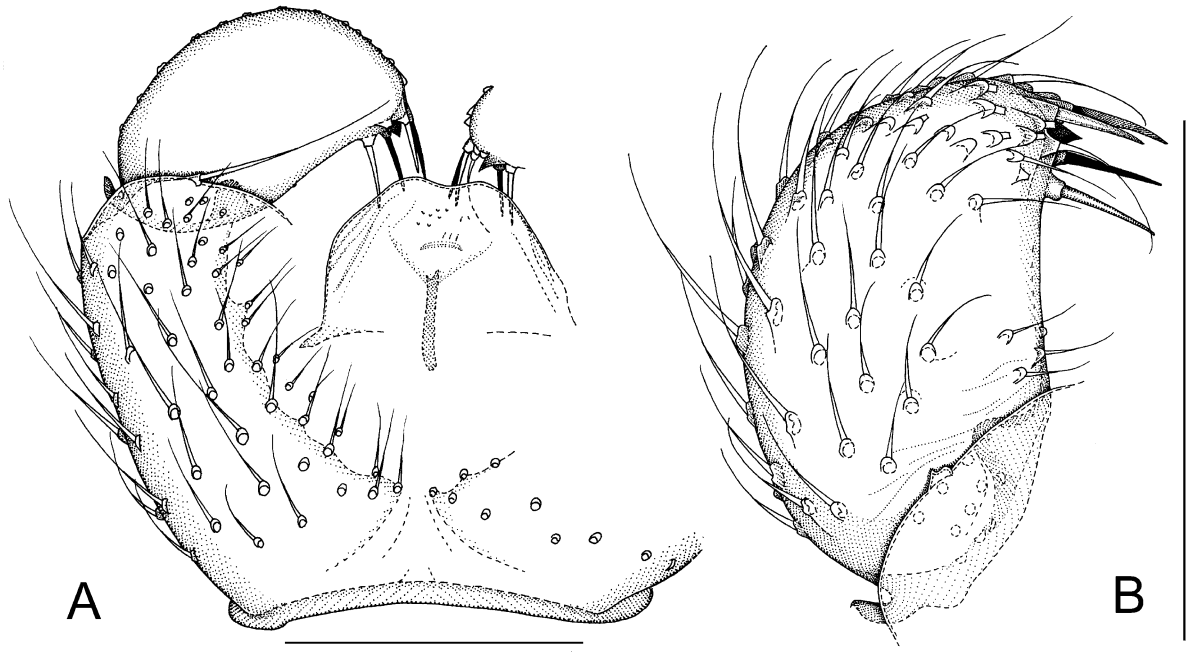

FIGURE 69. *Corynoptera grothae* Mohrig & Menzel (from Germany). **A.** Part of hypopygium, ventral view. **B.** Gonostylus, ventral view. Scale 0.1 mm.

***Corynoptera saetistyla* Mohrig & Krivosheina, 1985**
Figs. 2 B, 70 A–F, 71 A–F

Corynoptera saetistyla Mohrig & Krivosheina, in Mohrig *et al.*, 1985b: 253.
Corynoptera densiseta Mohrig & Menzel, 1990, in Menzel *et al.*, 1990: 280. Synonymy by Menzel and Mohrig (2000: 226).

Material studied. 1 male, **AUSTRIA**, K, Grossglockner High Alpine Road, Piffalpe, mountain meadow, 1300–1450 m, yellow dish, 13–15.vii.1993 (in SDEI); 1 male, S, Grossglockner High Alpine Road, Lärchach, larch/spruce mixed forest, 1750 m, sweep-net, 14.vii.1993, F. Menzel (in SDEI); 1 male, **CANADA**, **Ontario**, Crieff Bog 3 km W Puslinch, 5–12.vi.1987, D. Blades (in SMNH); 2 males, **Quebec**, Lac Ekonomiak, 53º23'N 77º36'W, partly burned coniferous forest, pitfall trap, vii.1990, S. Koponen (in MZH); 1 male, **CZECH REPUBLIC**, Bohemia, Riesengebirge, Mákov, SW Rokytnice near Jizera, 560–580 m, moist mixed beech/ash forest, sweep-net, 21–28.vii.1994, Menzel (in SDEI); 1 male, flooded poplar forest along old dump Osecka 2 km NW Duchcov, 220 m, 50°36'40''N 13°43'30''E, Malaise trap, 23.vii–24.viii.1998, Barták (in SDEI); 1 male, **ESTONIA,** Saaremaa, Viidumäe Nature Reserve 14.vi–17.vii.2002, T. Talvi (in MZH); 1 male, **FINLAND**, 1 male, Ab, Korppoo, Jurmo, planted pine forest, 19.v–29.vi.1969, P.T. Lehtinen (in MZH); 1 male, Kb, Kitee, 12.vii–5.x.1068, S. Koponen (in MZH); 1 male, Ob, Muhos, forest, Malaise trap, 27.vii–5.viii.2005, N. Laurenne (in MZH); 1 male, Oa, Kauhajoki, Kauhaneva, Malaise trap, 13.viii–4.x.2003, J. Salmela (in MZH); 1 male, Ab, Vihti, Vihtijärvi, 13.viii.1961, R. Tuomikoski (in MZH); 1 male, Ka, Vehkalahti, Paijärvi (672:51), 20.vi.1986, J. Tuiskunen (in MZH); 1 male, Tb, Toivakka, Ruostesuo (688:3443), Malaise trap, 1–29.vii.2003, J. Salmela (in MZH); 1 male, same data as previous but 29.vii–30.viii.2004 (in MZH); 1 male, Ks, Kalliovaara, spruce/birch/pine forest, sweep-net, 30.vii.2004, Jaschhof, (no. 6462 in PKHH); 1 male, Ks, Kuusamo, Kouhusuo-Kalliovaara, spruce/birch swamp forest, sweep-net, 2.viii.2004, Jaschhof, (no. 6555 in PKHH); 1 male, same data as previous but Malaise trap, 2–25.viii.2004 (no. 6263 in PKHH); 2 males, Ks, Taivalkoski, Paavonoja (7295643:3565826), by a brook, Malaise trap, 3.vii–1.viii.2004, J. Salmela (in MZH); 1 male, Ob, Pudasjärvi, Lianoja (7250705:3540737), by a brook, Malaise trap, 15.ix.2006, J. Salmela (in MZH); 1 male, Obb, Tervola, Karhukkamaanjänkä SE (7346274:3415780), by a spring, Malaise trap, 1–28.vi.2004 (in MZH); 1 male, Obb, Tervola, Piilola (7347560:3406921), by a spring, Malaise trap, 1.vii–2.viii.2004, J. Salmela (in MZH); 2 males, Obb, Tervola, eutrophic fen, Malaise trap, 28.vi–2.viii.2004, J. Salmela (in MZH); 1 male, Obb, Tervola, Hirviaapa (7347480:3418500), Malaise trap, 28.vi–2.viii.2004, J. Salmela (in MZH); 2 males, Li, Inari, Tsarmitunturi (7623483:3555297), Malaise trap, 3.vi–6.vii.2004, J. Salmela

(in MZH); 1 male, same data as previous but 6.vii–1.viii. (in MZH); 1 male, same data again but 1–27.viii. (in MZH); 2 males, Le, Kilpisjärvi, SW-slope of Saana (7675141:3253341), calcareous grove, Malaise trap, 15.vii–10.viii.2006, Penttinen & Yakovlev (in MZH); 5 males, **GERMANY**, BW, Bad Buchau, Federsee, Malaise trap, 24.v–14.vii.2003, D. Doczkal (no. 4499 in PKHH, no. 14 in PDDG, no. 7 in PASS, no. 2160, 2161 in ZMSC); 1 male, BW, Bad Rotenfels, avalanche forest Birkenkopf avalanche forest, Malaise trap, 21.vi–12.vii.2003, D. Doczkal (no. 4663 in PKHH); 3 males, BW, Ulm, spruce forest, dead logs, photoeclector, 26.v–19.vi.1992, M. Buck (no. 3958 in PKHH); same data but 19.vi–10.vii.1992 (no. 3946, 3947 in PKHH); 1 male, MV, Gützkow, meadow at river Peene, exhaustor, 15.v.1993, M. Jaschhof (no. 5393 in PKHH); 1 male, MV, Gützkow, beech forest, sweep-net, 27.v.1995, M. Jaschhof (no. 5284 in PKHH); 1 male, RP, Gönnersdorf, Mäuerchenberg dry grassland, Malaise trap, 1–8.vi.1991, K. Cölln (no. 1880 in PKHH); ST, Rübeland, mixed forest with spruce and maple, sweep-net, 9.vi.2001, K. Heller (no. 3446 in PKHH); 1 male, SH, Frörup mountains, forest, swamp, Malaise trap, 8–15.viii.1997, W. Barkemeyer (no. 2876 in PKHH); 1 male, SH, Heikendorf, garden, Malaise trap, 31.v–6.vi.1997, K. Heller (no. 2363 in PKHH); 1 male, same data as previous but 2–14.vi.1997 (no. 2384 in PKHH); 1 male, SH, Kiel, district Meimersdorf, hedgerow, sweep-net, 26.vii.1993, K. Heller (no. 420 in PKHH); 1 male, SH, Kremper Au stream, photoeclector, 9.viii.1989, J. Lietz (no. 735 in PKHH); 1 male, 2 females, SH, Meggerdorf, Alte Sorge Nature Reserve, wet meadow, photoeclector, 1–15.ix.1994, K. Heller, (no. 923–925 in PKHH); 1 male, same data as previous but Malaise trap, 17–31.v.1996 (no. 1483 in PKHH); 1 male, same data again but 17.viii–2.ix.1996 (no. 1738 in PKHH); 1 male, same data but 2–16.ix.1996 (no. 1756 in PKHH); 1 male, SH, Rade, wet meadow, Malaise trap, 13–20.v.1999, K. Heller (no. 2926); 1 male, same data as previous but small pond, photoeclector, 19.viii–2.ix.1999 (no. 3050 in PKHH); 1 male, same data again but 2–16.ix.1999 (no. 3062 in PKHH); 5 males, SH, Stolpe lake, meadow, photoeclector, 25.viii–8.ix.1992, J. Grabow (no. 449–452 in PKHH, no. 453 in PWMP); 1 male, SH, Trent near Plön, bog, Malaise trap, 4–11.vi.1994, C. Kassebeer (no. 722 in PKHH); 1 male, SH, Wankendorf, pasture, photoeclector, 6–20.vi.1989, R. Hingst (no. 170 in PKHH); 1 male, same data as previous but swampy alder forest, 27.vii–10.viii.1993 (no. 615 in PKHH); 1 male, ST, Thale, Roßtrappe, mixed forest, sweep-net, 26.v.2006, K. Heller (no. 4757 in PKHH);1 male, TH, Friedrichroda, beech forest, sweep-net, 21.vi.1996, K. Heller (1524 in PKHH); 1 male, TH, Seeberg near Gotha, pine forest, southern slope, 28.v.1988, F. Menzel (holotype of *C. densiseta*, in PWMP); 1 male, same data as previous (paratype of *C. densiseta*, in SDEI); 1 male, TH, Thüringer Wald, Silbachtal near Erlau, moist field, 24.v.1989, Menzel (in SDEI); 1 male, **GREAT BRITAIN**, Oxon, Wytham Woods by Wytham (NW of Oxford), deciduous forest beech/oak/maple/chestnut, sweep-net, 21.viii.2002, F. Menzel (in SDEI); 3 males, **LUXEMBOURG**, Waldbredimus, beech forest, sweep-net, 3.viii.2003, K. Heller (no. 4037, 4040, 4043); 1 male, **NORWAY**, Finnmark, Vardsø, birch forest with shrubs, sweep-net, 11.vii.1994, M. Jaschhof (no. 2503 in PWMP); 1 male, same data as previous but yellow pan trap, 9–12.vii.2004 (no. 2504 in PWMP); 1 male, **RUSSIA**, **Amur region**, Seya Nature Reserve, mixed forest mainly with birch, sweep-net, 22.vi.1982, N. Krivosheina (holotype, no. 2481 in PWMP); 1 male, same data as previous (paratype, no. 2482 in PWMP); 2 males, **Vologda region**, Kadnikov, mixed forest, sweep-net, 8.vii.1962, N. Krivosheina (no. 2179 in PWMP); 2 males, **Adygeya Republic**, Guzeripl, forest at shore of River Belaya, sweep-net, 30.vii.1994, W. Mohrig (no. 2550, 2551 in PWMP); 4 males, **Polar Ural**, Krasnyi Kamen, *Aconitum* grove, 230 m, pitfall trap, 3–17.vii.1994, S. Koponen (in MZH); 1 male, **Primorsk region**, Krounovka, river Medveditsa, 40 km SW Ussuriysk, 43º03'N 131º15'E, 250 m, 2–6.viii.1993, C. Kutzscher (in SDEI); 2 males, **Krasnodar region**, Medvety Vorota, 19.vi.1967, B. Mamaev (no. 2492, 2493 in PWMP); 1 male, same data as previous, but 1.vii.1967 (no. 2494 in PWMP); 2 males, **SLOVENIA**, Bohinjska Bistrica, Triglav National Park, tree limit, sweep-net, ix.1996, F. Röschmann (no. 2543, 2544 in PWMP); 2 males, **SWEDEN**, Bo, Stenungsund, Ödsmål, Hällsberget, deciduous forest in southern slope, Malaise trap, 30.vii–11.viii.2004, Swedish Malaise Trap Project (no. 938, 948 in SMNH); 1 male, Dr, Ludvika, Gonäs, garden, Malaise trap, 1–5.vii.1999, K.D. Hilger (no. 3213 in PKHH); 3 males, same data as previous but 16–27.vii.2000 (no. 3393–3395 in PKHH); 1 male, Ha, Halmstad, Gårdshult, Buskastycket, moist hay meadow, Malaise trap, 25.v–8.vi.2005, Swedish Malaise Trap Project (no. 6704 in PKHH); 6 males, Pi, Arjeplog, L. Sädvajaure (northern end), 500 m, subalpine birch forest, Malaise trap, 7.vii–12.viii.2005, M. & C. Jaschhof (no. 5877, 5878, 6016, 6017 in PKHH, 1005, 1006 in SMNH); 2 males, Pi, Arjeplog, Kungsleden SW Jäkkvik, 350 m, subalpine birch forest, Malaise trap, 7–12.viii.2005, M. & C. Jaschhof (no. 5888 in PKHH, 1018 in SMNH); 1 male, Sk, Klippan, Skäralid, valley below northern Lierna, rich beech forest, Malaise trap, 14.vii–6.viii.2004, Swedish Malaise Trap Project (no. 6744 in PKHH); 2 males, Sm, Nybro, Bäckebo, Grytsjöns Nature Reserve, old moist hay-making meadow, Malaise trap, 13–24.viii.2005, Swedish Malaise Trap Project (no. 5964 in PKHH, 1104 in SMNH); 1 male, To, Kiruna, Nikkaluokta, young birch/willow forest along stream, Malaise trap 14.vii–5.viii.2005, M. Jaschhof (no. 5946 in PKHH); 1 male, Ög, Ödeshög, Omberg, Storpissan, old Norway

spruce wood, Malaise trap, 28.v–5.vii.2005, Swedish Malaise Trap Project (no. 2193 in SMNH); 24 males, To, Kiruna, Abisko, 68˚20'N 18˚52'E, 440 m, northern slope, margin of birch forest, white dish, 13–17.vii.1991, M. v. Tschirnhaus (in SDEI, no. 2509–2531 in PWMP); 1 male, **SWITZERLAND**, ZH, Sihlwald near Zurich, window trap, 24.v–5. vi.1996, K. Schiegg (no. 1801 in PKHH); 1 male, same data as previous but photeclector, 21.vi–18.viii.1997 (no. 2539 in PKHH);1 male, **UKRAINE**, Zakarpatye near Rakhiv, sweep-net, 16.vi.1966, B. Mamaev (no. 2491 in PWMP).

Description. See Mohrig *et al.* (1985b) and Menzel *et al.* (1990); for antennal flagellomere 4, see Fig. 70 A, for wing, see Fig. 2 B, for apical part of front tibia, see Fig. 70 B, for hypopygium, see Figs. 70 C–F and 71 A–F.

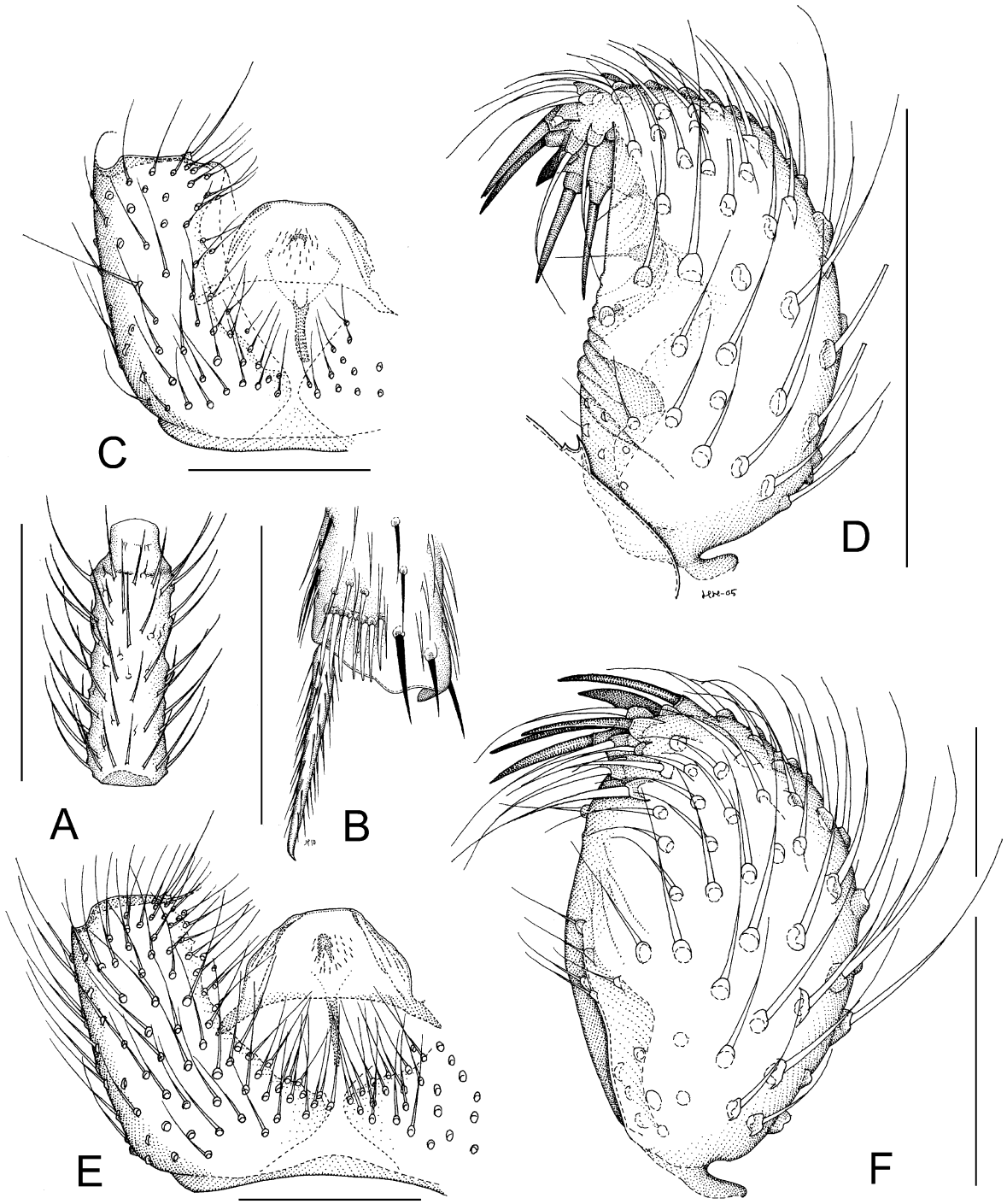

FIGURE 70. *Corynoptera saetistyla* Mohrig & Krivosheina (A from Germany, C, D paratype of *C. grothae*, E, F paratype of *C. densiseta* Mohrig & Menzel). **A.** Antennal flagellomere 4. **B.** Apical part of front tibia, prolateral view. **C, E.** Part of hypopygium, ventral view (aedeagal apodeme omitted in). **D, F.** Gonostylus, ventral view. Scale 0.1 mm.

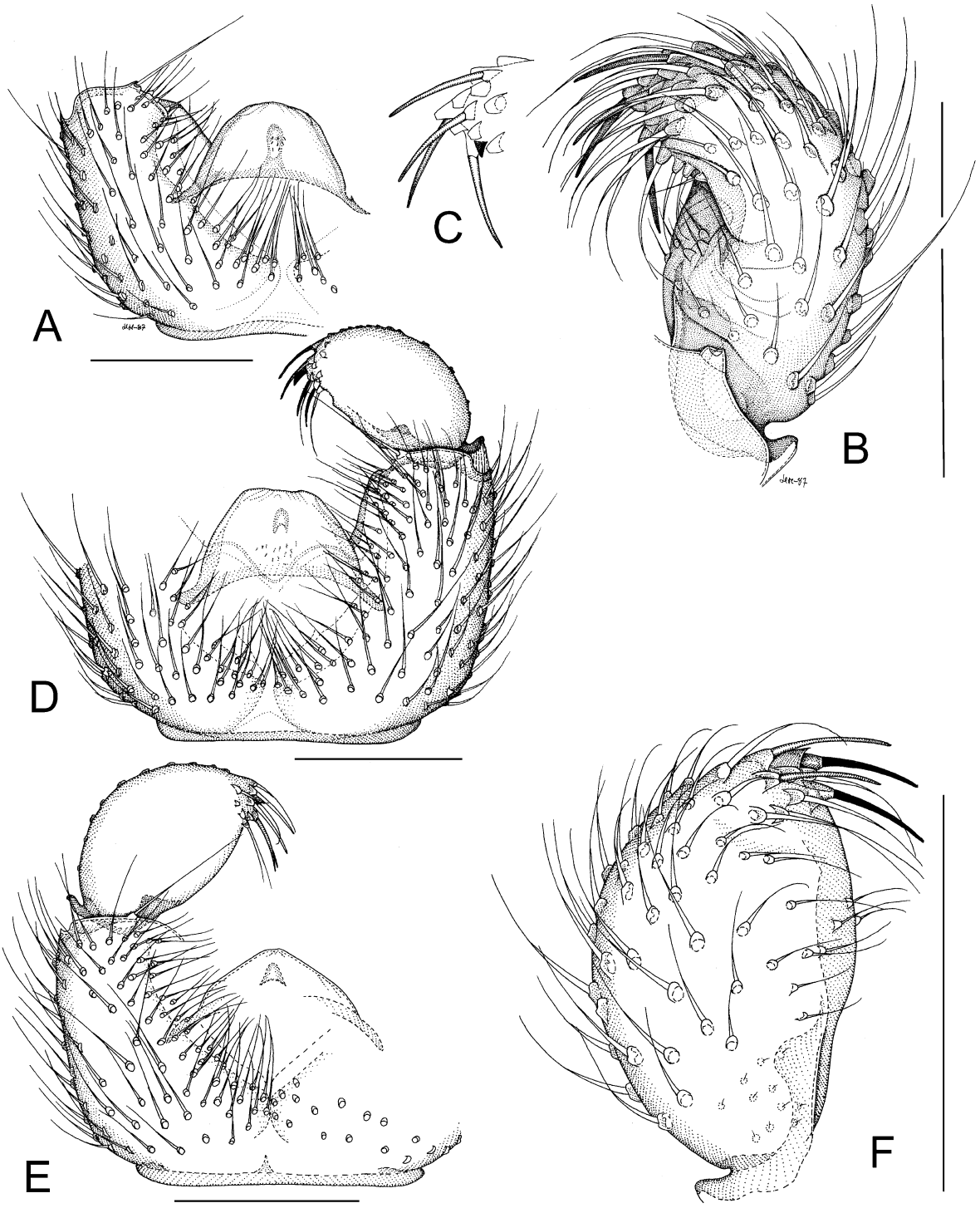

FIGURE 71. *Corynoptera saetistyla* Mohrig & Krivosheina (A, B, C paratype, D from Finland, E, F from Quebec). **A, D, E.** Part of hypopygium, ventral view. **B, F.** Gonostylus, ventral view. **C.** Apical part of gonostylus, ventral view. Scale 0.1 mm.

Discussion. Having studied the holotypes of *Corynoptera saetistyla* from the Amur region, Russia, and *C. densiseta* from Germany we agree with Menzel and Mohrig (2000) regarding their synonymy. One of the paratypes of *C. grothae*, collected from the type locality in Germany (Figs. 70 C, D), belongs in our opinion to *C. saetistyla*.

Corynoptera saetistyla is similar to *C. grothae*, *C. inexspectata* and *C. saetistyla*. For further discussion and distinguishing characters, see under *C. inexspectata*. Specimens of *C. saetistyla* from northern Sweden show a tendency towards a nearly complete reduction of the apical tooth of gonostylus but are otherwise indistinguishable from the others.

Distribution. **Austria** (Menzel 2001), (Röschmann & Mohrig 1993, Rudzinski 1994d: as *C. densiseta*), **Canada** (this study), **Czech Republic** (Menzel *et al.* 2000, Rudzinski 1994b), **Estonia** (this study), **Finland** (Salmela & Vilkamaa 2005), **Germany** (Heller 1998: as *C. melanochaeta*), (Heller 1999: as *Cratyna uliginosa*), (Heller 1996, 2002a, Hennicke *et al.* 1997, Menzel *et al.* 2002, 2003, Hövemeyer 1996b, Rudzinski 1995, 2003, 2006), **Great Britain** (Laurence 1994: as *C. densiseta*), (Menzel *et al.* 2006, Smith & Menzel 2007), **Hungary** (Rulik *et al.* 2001), **Ireland** (Menzel *et al.* 2006), **Italy** (Röschmann & Mohrig 1993), **Korea**, (Mohrig Menzel & Kozanek 1992), **Luxembourg** (Heller & Menzel 2004), **Netherlands** (Mohrig 1996), **Norway** (this study), **Russia, Amur region** (Mohrig *et al.* 1985b), **Russia, Vologda region, Adygeya Republic, Polar Ural, Primorsk region** and **Krasnodar region** (this study), **Sweden** (Heller & Menzel 2004, Heller *et al.* 2009), **Slovakia** (Rudzinski 2009), **Slovenia** (this study), **Switzerland** (Schiegg *et al.* 1999), **Ukraine** (this study).

***Corynoptera fimbriata* sp. n.**
Figs. 72 A–E

Material studied. Holotype male. **JAPAN**, Shikoku, Kochi Pref., Kochi City, Asakura, Asakura Shrine, dry evergreen deciduous forest, 100 m, sweep-net, 6.xi.1998, M. Jaschhof (in SDEI). *Paratypes*. 1 male, same data as holotype (in SDEI); 1 male, same data again but Asakura, mixed secondary deciduous forest, with *Cryptomeria japonica*, bamboo, 50 m, Malaise trap, 4–11.xi.1998, M. Jaschhof (in KUEC).

Description. Male. **Head**. Brown, maxillary palpus very pale brown, scape and pedicel yellow, antennal flagellum concolorous with face. Eye bridge 3 facets wide. Face with 9–14 scattered dark longer and shorter setae. Clypeus with 1 dark seta. Maxillary palpus with 3 palpomeres; palpomere 1 longer than palpomere 2, palpomere 3 shortest; palpomere 1 with one long sharp seta, with a dorsal patch of sensilla; palpomere 2 with 1 long sharp seta and 2–3 shorter truncate setae, palpomere 3 with 2–3 short truncate setae. Antennal flagellomere 4, Fig. 72 A, 2.3–2.4 times as long as wide, the neck shorter than the width of flagellomere, the longest setae as long as the width of flagellomere. **Thorax**. Scutum pale brown, pleura yellow, setae dark. Anterior pronotum with 2–3 setae. Episternum 1 with 2–5 setae. **Wing**. Length 1.0–1.2 mm. Width/length 0.40–0.45. R1/R 0.55–0.65. c/w 0.75–0.80. r-m and bM subequal in length, r-m/bM 1.00–1.05, both r-m and bM non-setose. Haltere pale brown. **Legs**. Pale yellowish brown. Apical part of front tibia, Fig. 72 B: tibial organ with dark vestiture, forming a loose comb-like row. Front tibial spur slightly longer than the tibial width. **Abdomen**. Pale brown. Setae dark and strong. **Hypopygium,** Figs. 72 C, D, E. Yellow. Gonocoxa longer than gonostylus. The ventral setosity of gonocoxa sparse, setae at the apical part of the mesial margin greatly slightly elongated. Gonostylus oval; the setosity sparse, apicomesially with a few elongated setae; without an apical tooth, with 3–4 megasetae, the megasetae subequal in size, slender, almost straight. Tegmen broader than long, with a dorsal finger-like process.

Discussion. Corynoptera fimbriata is very similar to *C. secretas* Rudzinski, 2008 from Taiwan, but differs according to the original description by having the mesial side of the gonocoxa and the intercoxal area with less dense and longer vestiture and the apex of gonostylus narrower. It is also similar to *C. sinedens* and *C. sphaerula.* For further discussion and distinguishing characters, see under the latter two and also under *C. inexspectata.*

Etymology. The name is Latin, *fimbriata*, fringed, referring to the fringe of hairs on the mesial margin of gonocoxa.

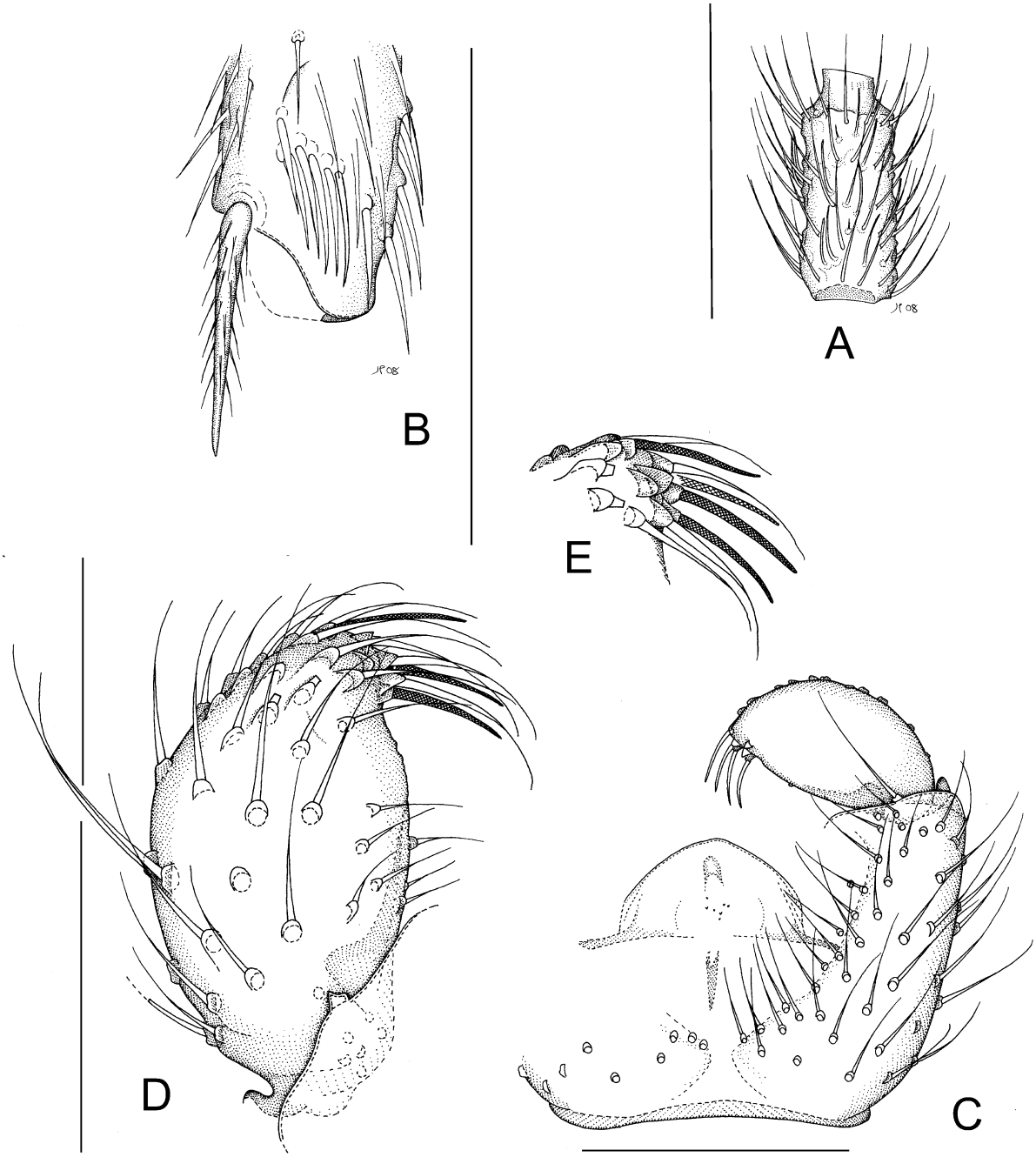

FIGURE 72. *Corynoptera fimbriata* sp. n. (A, B, C, D holotype, E paratype). **A.** Antennal flagellomere 4. **B.** Apical part of front tibia, prolateral view. **C.** Part of hypopygium, ventral view. **D.** Gonostylus, ventral view. **E.** Apex of gonostylus, ventral view. Scale 0.1 mm, for E as D.

***Corynoptera sphaerula* sp. n.**
Figs. 73 A, B

Material studied. *Holotype male*. **JAPAN**, Honshu, Osaka Pref., Mino, mixed forest (sclerophyll plants and *Cryptomeria japonica*), sweep-net, 29.ix.1995, M. Jaschhof (in SDEI). *Paratypes*. 5 males, same data as holotype (2 in SDEI, 3 in KUEC); 1 male, Honshu, Hyogo Pref., Mt. Hyonosen, deciduous forest (*Fagus crenatus* and bamboo), 1200 m, sweep-net, 28.ix.1995, M. Jaschhof & Yagi (in SDEI).

Description. Male. **Head**. Brown, maxillary palpus very pale brown, scape and pedicel yellow, antennal flagellum concolorous with face. Eye bridge 3 facets wide. Face with 9–11 scattered dark longer and shorter setae.

Clypeus with 1 dark seta. Maxillary palpus with 3 palpomeres; palpomeres 1 and 3 subequal in length, palpomere 2 shorter; palpomere 1 with one long sharp seta, with a dorsal patch of sensilla; palpomere 2 with 1 long sharp seta and 3–5 shorter truncate setae, palpomere 3 with 5–6 short truncate setae. Antennal flagellomere 4 1.4–2.1 times as long as wide, the neck shorter than the width of flagellomere, the longest setae slightly shorter than the width of flagellomere. **Thorax**. Scutum brownish, pleura yellow, setae dark. Anterior pronotum with 2–4 setae. Episternum 1 with 4–6 setae. **Wing**. Length 1.1–1.3 mm. Width/length 0.40–0.45. R1/R 0.65–0.85. c/w 0.60–0.75. r-m longer than bM, r-m/bM 1.20–1.55, r-m non-setose or with 1 seta, bM non-setose. Haltere pale brown. **Legs**. Yellow. Front tibial organ with dark vestiture, forming a comb-like row of few elements. Front tibial spur slightly shorter than the tibial width. **Abdomen**. Brown. Setae dark. **Hypopygium,** Figs. 73 A, B. Yellowish. Gonocoxa slightly longer than gonostylus. The ventral setosity of gonocoxa sparse, the setae at the apical part of the mesial margin elongated. Gonostylus spherical; the setosity sparse, apicomesially with a few elongated setae; without an apical tooth, with 3–4 megasetae, the megasetae subequal in size, straight. Tegmen with a dorsal finger-like process.

Discussion. *Corynoptera sphaerula* is similar to *C. fimbriata* and *C. sinedens.* For distinguishing characters, see under *C. sinedens*. For discussion of other similar species, see under *C. inexspectata*.

Etymology. The name is Latin, *sphaerula*, a little ball, referring to the globular gonostylus.

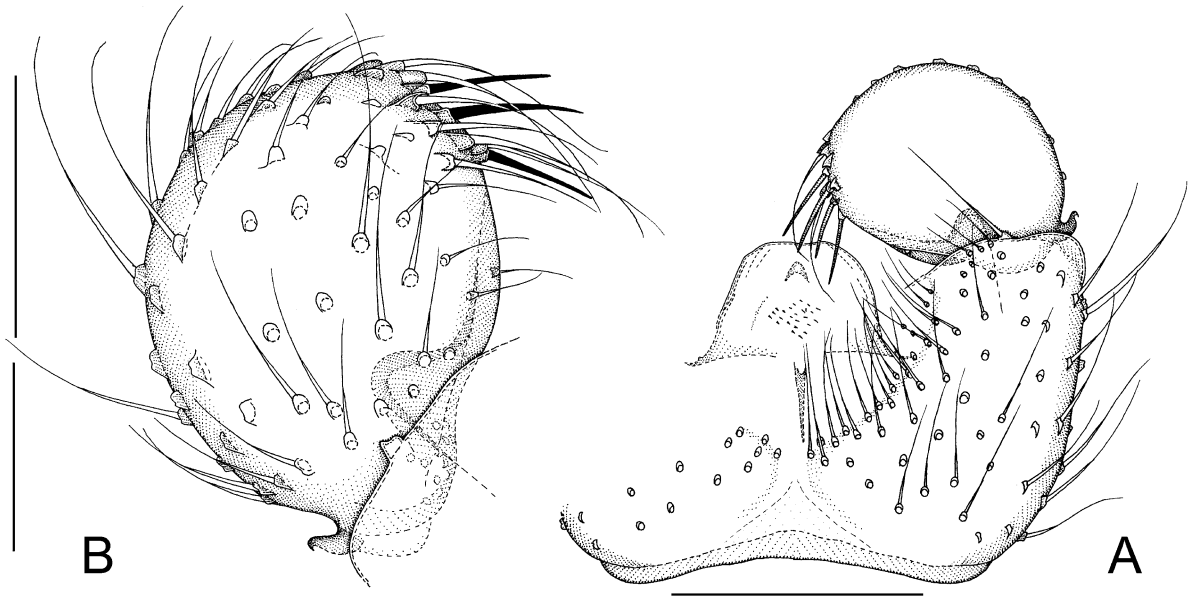

FIGURE 73. *Corynoptera sphaerula* sp. n. (holotype). **A.** Part of hypopygium, ventral view. **B.** Gonostylus, ventral view. Scale 0.1 mm.

***Corynoptera flavicauda* (Zetterstedt, 1855)**

Figs. 1 C, 2 C, 74 A–F

Sciara flavicauda Zetterstedt, 1855: 1888.
Corynoptera flavicauda, Tuomikoski, 1960: 52.

Material studied. 1 male, **DENMARK**, Alsen, Fynshav, old beech forest, sweep-net, 17.v.2007, K. Heller (no. 5560 in PKHH); 1 male, **FINLAND**, A, Jomala, Jomala-Öjen, N. Kallvik, R. Frey, 25.vi.1945 (in MZH); 1 male, **GERMANY**, BY, Watzmann, Stubenalm, sweep-net, 2.vi.1999, K. Heller (no. 2805 in PKHH); NW, Cologne district Immendorf, Malaise trap, 9–16.v.1989, J. Franzen (no. 1261 in PKHH); 2 males, NW, Cologne, district Poll, garden, Malaise trap, 21–28.v.2002, J. Franzen (no. 2106, 2107 in ZSMC); 1 male, RP, Gönnersdorf, managed grassland with fruit trees, Malaise trap, 14–21.v.1994, K. Cölln (no. 1888 in PKHH); 1 male, RP, Kirchheimbolanden, Albertskreuz Nature Reserve, Malaise trap, 11.iv–2.v.2002, D. Doczkal (no. 123 in PASS); 2 males, same data as previous but 23.v–7.vi.2002 (no. 115 in PDDG, no. 95 in PASS); 1 male, SH, Bredenbek, beech forest at lake Stocksee, sweep-net, 13.v.2006, K. Heller (no. 57 in PASS); 1 male, SH, Heikendorf, Korügen, beech forest, sweep-net, 17.v.1991, K. Heller (no. 148 in PKHH); 3 males, same data but 6.v.1989 (no. 149–151); 1 male, SH,

Fehmarn, Katharinenhof, coastal beech forest, sweep-net, 25.v.2003, K. Heller (no. 3984 in PKHH); 1 male, SH, Kiel, University, garden, Malaise trap, 13–20.vi.1996, K. Heller (no. 1529 in PKHH); 1 male, 1 female, SH, Rade, wet meadow, Malaise trap, 27.v–3.vi.1999, K. Heller (no. 2939); 1 male, SH, Trent near Plön, bog, Malaise trap, 22–29.v.1994, C. Kassebeer (no. 731 in PKHH); 1 male, TH, Hainich National Park, mixed forest at Thiemsburg, sweep-net, 18.vi.2005, K. Heller (no. 4366 in PKHH); 1 male, Jena, Kunitzberg, sweep-net, 5.iv.1999, S. Erlacher (no. 4152 in PKHH); 1 male, 1 female, TH, Kyffhäuser, oak forest, sweep-net, 22.v.2006, K. Heller (no. 4749); 2

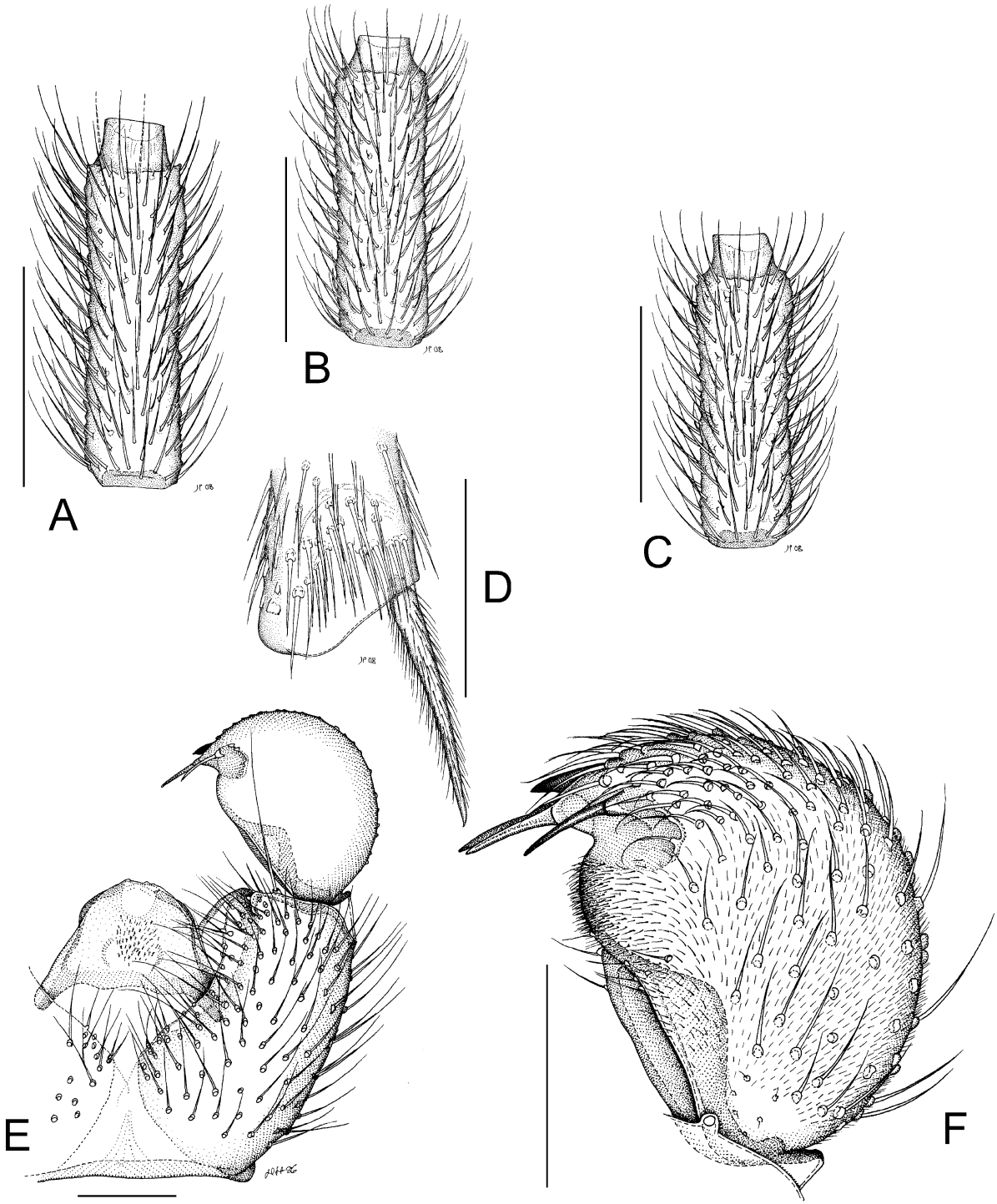

FIGURE 74. *Corynoptera flavicauda* (Zetterstedt) (A from Italy, B, D, E, F from Finland, C from England). **A, B, C.** Antennal flagellomere 4. **D.** Apical part of front tibia, prolateral view. **E.** Part of hypopygium, ventral view (aedeagal apodeme omitted). **F.** Gonostylus, ventral view. Scale 0.1 mm.

males, **GREAT BRITAIN**, Devon, Torquay, 15–21.vi.1960, R.J. Vockeroth (no 2970, 2971 in MZH); 1 male, **SWEDEN**, Öl, 1982, Holmgren (lectotype, des. Menzel, in Menzel & Mohrig 2000, in MZLU); 1 male, Go, Gotland, Roleks, border between wood and open pasture, grazed calcareous pine forest, Malaise trap, 2–19.viii.2004, Swedish Malaise Trap Project (no. 6843–6845 in PKHH, no. 2942, 2943 in SMNH); 1 male, Sm, Gränna, Lönnemålen, next to old cellar, Norway spruce forest with big harvested ashes, Malaise trap, 14.vi–1.vii.2005, Swedish Malaise Trap Project (no. 6711 in PKHH); 6 males, same data as previous but 10–24.ix.2003 (in SMNH); 1 male, Up, Lövstabruk, Malaise trap, 2–4.vi.2002, H. Hippa, (no. 23 in SMNH); 1 male, same data as previous but 5–9.vi.1992 (no. 726 in SMNH); 1 male, same data again but 9–12.vi.1992 (no. 17 in SMNH); 2 males, same data again but 12–15.vi.1992 (no. 153, 263 in SMNH); 1 male, Ög, Ödeshög, Omberg, Storpissan, old Norway spruce wood, Malaise trap, 28.v–5.vii.2005, Swedish Malaise Trap Project (no. 2024 in SMNH); 9 males, Öl, Mörbylånga, Skogsby, Gamla Skogsby, meadow with bushes, Malaise trap, 20.v–28.vi.2006, Swedish Malaise Trap Project (no. 2303, 2304, 2454, 2551, 2593–2597 in SMNH); 1 male, **SWITZERLAND**, ZH, Sihlwald near Zurich, window trap, 24.v–5.vi.1996, K. Schiegg (no. 1814 in PKHH); 1 male, 1 female, same data as previous but photoeclector, 24.v–16.vi.1996 (no. 2426 in PKHH).

Description. See Menzel and Mohrig (2000); for antennal flagellomere 4, see Figs. 74 A, B and C, for scutum and scutellum, see Fig. 1 C, for wing, see Fig. 2 C, for apical part of front tibia, see Fig. 74 D, for hypopygium, see Figs. 74 E and F.

Discussion. Corynoptera flavicauda is very similar to *C. hypopygialis.* For other similar species and distinguishing characters, see under *C. hypopygialis.*

Distribution. **Austria** (Franz 1989), **Czech Republic** (Menzel *et al.* 2000, Rudzinski 1998), **Denmark** (this study), **Finland** (Frey 1948), **Germany** (Heller 2002a, 1999, 1998, Hennicke *et al.* 1997, Hövemeyer 1992, 1996a, 1996b, 1997, Kröber 1935, Menzel *et al.* 1990, 2002, 2003, Mohrig 1985, Rudzinski 2003, 2006), **Great Britain** (Edwards 1925, 1938, Menzel *et al.* 2006), **Great Britain, Northern Ireland** (Menzel *et al.* 2006), **Hungary** (Rulik *et al.* 2001), **Ireland** (Chandler *et al.* 1996), **Norway** (Lengersdorf 1926b), **Romania** (Hondru 1965); **Sweden** (Heller *et al.* 2009, Zetterstedt 1855), **Switzerland** (Heller & Menzel 2004).

Corynoptera hypopygialis (Lengersdorf, 1926)

Figs. 75 A–H

Sciara hypopygialis Lengersdorf, 1926a: 127.
Neosciara piniphila Lengersdorf, 1940: 25. Synonymy by Menzel and Mohrig (1993: 72).
Bradysia (*Chaetosciara*) *pachycerca* Frey, 1948: 60. Synonymy by Tuomikoski (1960: 52).
Corynoptera piniphila, Tuomikoski, 1960: 52.
Corynoptera hypopygialis, Menzel & Mohrig, 1993: 72.

Material studied. 1 male, **AUSTRIA**, V, Baad, meadow in valley, sweep-net, 18.viii.2001, K. Heller (no. 3535 in PKHH); 1 male, **FINLAND**, Ta, Kangasala, Vääksy, *Corylus*, 17.vii.1944, R. Frey (lectotype, hereby designated to fix the name of *Bradysia* (*Chaetosciara*) *pachycerca* Frey; in MZH); 11 male, Ab, Vihti, Vihtijärvi, end of vii.1957, R. Tuomikoski (in MZH); 1 male, same data as previous but 15.viii.1958 (in MZH); 6 males, same data again but end of viii.1958 (in MZH); 2 males, same data again but 5–7.viii.1961 (in MZH); 1 male, N, Espoo, Kasberget, 30.vii.1944, R. Frey (in MZH); 1 male, Ak, Virolahti, Salajärvi-Lehtomäki, 23.v–13.ix.1970, Kännö (in MZH); 1 male, Ta, Somero, Koisthuhta, 3.viii.1988, H. Hippa (in MZH); 1 male, Ta, Kangasala, Joutsiniemi, *Crataegus*, 8.viii.1944, R. Frey (in MZH); 2 males, Ta, Kangasala, Ponsa, 10.viii.1986, J. Tuiskunen (in MZH); 1 male, Ta, Lammi, Biological Station 12.viii.1986, H. Hippa (in MZH); 1 male, Tb, Toivakka, Ruostesuo (6886:3443), Malaise trap, 1–29.vii.2003, J. Salmela (in MZH); 1 male, same data as previous but 29.vii–30.viii.2003 (in MZH); 1 male, Tb, Konnevesi, Siikakoski (6946:465), 26.vii.2003, J. Salmela (in MZH); 2 males, Sb, Kangaslampi, forest, Malaise trap, 17–29.vii.2004, N. Laurenne (in MZH); 3 males, Oa, Ilmajoki, Kivistönmäki, Malaise trap, 12.vii–6.ix.2003, J. Salmela (in MZH); 1 male, Kb, Lieksa, Toivaanjärvi (704:65), by a brook, 9.viii.1986, J. Tuiskunen (in MZH); 1 male, Ob, Muhos, forest, Malaise trap, 27.vii–5.viii.2005, N. Laurenne (in MZH); 1 male, Kl, Parikkala, Lake Siikalahti, birch/alder, swamp forest, sweep-net, 19.viii.2004, M. Jaschhof (no. 6346 in PKHH); 3 males, 1 female, **GERMANY**, BB, Altkünkendorf, hedge, photoeclector, 24.vi–24.vii.1995, R. Nötzold (no. 1121–1123 in PKHH); BW, Belchen, Malaise trap, 7–28.v.2003, D. Doczkal (no. 5032 in PKHH); 4 males, BW, Isny,

Adelegg, Malaise trap, 15.ix–27.xi.2003, D. Doczkal (no. 4589 in PKHH, no. 47 in PDDG, no. 29 in PASS, no. 2177 in ZMUC); 5 males, BW, Malsch, Heckelbachklamm, Malaise trap, 3–17.v.2003, D. Doczkal (no. 7043–7046, no. 162 in PDDG); 13 males, same data as previous but 16.ix.2003–8.i.2004 (no. 4706, 6168–6173, 7047–7049 in PKHH, no. 2220 in ZMUC, no. 163 in PDDG); 3 males, BY, mixed forest at lake Freibergsee, sweep-net, 16.viii.2001 (no. 3495–3497 in PKHH); 1 male, SN, Stadt Wehlen, forest at Bärenstein, sweep-net, 21.vi.2008, K. Heller (no. 6381 in PKHH); 1 male, SH, Siggen, beech/oak forest, photoeclector, 2–16.ix.1986, T. Tischler (no. 556 in PKHH); 2 males, SH, Kiel, district Suchsdorf, hedgerow, pitfall trap, 18.viii–1.ix.1993, K. Heller, (no. 409–410 in PKHH); 1 male, ST, Thale, Roßtrappe, mixed forest, sweep-net, 26.v.2006, K. Heller (no. 4756 in PKHH); 3 males, TH, Kyffhäuser, oak forest, sweep-net, 22.v.2006, K. Heller (no. 4741–4743); 1 male, TH, Kunitz, 15.v.1995 (no. 4118 in PKHH); 1 male, RP, Kirchheimbolanden, Albertskreuz Nature Reserve, Malaise trap, 4–19.vii.2001, D. Doczkal (no. 4805 in PKHH); 1 male, **GREAT BRITAIN**, Devon, Brixham, Berry Head, 1.ix.1960, J.R. Vockeroth (no. 2966 in MZH); 1 male, Devon, Heathfield, 2.ix.1960, J.R. Vockeroth (no. 2967 in SMNH); 1 male, **GREECE**, Kerkini mountains, Procom, riverine forest along river Styrmon, Malaise trap, 14–20.iv.2008, G. Ramel (no. 6966 in PKHH); 7 males, **ITALY**, South Tyrol, St. Magdalena, larch-heather zone, 2000 m, sweep-net, 31.vii.2002, K. Heller (no. 3833–3836 in PKHH); 2 males, South Tyrol, St. Magdalena, spruce forest at Spielbühl, 1600 m, sweep-net, 31.vii.2002, K. Heller (no. 3867, 3868 in PKHH); 2 males, Rome, Forum Romanum, 2.ix.1988, H. Hippa (no. 2964, 2965 in SMNH); 1 male, Rome, Villa Borghese, 14.iii.1987, H Hippa (no. 2962, 2963 in SMNH); 1 male, same data as previous but 28.iii.1998 (no. 2969); 1 male, **SLOVAKIA**, Lipovec, beech forest, sweep-net, 3.viii.2007, K. Heller (no 5669, 5670 in PKHH); 2 males, **SLOVENIA**, Begunje, spruce forest, 2.viii.2009, K. Heller (no. 7203, 7204 in PKHH); 1 male, **SWEDEN**, Ån, Örnsköldvik, Skuleskogen National Park, Långrå, brook ravine in mixed forest, Malaise trap, Swedish Malaise Trap Project, 29.viii–1.x.2003, (no. 1225 in SMNH); Bo, Stenungsund, Ödsmål, Hällsberget, broad leaved deciduous forest in southern slope, Malaise trap, 30.vii–11.viii.2004, Swedish Malaise Trap Project (no. 942 in SMNH); 1 male, Dr, Ludvika, Gonäs, garden, Malaise trap, 3–10.vii.2000, K.D. Hilger (no. 3370 in PKHH); 1 male, same data as previous but 2–9.viii.2000 (no. 3401 in PKHH); 5 males, Go, Gotland, Roleks, border between wood and open pasture, grazed calcareous pine forest, Malaise trap, 2–19.viii.2004, Swedish Malaise Trap Project (no. 6843–6845 in PKHH, no. 2942, 2943 in PKHH); 1 male, Ha, Halmstad, Gårdshult, Buskastycket, moist hay meadow, Malaise trap, 4–15.viii.2005, Swedish Malaise Trap Project (no. 6619 in PKHH); 1 male, Sk, Höganäs, Mölle, Kullabergs Nature Reserve, oak forest in southern slope, Malaise trap, 9.viii–20.ix.2005, Swedish Malaise Trap Project (no. 2276 in SMNH); 1 male, Vr, Munkfors, Ransäter, sandy railway embankment through pasture land, Malaise trap, 13–23.vii.2005, Swedish Malaise Trap Project (no. 1437 in SMNH); 1 male, same data but 12–24.viii.2005 (no. 6859 in PKHH); 1 male, **SWITZERLAND**, ZH, Sihlwald near Zurich, photoeclector, 15.viii–12.ix.1996, K. Schiegg (no. 2512 in PKHH).

Description. See Lengersdorf (1926a) and Frey (1948); for antennal flagellomere 4, see Figs. 75 A–D, for apical part of front tibia, see Figs. 75 E, F, for hypopygium, see Figs. 75 G, H.

Discussion. *Corynoptera hypopygialis* was described from one male from Albania and one male from Austria. Menzel and Mohrig (1993) designated the one from Albania as lectotype, the other one as paralectotype. We have not studied the type material but it is evident from the characters given by Menzel and Mohrig (1993) and the discussion under *C. flavicauda* in Menzel and Mohrig (2000), that our concept of the species is the same. We have been able to confirm Tuomikoski's (1960) synonymization of *Bradysia pachycera* with the present species.

Corynoptera hypopygialis is very similar to *C. flavicauda* and their distinction in some cases may be problematic just using the known characters. It is also possible that there are more than two species in the complex (see below). Menzel and Mohrig (2000) distinguished *C. hypopygialis* by its smaller size (length 2.0–2.2 mm contra 3.0–3.5 mm), darker legs, and by having the area of the hyalinous sensilla on the basal palpomere pale and simple whereas in *C. flavicauda* it is darkened and slightly deepened. These characters largely fit our material even if the size differences are not as clear. Except for these characters it seems that the species as we have delimited them now differ as follows: 1) in *C. hypopygialis* the wing length is 1.6–2.2 mm, in *C. flavicauda* 2.3–2.5 mm, 2) in *C. hypopygialis* the hypopygium is unicolorous dark brown and concolorous with the abdomen, in *C. flavicauda* the gonocoxa is paler, from yellow to pale brown, 3) in *C. hypopygialis* the antennal flagellomeres have a sparser vestiture than *C. flavicauda* even if not always (Figs. 74, 75), and 4) in *C. hypopygialis* the gonostylus has a more strongly bulged mesial margin and more strongly curved lateral margin so that it seems more gibbous when compared with *C. flavicauda*.

In *C. hypopygialis*, there is a lot of variation regarding the length of antennae (Figs. 75 A–D) and many details in the hypopygium and colouration. Some of this variation seems to be geographic. For example, we can identify a boreomontane form which is smaller and darker than the others, with a slightly less inflated gonostylus and less inclined gonostylar megasetae. Some of the variation may indicate the existence of additional species, but at the moment we are not able to demonstrate this satisfactorily.

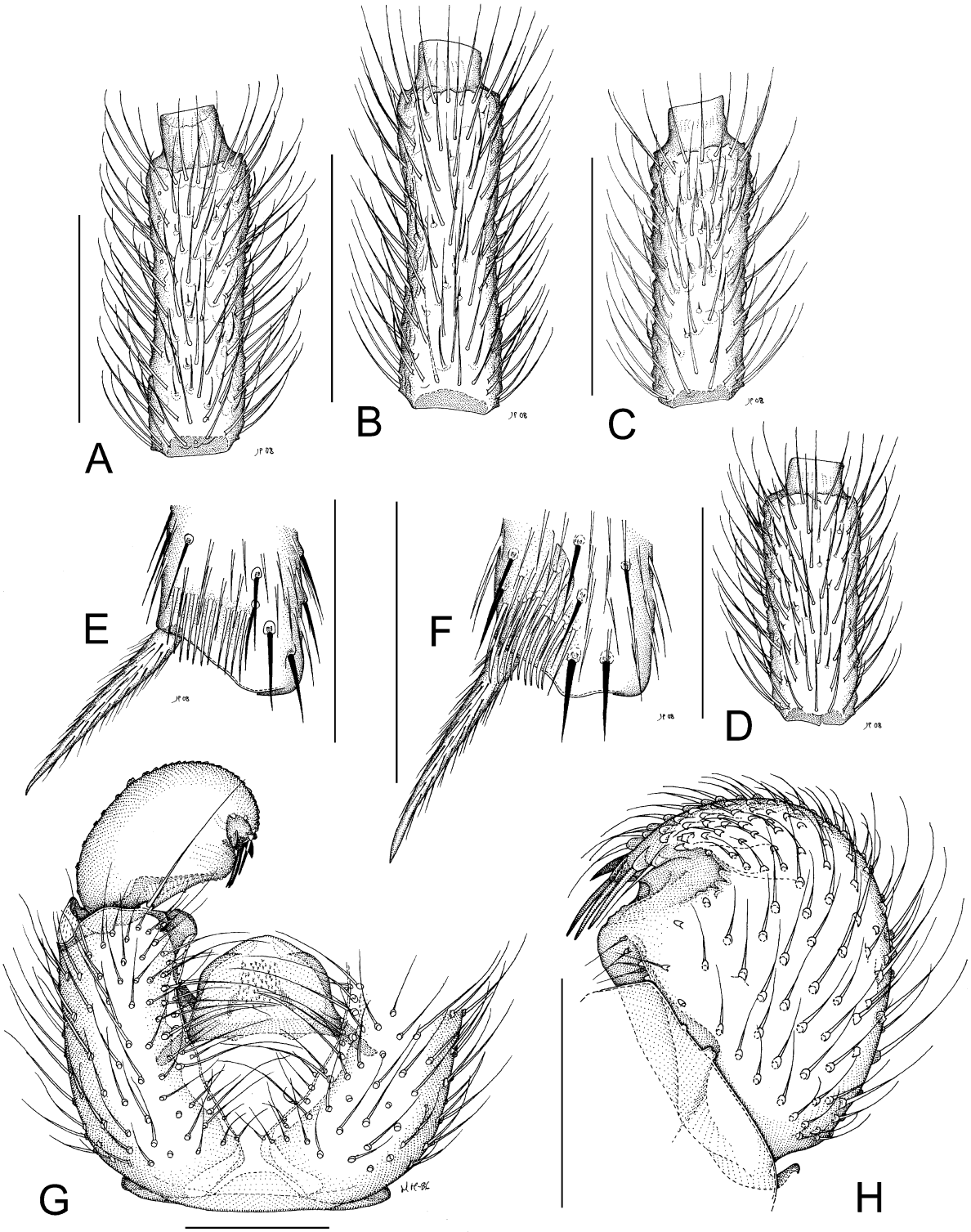

FIGURE 75. *Corynoptera hypopygialis* (Lengersdorf) (A from England, B, E, H from Germany, C, F, G from Finland, D from Italy). **A–D.** Antennal flagellomere 4. **E, F.** Apical part of front tibia, prolateral view. **G.** Part of hypopygium, ventral view (aedeagal apodeme omitted). **H.** Gonostylus, ventral view. Scale 0.1 mm.

Both *C. hypopygialis* and *C. flavicauda* are very similar to *C. alticola* and *C. subpiniphila*, but the latter two have less inflated gonostylus with the mesial margin not as bulged and by lacking a strong oblige depression subapically on the ventral side of the gonostylus.

Distribution. **Albania** (Lengersdorf 1926a), **Austria** (Lengersdorf 1926a, Menzel 2001, Röschmann & Mohrig 1993), **Bulgaria** (Dimitrova & Mohrig 1993), **Czech Republic** (Menzel *et al.* 2000, Rudzinski 1998, 2000), **Finland** (Frey 1948, Lengersdorf 1940, Salmela & Vilkamaa 2005, Tuomikoski 1960), **Germany** (Feldmann 1992, Heller 2002a, 2004, Hennicke *et al.* 1997, Hövemeyer 1992, Menzel *et al.* 1990, Metzner & Menzel 1996, Rudzinski 2006, Weber 1993), **Greece** (Röschmann & Mohrig 1996), **Great Britain** (Menzel *et al.* 2006, Smith & Menzel 2007), **Italy** (Röschmann & Mohrig 1993), **Norway** (Tuomikoski 1960), **Slovakia** (this study), **Slovenia** (this study), **Spain** (Heller & Menzel 2004), **Sweden** (Heller *et al.* 2009), **Switzerland** (Röschmann & Mohrig 1994).

Corynoptera alticola (Kieffer, 1919)

Figs. 76 A–H

Geosciara alticola Kieffer, 1919: 213.
Corynoptera postpiniphila Mohrig & Mamaev, in Mohrig *et al.*, 1992: 197. Synonymy by Menzel and Mohrig, 2000: 254.
Corynoptera praepiniphila Mohrig & Dimitrova, in Mohrig & Dimitrova, 1992: 185. **New synonymy**.
Corynoptera alticola, Menzel & Mohrig, 2000: 254.

Material studied. 1 male, **BULGARIA**, Vitosha Mountains, Boyansko Lake, beech forest, 13.vi.1991, B. Dimitrova (holotype of *C. praepiniphila*, no. 1474 in PWMP); 1 male, Sofia, birch forest, sweep-net, 7.v.1987, B. Dimitrova (holotype of *C. postpiniphila*, no. 1560 in PWMP); 1 male, **GREECE**, Kerkini mountains, Kerkini marsh, Malaise trap, 10.iv.2007, G. Ramel (no. 5738 in PKHH); 2 males, same data as previous but 11–17.iv.2007 (no. 6086, 6087 in PKHH); 1 male, same data again but 25.iv–1.v.2007 (no. 5721 in PKHH); 1 male, Kerkini mountains, Malaise trap, 25–31.vii.2007, G. Ramel (no. 6203 in PKHH); 2 males, 1 female, Kerkini mountains, Elodia Cafe Site, Malaise trap, 24–30.iii.2008, G. Ramel (no. 7001 in PKHH); 3 males, Kerkini mountains, Vironia, Malaise trap, 11–17.iv.2005, G. Ramel (no. 6161–6163, 6165 in PKHH); 7 males, same data as previous but 25.iv–1.v.2005 (no. 6179, 6183–6185 in PKHH); 1 male, same data again but 9–15.v.2005 (no. 6176 in PKHH), same data 25.iv–1.v.2007 (no. 5721 in PKHH); 1 male, Kerkini mountains, Malaise trap, 25–31.vii.2007, G. Ramel (no. 6203 in PKHH); 2 males, 1 female, Kerkini mountains, Elodia Cafe Site, Malaise trap, 24–30.iii.2008, G. Ramel (no. 7001 in PKHH); 3 males, Kerkini mountains, Vironia, Malaise trap, 11–17.iv.2005, G. Ramel (no. 6161–6163, 6165 in PKHH); 7 males, same data as previous but 25.iv–1.v.2005 (no. 6179, 6183–6185 in PKHH); 1 male, same data again but 9–15.v.2005 (no. 6176 in PKHH), same data again but 16–22.v.2005 (no. 6167 in PKHH); 1 male, Kerkini mountains, Midway Site, Malaise trap, 19–25.v.2008, G. Ramel (no. 6953 in PKHH); 1 male, Kerkini mountains, Procom, riverine forest along river Styrmon, Malaise trap, 12–19.ix.2007, G. Ramel (no. 1 in PGRK); 1 male, Kerkini mountains, Petritsi, brookside with *Platanus orientalis*, Malaise trap, 14–22.vi.2008, G. Ramel (no. 6888 in PKHH).

Description. See Kieffer (1919) and Menzel and Mohrig (2000); for antennal flagellomere 4, see Figs. 76 A and B, for apical part of front tibia, see Fig. 76 C, for hypopygium, see Figs. 76 D–H.

Discussion. The type material of *Corynoptera alticola* from Algeria is lost and we follow the concept of Menzel and Mohrig (2000). We have studied the holotypes of *C. praepiniphila* and *C. postpiniphila* and found only a slight difference in the size and the position of the apical tooth and the shape of the mesial margin of the gonostylus. Both fit well with the concept of *C. alticola* by Menzel and Mohrig (2000).

Corynoptera alticola is similar to *C. subpiniphila*. It is distinguished by having a smaller apical tooth on the gonostylus, sub-parallel with the gonostylar megasetae, and often in ventral view concealed behind the megasetae so that it is difficult to see. In *C. subpiniphila* the apical tooth and the megasetae are divergent so that the tooth is fully exposed. In *C. alticola* the gonostylus is also more inflated than in *C. subpiniphila*. Both *C. alticola* and *C. subpiniphila* are also similar to *C. flavicauda* and *C. hypopygialis* but the former two have a more inflated gonostylus, with a more strongly bulged mesial margin and a strong oblique depression subapically on the ventral side of the gonostylus. See also under *C. syriaca*.

Distribution. **Algeria** (Kieffer 1919), **Bulgaria** (Mohrig, Dimitrova & Mamaev 1992, Mohrig & Dimitrova 1992), **Czech Republic** (Rudzinski 1998), **Germany** (Mohrig *et al.* 1992), **Greece** (Röschmann & Mohrig 1996).

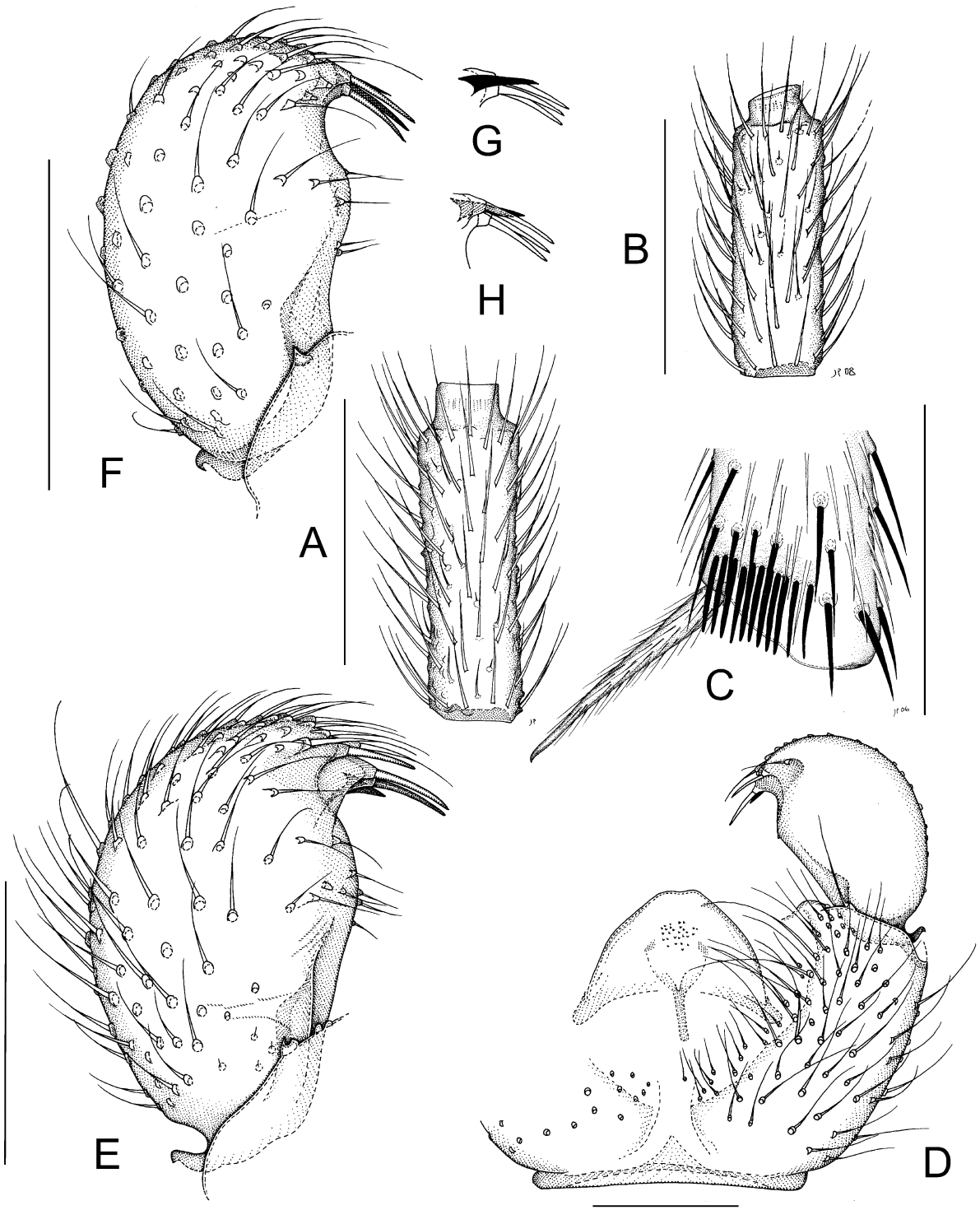

FIGURE 76. *Corynoptera alticola* (Kieffer) (A, C, D, E) from Greece, Beles, B, F, G, H holotype of *C. praepiniphila* Mohrig & Dimitrova). **A, B.** Antennal flagellomere 4. **C.** Apical part of front tibia, prolateral view. **D.** Part of hypopygium, ventral view. **E, F.** Gonostylus, ventral view. **G.** Apex of gonostylus, dorsal view. **H.** Apex of gonostylus, ventral view. Scale 0.1 mm.

Corynoptera subpiniphila **Mohrig & Mamaev, 1992**

Figs. 77 A–D

Corynoptera subpiniphila Mohrig & Mamaev, in Mohrig *et al*., 1992: 198.

Material studied. 1 male, **BULGARIA**, surroundings of Sofia, deciduous forest, 10.v.1987, sweep-net, B. Dim-

itrova (holotype, no 1472 in PWMP); 1 male, **GREECE**, Kerkini mountains, Vironia, Malaise trap, 7–13.iii.2005, G. Ramel (no. 5571 in PKHH); 4 males, 3 females, same data as previous but 21–27.iii.2005 (no. 6191–6195 in PKHH); 11 males, same data again but 28.iii–3.iv.2005 (no. 6139–6147 in PKHH, no. 38 in PGRK, no. 174 in PASS).

Description. See Mohrig, Dimitrova and Mamaev (1992); for hypopygium and gonostylus, see Figs. 77 A–D.

Discussion. Corynoptera subpiniphila is similar to *C. alticola*. For the discussion of the distinguishing characters and other similar species, see under the latter.

Distribution. **Bulgaria** (Mohrig, Dimitrova & Mamaev 1992), **Greece** (this study), **Turkey** (Rulik *et al*. 1999).

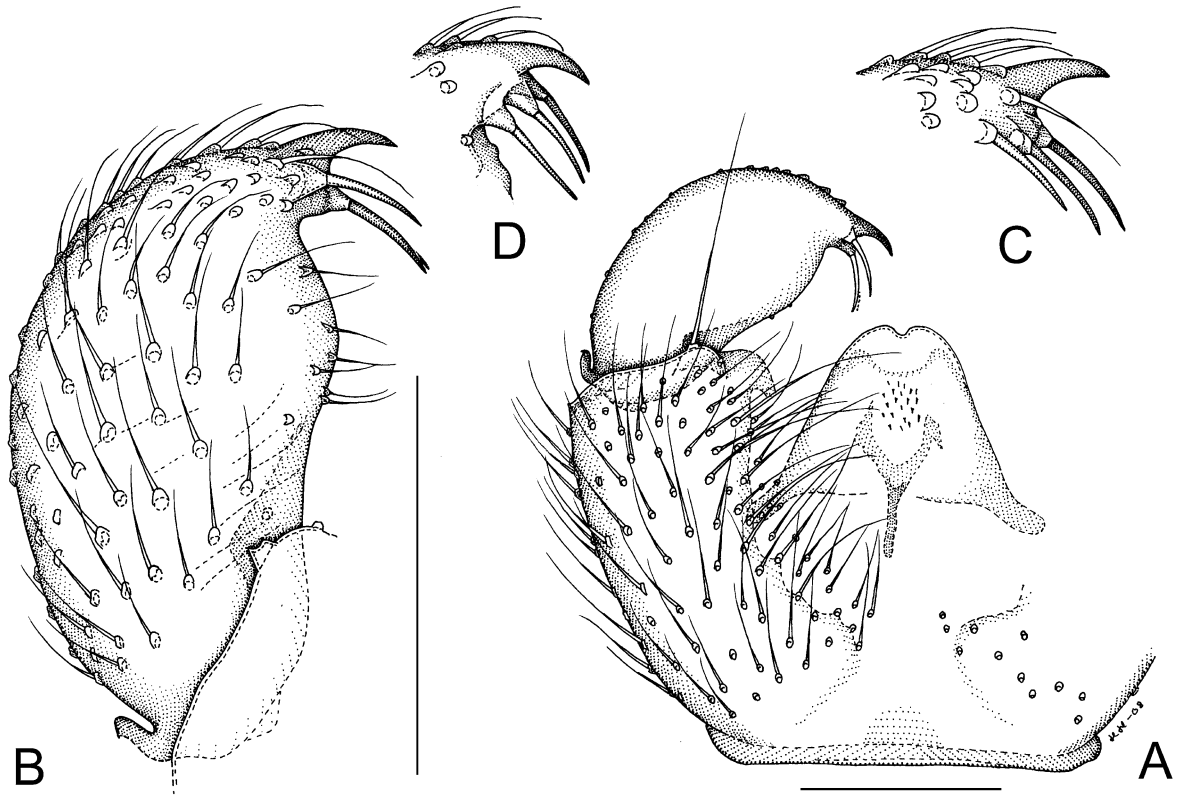

FIGURE 77. *Corynoptera subpiniphila* Mohrig & Mamaev (A, B, C from Greece, Beles, D holotype). **A.** Part of hypopygium, ventral view. **B.** Gonostylus, ventral view. **C.** Apical part of gonostylus, ventral view. **D.** Apical part of gonostylus, dorsal view. Scale 0.1 mm., for C and D as B.

***Corynoptera syriaca* (Lengersdorf, 1934)**
Figs. 78 A–D

Neosciara syriaca Lengersdorf, 1934: 55.
Corynoptera (*Psilosciara*) *lindbergii* Tuomikoski, 1959: 166. Synonymy by Menzel and Mohrig (2000: 258).
Corynoptera syriaca, Menzel & Mohrig, 2000: 258.

Material studied. 1 male, 2 females, **AFGHANISTAN**, Koshki, Laghman, stony slope, 30.i.1958, K. Lindberg (holotype and paratypes of *C. lindbergii* Tuomikoski, in MZH); 1 male, **ISRAEL**, Jerusalem, Mount Scopus, 26.i.1931, Aharoni (holotype, in ZFMK); 2 males, **TURKMENISTAN**, Badchis, Akor Cheshma, 80 km NW of Kushk, sweep-net, 5.v.1963, B. Mamaev (no. 1558, 1559 in PWMP).

Description. See Lengersdorf (1934), Tuomikoski (1959) and Menzel and Mohrig (2000); for antennal flagellomere 4, see Fig. 78 A, for hypopygium, see Figs. 78 B, C and D.

Discussion. Corynoptera syriaca was described from an unknown number of males from Jerusalem, Israel. Menzel and Mohrig (2000) found one male in Lengerdorf's material and designated it as the lectotype. We have compared it with the holotype of *C. lindbergii* from Afghanistan and agree with Menzel and Mohrig (2000) about the synonymy of the two species.

Corynoptera syriaca has a great overall similarity to *C. alticola* and *C. subpiniphila*, but lacks the apical tooth on the gonostylus and has much larger gonostylar megasetae.

Distribution. **Afghanistan** (Tuomikoski 1959), **Israel** (Lengersdorf 1934), **Turkmenistan** (this study).

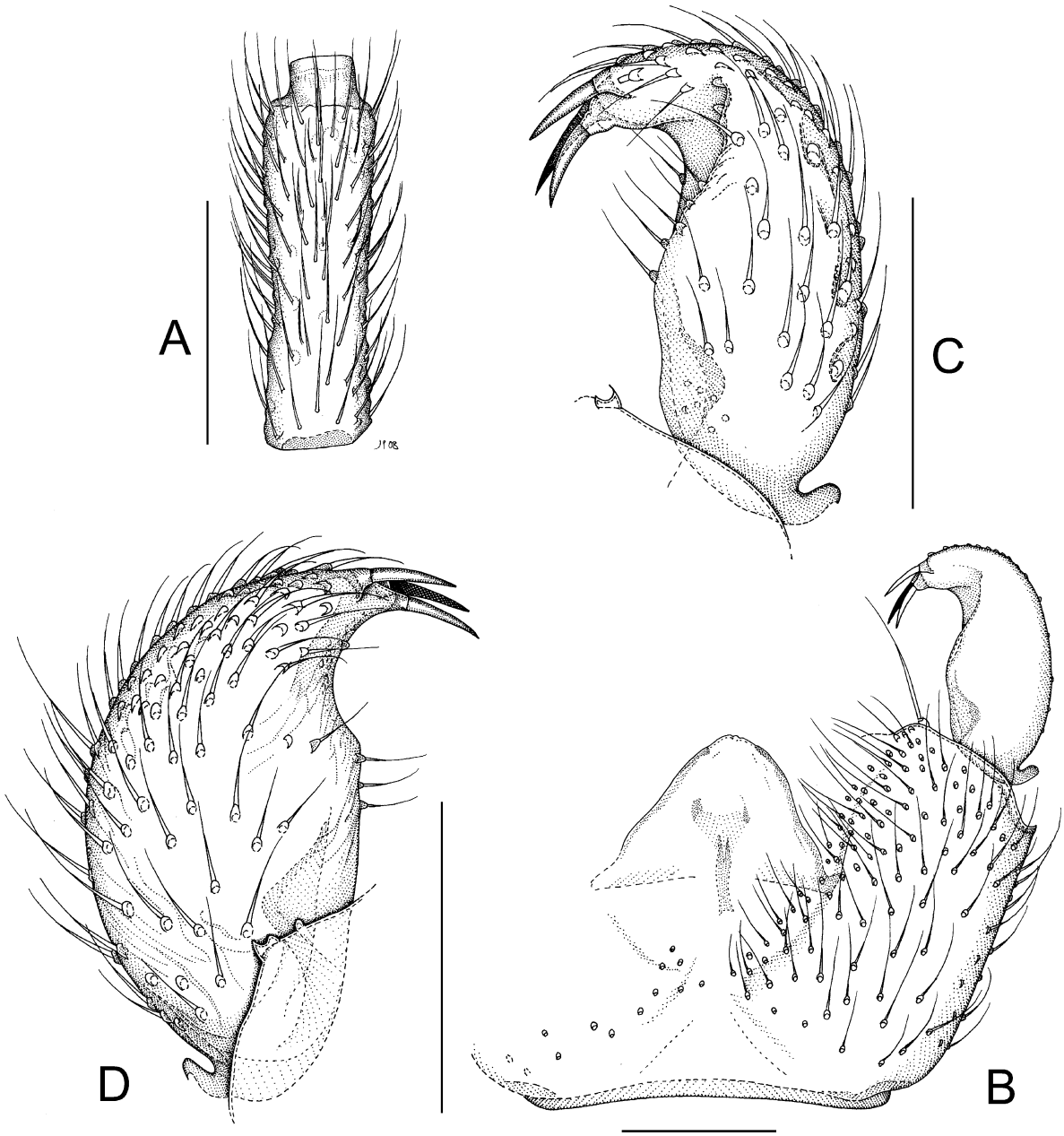

FIGURE 78. *Corynoptera syriaca* (Lengersdorf) (A, D from Turkmenistan, B, C holotype of C. *lindbergii* Tuomikoski). **A.** Antennal flagellomere 4. **B.** Part of hypopygium, ventral view. **C, D.** Gonostylus, ventral view. Scale 0.1 mm.

Corynoptera tridentata **Hondru, 1968**

Figs. 79 A, B

Corynoptera tridentata Hondru, 1968: 89.
Corynoptera pratorum Fritz, 1982: 263. Synonymy by Menzel and Mohrig (2000: 232).

Material studied. 5 males, 3 females, **GERMANY**, BB, Altkünkendorf, dry grassland with bushes, photoeclector, 24.vi–24.vii.1995, R. Nötzold (no. 1141–1143, 1146, 1147 in PKHH); 1 male, BB, Klein Ziethen, field at Serwester See, Malaise trap, 20.vii.1992, Sommer (no. 957 in PKHH); 1 male, BW, Belchen, Malaise trap, 28.v–

3.vii.2003, D. Doczkal (4831 in PKHH); 1 male, BW, Malsch, Heckelbachklamm, Malaise trap, 3–17.v.2003, D. Doczkal (no. 98 in PASS); 1 male, BW, Oberweier, alluvial forest, Malaise trap, 23.v.1995, D. Doczkal (no. 113 in PDDG); 1 male, BW, Ringingen near Ulm, Hirscheler Hudewald forest, Malaise trap, 16.v–3.vi.2000, D. Doczkal (no. 5047 in PKHH); 1 male, BY, Oberstdorf, Nebelhorn, alpine region, sweep-net, 21.viii.2001, K. Heller (no. 3579 in PKHH); 1 male, BY, Schwarzenau, field, photoeclector, 9.v–20.vi.2007, S. Prescher (no. 143 in ZNMB); 1 male, BY, Grainau SW of Garmisch-Partenkirchen, Obergrainau, Höhenrain, Panoramic road, 47º28'47''N 11º01'10''E, 800–830 m, spruce forest, sweep-net, 15.vi.2002, F. Menzel (in SDEI); 1 male, HE, Neumorschen, Hallberg, dry grassland and oak-ash forest, sweep-net, 17.vi.2007, K. Heller (no. 5594 in PKHH); 1 male, MV, Abtshagen near Greifswald, sweep-net, 14.v.1993, M. Jaschhof (no. 1909 in PWMP); 1 male, NW, Cologne, district Poll, garden, Malaise trap, 14–21.vi.1994, J. Franzen (no. 3011 in PKHH); 1 male, RP, Gönnersdorf, Mäuerchenberg, dry grassland, Malaise trap, 13–20.vii.1991, K. Cölln (no. 1841, 1843 in PKHH); same data as before, but 11–16.vii.1994 (no. 1895 in PKHH); 1 male, TH, Hainich National Park, mixed forest at Thiemsburg, sweep-net, 18.vi.2005, K. Heller (no. 4360 in PKHH); 2 males, **ITALY**, Malcesine, Monte Baldo, 700–1200 m, 7.vii.1986, H. Hippa (in MZH); 2 males, Provincia di Roma, 28.iii.1988, H. Hippa (in MZH); 1 male, Sicily, spring Piano Iola, 12.x.1988, R. Gerecke (no. 1904 in PWMP); 4 males, **RUSSIA**, **Krasnodar region**, Sochi, Dendrarium, sweep-net, 12.v.1988, P. Vilkamaa (in MZH); 1 male, Krasnaya Polyana, 5.vi.1965, B. Mamaev (no. 1895 in PWMP); 1 male, same data as previous but 19.vi.1967 (no. 1899 in PWMP); 1 male, same data but 18.vii.1971, E.B. Antonova (no. 1898 in PWMP); 2 males, Medvety Vorota, 19.vi.1967, B. Mamaev (no. 1894, 1900 in PWMP); 1 male, same data as previous but 27.vi.1967 (no. 1896 in PWMP); 1 male, same data again but 30.vi.1967 (no. 1897 in PWMP); 3 males, **Adygeya Republic**, Guzeripl, station Abago, 29.vii.1994, sweep-net, W. Mohrig (no. 1906–1908 in PWMP); 1 male, **SPAIN**, Andalusia, Jimena de la Frontera, brook valley, humid cork oak, yellow pan trap, iii–iv.1995, W. Wilden (in SDEI); 1 male, **SWITZERLAND**, GR, Ramosch, Clisot Charbunera, pitfall trap, 5.vi–19.viii.1980, K. Thaler (no. 1905 in PWMP); 1 male, **TURKEY**, Sütcüler, Isparta, sweep-net, 15.v.2004, H. Koc (no. 4338 in PKHH); 2 males, **TURKMENISTAN**, Kara-Kala, 21.iv.1989, A. Zaitsev (no. 1902, 1903 in PWMP); 1 male, **UKRAINE**, Kvasy, mixed forest, sweep-net, 16.vi.1963, B. Mamaev (no. 1901 in PWMP).

Description. See Hondru (1968), Menzel and Mohrig (2000) and Rulik *et al.* (2001); for hypopygium, see Figs. 79 A and B.

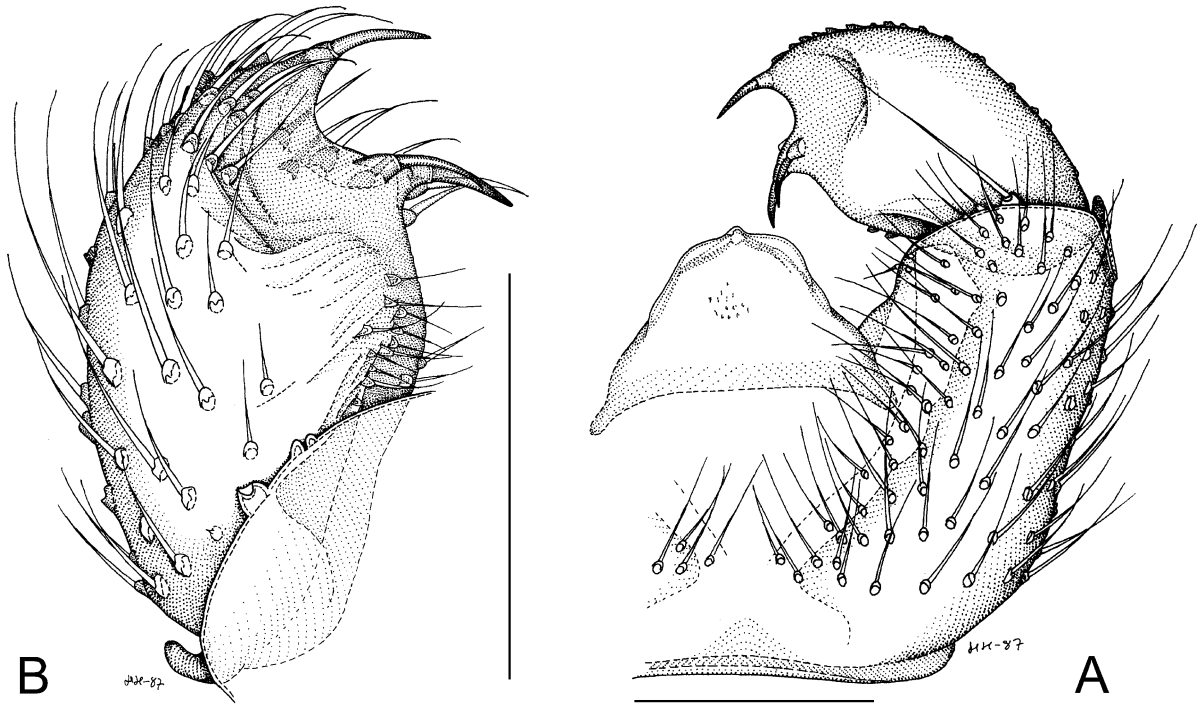

FIGURE 79. *Corynoptera tridentata* Hondru (from Italy). **A.** Part of hypopygium, ventral view (aedeagal apodeme omitted). **B.** Gonostylus, ventral view. Scale 0.1 mm.

Discussion. We have not seen the type material of *Corynoptera tridentata*, but the description (Hondru 1968) and redescriptions of the species (Menzel & Mohrig 2000, Rulik *et al.* 2001) have made the species easy to iden-

tify. *Corynoptera tridentata* is similar to *C. roeschmanni* and *C. warnckei* by having strong gonostylar megasetae distinctly separated into two groups, one at the very apex of gonostylus and the other subapically. The megasetae have distinct basal bodies, so that the gonostylus looks bilobed. The species can be distinguished by the number and arrangement of the megasetae: *C. tridentata* has one apical and two subapical megasetae (the latter usually accompanied with a strong sharp seta), *C. roeschmanni* has one apical and three subapical megasetae, and C. *warnckei* two apical and two subapical ones. Furthermore, the megasetae of *C. warnckei* are relatively smaller than those of the other species, whereas the subapical megasetae of *C. roeschmanni* are notably large, and the mesial setae of the gonocoxa and gonostylus are shorter and fewer in number than those in the other two species.

Rulik *et al.* (2001) also discussed *C. fritzi* (= *C. triacantha*) in connection with *C. tridentata* and *C. roeschmanni*, but in our view *C. triacantha* resembles more *C. hemiacantha*, *C. flavosignata* and other similar species (see under *C. hemiacantha* and *C. triacantha*).

Distribution. **Czech Republic** (Menzel *et al.* 2000, Rudzinski 1998, 2000), **Germany** (Drissner 1992, Fritz 1982, Heller 1999, 2002b, Hövemeyer 1996b, Menzel 1992, Menzel & Heller 2006, Menzel *et al.* 2003, Rudzinski 1994a), **Hungary** (Rulik *et al.* 2001), **Italy** (this study), **Romania** (Hondru 1968), **Russia, Krasnodar region** and **Adygeya Republic** (this study), **Slovakia** (Rudzinski 2009), **Spain** (Heller & Menzel 2004), **Switzerland** (this study), **Turkey** (this study), **Turkmenistan** (this study), **Ukraine** (this study).

Corynoptera warnckei Rudzinski, 2006

Figs. 80 A, B

Corynoptera warnckei Rudzinski, 2006: 439.

Material studied. 1 male, **GERMANY**, BY, Rappersdorf, Rhine-Main-Danube Canal, (project Warncke), 21–29.vi.1988, Blank (holotype, in ZSMC); 1 male, MV, Potthagen near Greifswald, beech/alder/birch forest, sweep-net, 28.v.1994, M. Jaschhof (no. 5360 in PKHH); 1 male, **SWEDEN**, Öl, Mörbylånga, Skogsby, Gamla Skogsby, meadow with bushes, Malaise trap, 20.v–28.vi.2006, Swedish Malaise Trap Project (no. 2349 in SMNH).

Description. See Rudzinski (2006); for hypopygium see Figs. 80 A and B.

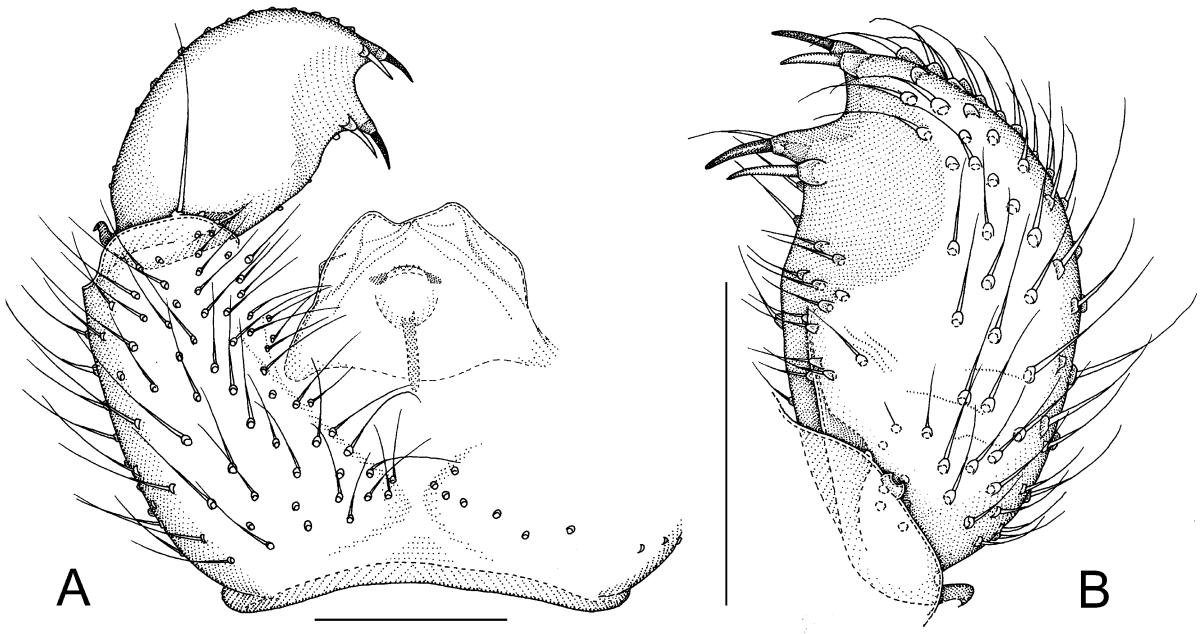

FIGURE 80. *Corynoptera warnckei* Rudzinski (holotype). **A.** Part of hypopygium, ventral view. **B.** Gonostylus, ventral view. Scale 0.1 mm.

Discussion. Corynoptera warnckei is similar to *C. roeschmanni* and *C. tridentata*. For distinguishing characters, see under the latter.

Distribution. **Germany** (Rudzinski 2006), **Italy** (Rudzinski 2006), **Sweden** (Heller *et al.* 2009).

***Corynoptera roeschmanni* Mohrig & Rulik, 2001**
Figs. 81 A–D

Corynoptera roeschmanni Mohrig & Rulik, in Rulik *et al.*, 2001: 235.

Material studied. 1 male, **GREECE**, Peloponnese, Patras, Kalavrita, forest with *Acer cephalonica* and *Quercus coccifera*, yellow dish, 18–19.v.1996, F. Röschmann (holotype, no. 1470 in PWMP); 1 male, same data as previous but sweep-net, (no. 3800 in PKHH); 1 male, Lesbos, near Agiassos, *Pinus-Quercus coccifera* forest, Malaise trap, 3–8.v.2006, Exp. Zool. Mus. Helsinki & Zool. Mus. Turku (in MZH).

Description. See Rulik *et al.* (2001); for antennal flagellomere 3, see Fig. 81 A, for apical part of front tibia, see Fig. 81 B, for hypopygium, see Figs. 81 C and D.

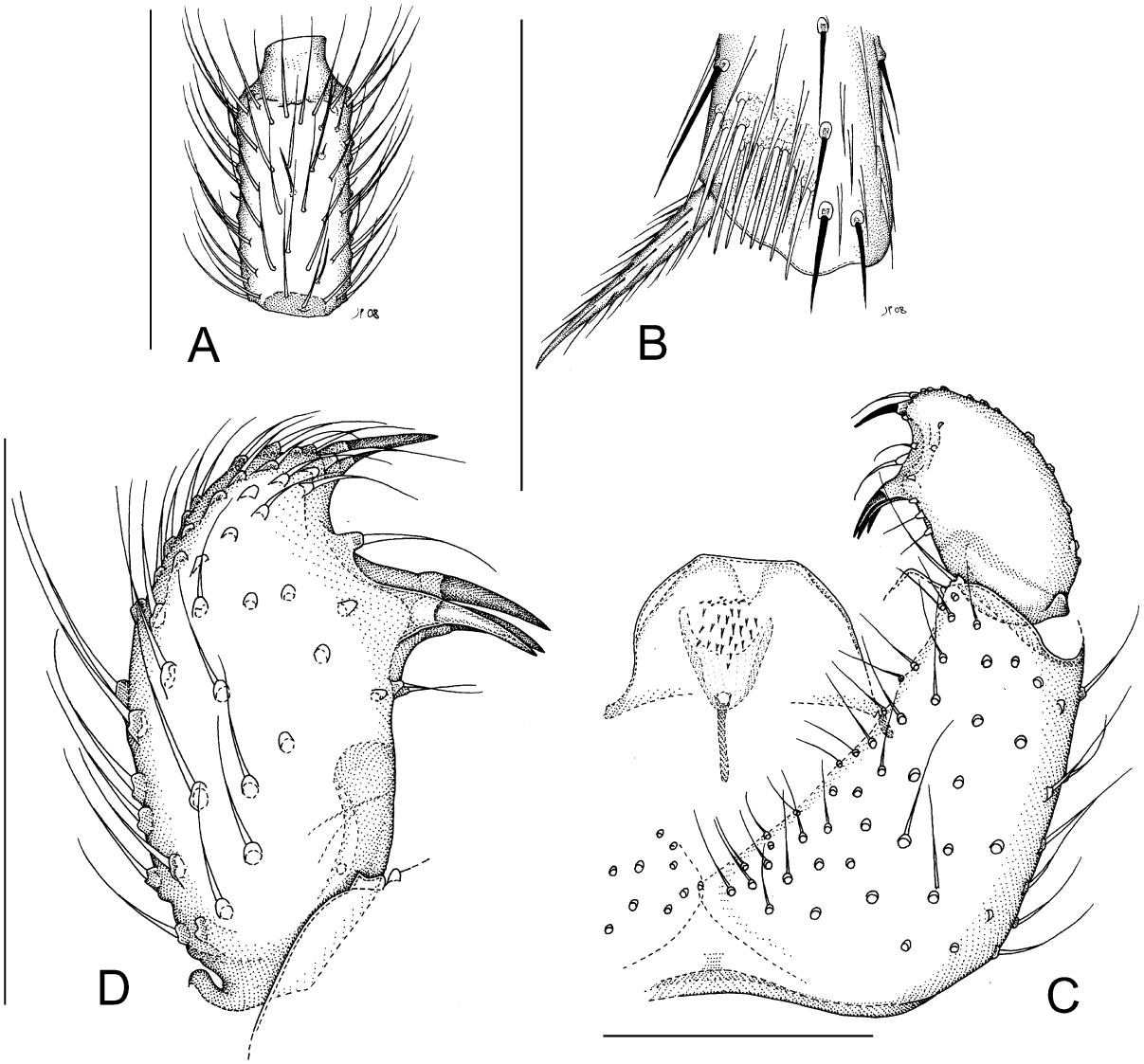

FIGURE 81. *Corynoptera roeschmanni* Mohrig & Rulik (holotype). **A.** Antennal flagellomere 3. **B.** Apical part of front tibia, prolateral view. **C.** Part of hypopygium, ventral view. **D.** Gonostylus, ventral view. Scale 0.1 mm.

Discussion. *Corynoptera roeschmanni* is similar to C. *tridentata* and *C. warnckei*. For distinguishing characters, see under *C. tridentata*.

Distribution: **Greece** (Rulik *et al.* 2001).

***Corynoptera dioon* sp. n.**
Figs. 82 A, B

Material studied. Holotype male. **NEPAL**, Kakani, 15.vi.1989, Allen, Tuck & Robinson (in BMNH)

Description. Male. **Head**. Brown, maxillary palpus very pale brown, antenna paler than face. Eye bridge 2–3 facets wide. Face with 5 scattered dark longer and shorter setae. Clypeus with 1 dark seta. Maxillary palpus with 3 palpomeres; palpomere 1 longer than palpomere 3, palpomere 2 shortest; palpomere 1 with one long sharp seta, with a dorsal patch of sensilla; palpomere 2 with 1 long sharp seta and 1 shorter truncate seta, palpomere 3 with 3 short truncate setae. Antennal flagellomere 4 2.0 times as long as wide, the neck shorter than the width of flagellomere, the longest setae slightly shorter than the width of flagellomere. **Thorax**. Unicolorous brown, setae dark. Anterior pronotum with 1 seta. Episternum 1 with 4 setae. **Wing**. Length and width not measurable, one wing missing, the other broken in the specimen. R1/R 0.65. c/w not measurable. r-m longer than bM, r-m/bM 1.25, both r-m and bM non-setose. Haltere pale brown. **Legs**. Yellow. Front tibial organ with dark vestiture, forming a comb-like row of strong setae. Front tibial spur slightly longer than the tibial width. **Abdomen**. Brown, slightly paler than thorax. Setae dark. **Hypopygium,** Figs. 82 A, B. Brown, as abdomen. Gonocoxa slightly longer than gonostylus. The ventral setosity of gonocoxa sparse, a few of the setae at the apical part of the mesial margin greatly elongated. Gonostylus oval, the mesial side slightly impressed on apical half; the setosity sparse, apicomesially with a few elongated setae; without an apical tooth, with 5 megasetae, the megasetae subequal in size, straight. Tegmen simple, without a dorsal finger-like process.

Discussion. Corynoptera dioon is not especially similar to any other species. It is similar to *C. spicigera* but differs by having five, instead of three, gonostylar megasetae and by having much smaller basal bodies of the megasetae. *Corynoptera dioon* may also resemble *C. distenta* but differs from it by also having five, not three, gonostylar megasetae and by lacking a finger-like process dorsally on the tegmen.

Etymology. The name is Greek, *dioon*, two-egg, referring to the ovate gonostyli. For nomenclature, the name is to be regarded as an arbitrary combination of letters.

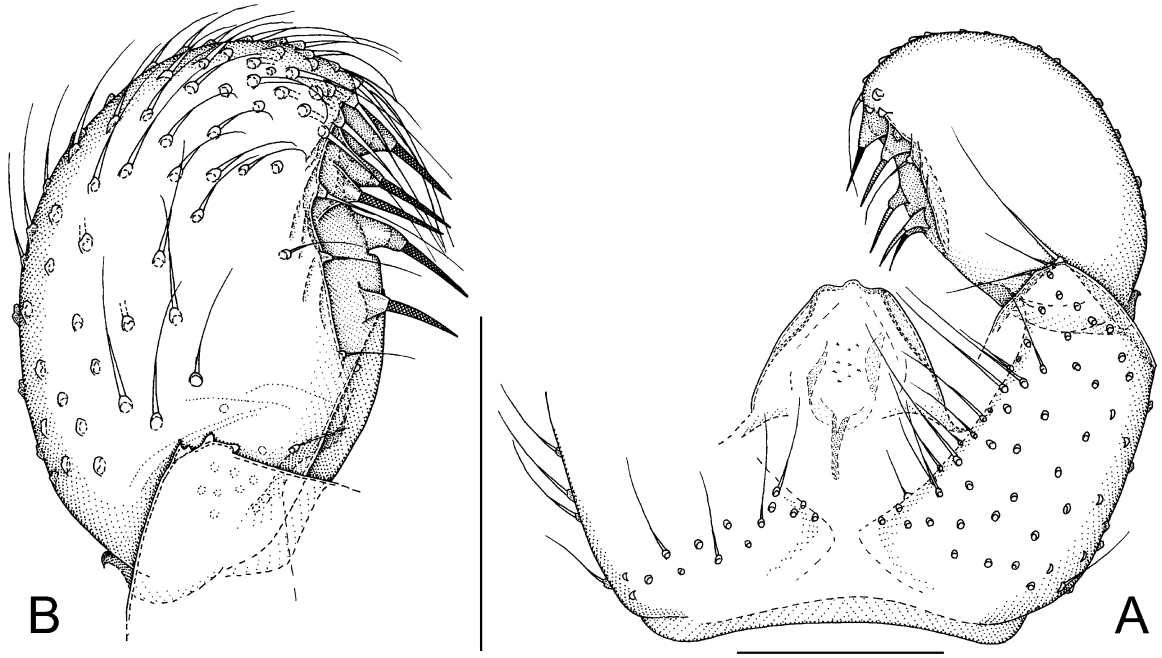

FIGURE 82. *Corynoptera dioon* sp. n. (holotype). **A.** Part of hypopygium, ventral view. **B.** Gonostylus, ventral view. Scale 0.1 mm.

***Corynoptera spicigera* sp. n.**
Figs. 83 A, B

Material studied. *Holotype male*. **NEPAL**, Kakani, 15.vi.1983, Allen, Tuck & Robinson (in BMNH).

Description. Male. **Head**. Brown, maxillary palpus very pale brown, antenna slightly paler than face. Eye bridge 3 facets wide. Face with 8 scattered dark longer and shorter setae. Clypeus with 1 dark seta. Maxillary palpus with 3 palpomeres; palpomeres 2 and 3 subequal in length, shorter and narrower than palpomere 1; palpomere 1 with1 long sharp seta, with a large distinct dorsal patch of sensilla; palpomere 2 with 1 long sharp seta and 3 shorter truncate setae, palpomere 3 with 4 short truncate setae. Antennal flagellomere 4 2.2 times as long as wide, the neck shorter than the width of flagellomere, the longest setae about as long as the width of flagellomere. **Thorax**. Unicolorous brown, setae dark. Anterior pronotum with 4 setae. Episternum 1 with 5 setae. **Wing**. Length 1.5 mm. Width/length 0.40. R1/R 0.50. c/w not measured (tip of wing partly missing). r-m longer than bM, r-m/bM 1.65, both r-m and bM non-setose. **Legs**. Pale yellowish brown. Front tibial organ with dark vestiture, forming a comb-like row. Front tibial spur as long as the tibial width. **Abdomen**. Pale brown. Setae dark. **Hypopygium,** Figs. 83 A, B. Brown, concolorous with abdomen. Gonocoxa longer than gonostylus. The ventral setosity of gonocoxa rather dense, the setae of the mesial margin elongated. Gonostylus rather tumid, broadest medially, the mesial side slightly impressed on apical half; the setosity sparse, apicomesially with a few elongated setae; without an apical tooth; with one perpendicular and two oblique megasetae subapically, the megasetae with conspicuous basal bodies.

Discussion. *Corynoptera spicigera* is not very similar to and cannot be confused with any other species. The greatly inflated gonostylus which lacks an apical tooth and has three strong megasetae arising from basal bodies which are nearly as long as the megasetae distinguish the species from all others. *Corynoptera spicigera* is similar to *C. dioon* and *C. distenta*. Besides the very large basal bodies of the gonostylar megasetae, it also differs from *C. dioon* by having three, not five, gonostylar megasetae and from *C. distenta* by lacking a finger-like process dorsally on the tegmen.

Etymology. The name is derived from the Latin word *spica*, spear with the suffix *-gera*, bearing, referring to the strong and sharp gonostylar megasetae.

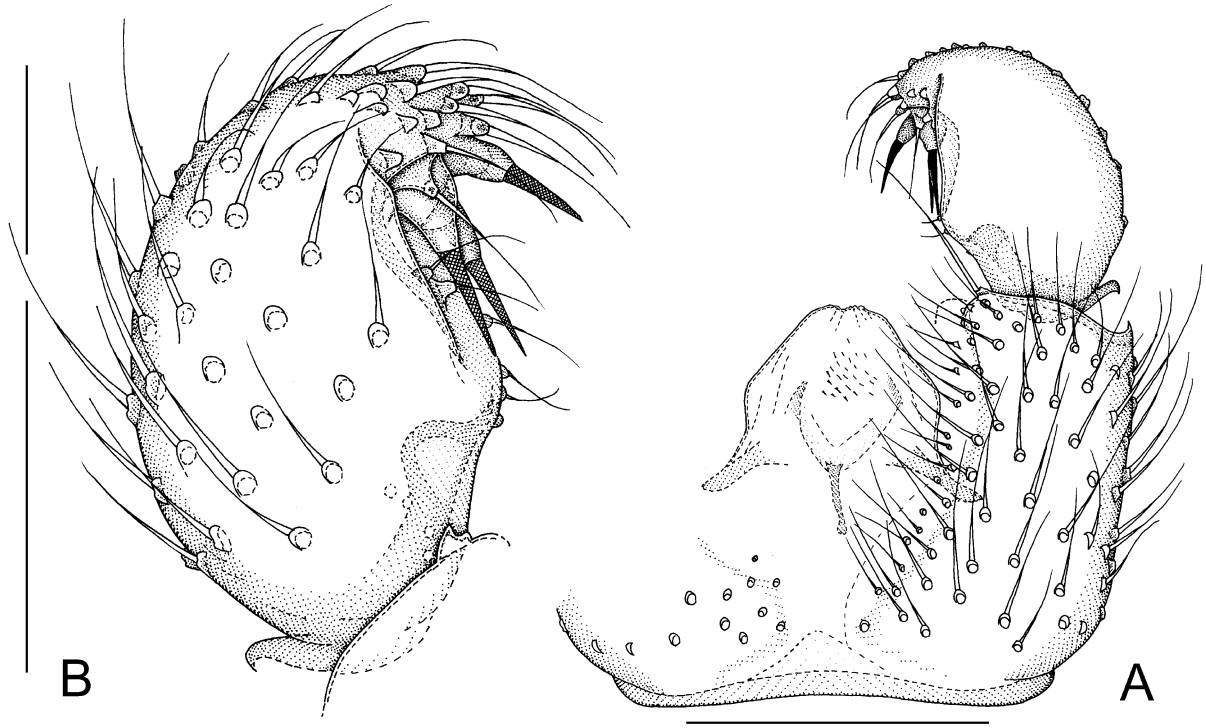

FIGURE 83. *Corynoptera spicigera* sp. n. (holotype). **A.** Part of hypopygium, ventral view. **B.** Gonostylus, ventral view. Scale 0.1 mm.

***Corynoptera triacantha* Tuomikoski, 1960**
Figs. 84 A–F

Corynoptera triacantha Tuomikoski, 1960: 64.
Corynoptera fritzi Mohrig & Rulik, in Rulik *et al.*, 2001: 236. **New synonymy**.

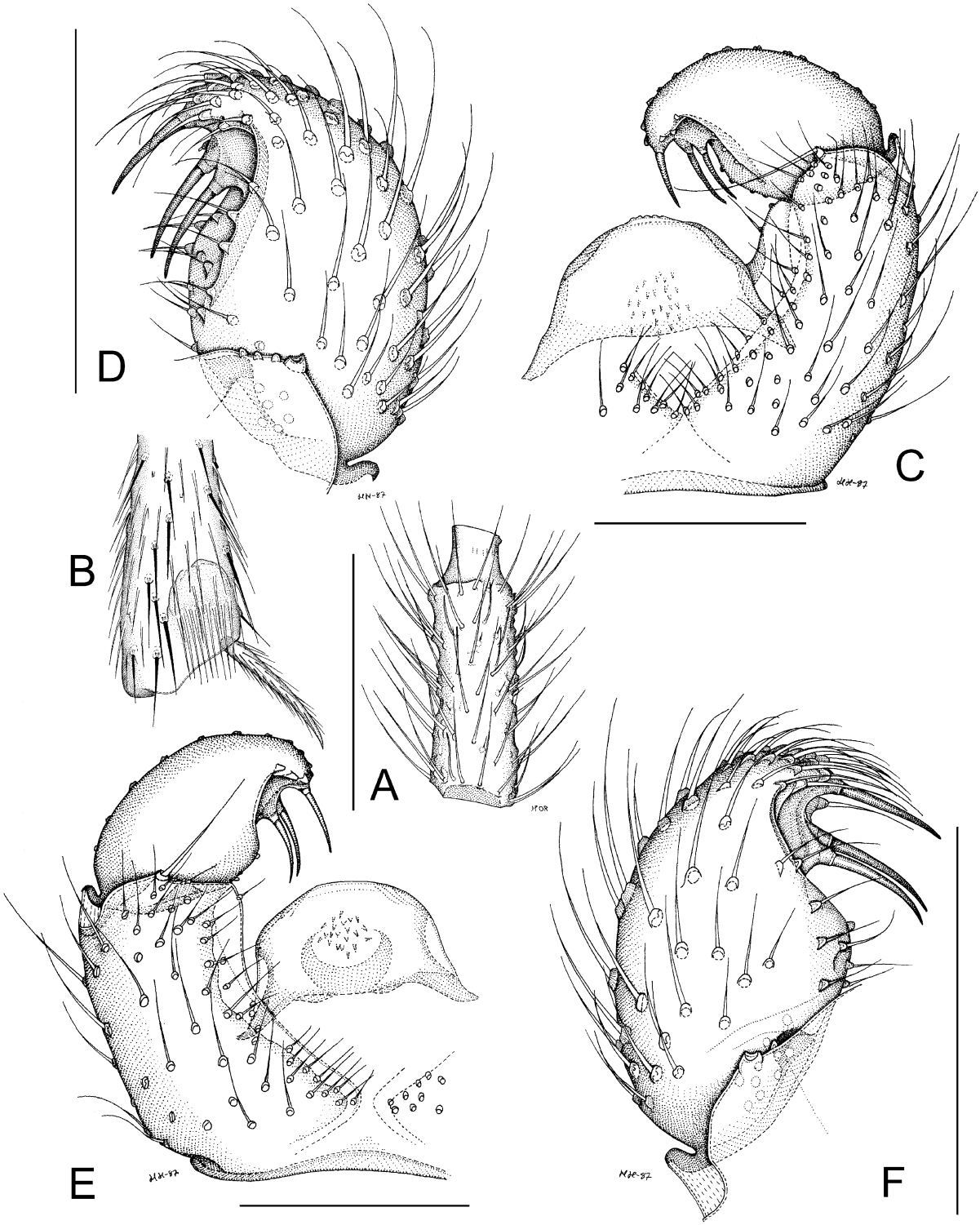

FIGURE 84. *Corynoptera triacantha* Tuomikoski (A, B from Germany, C, D holotype, E, F holotype of *C. fritzi* Mohrig & Rulik). **A.** Antennal flagellomere 4. **B**. Apical part of front tibia, prolateral view. **C, E.** Part of hypopygium, ventral view (aedeagal apodeme omitted). **D, F.** Gonostylus, ventral view. Scale 0.1 mm.

Material studied. 1 male, **FINLAND**, N, Helsinki, Sillböle, 31.viii.1959, R. Tuomikoski (holotype, in MZH); 2 males, Ta, Urjala, Kivijärvi Nature Reserve (6770:308), grove, malaise trap, 6.vii–3.viii.2003, J. Salmela & O. Härmä (in MZH); 1 male, **GERMANY**, HE, Kühkopf-Knoblochsaue Nature Reserve, meadow, photoeclector, 12.ix.1981, H.-G. Fritz (holotype of *C. fritzi*, in PWMP); 2 males, MV, Greifswald, forest, 1994, M. Jaschhof (no. 5383 in PKHH); 2 males, Karbow, alluvial alder-ash forest, exhaustor, 18.viii.1993, M. Jaschhof (no. 159 in

PASS); 1 male, SH, Heikendorf, garden, Malaise trap, 23–30.vii.2000, K. Heller (no. 3215 in PKHH); 1 male, SH, Meggerdorf, Alte Sorge Nature Reserve, wet meadow, photoeclector, 15.vii–15.viii.1994, K. Heller, (no. 827, 834 in PKHH); same data as previous but 15.viii–1.ix.1994 (no. 961 in PKHH); same data again but Malaise trap, 15.vii–1.viii.1995 (no. 1106 in PKHH); 7 males, 5 females, same data again but 1–16.viii.1995 (no. 1117 in SDEI, no. 1118, 1120 in PKHH, 2300–2302 im PWMP); 1 male, 1 female, same data again but yellow dish, 1–16.viii.1995 (no. 1198 in PKHH); same data again but photeclector, 16.viii–1.ix.1995 (no. 1372 in PKHH); same data again but Malaise trap, 14.vii–1.viii.1996 (no. 1644 in PKHH); 1 male, SH, Rade, wet meadow, Malaise trap, 12–19.viii.1999, K. Heller (no. 3051); 1 male, same data as previous but 19–26.viii.1999 (no. 3053 in PKHH); 1 male, **GREAT BRITAIN**, England, Leicestershire, Kelham Bridges Nature Reserve S of Ravenstone (SW Coalville), 52˚42'17''N 01˚23'59''W, 124 m, pond shore at moist meadow, sweep-net, 24.viii.2003, F. Menzel (in SDEI); 1 male, Warwickshire, Coombe Abbey Country Park E of Coventry, 52˚24'53''N 01˚25'12''W, 95 m, deciduous forest Ash/oak/maple/elder, sweep-net, 28.viii.2003, F. Menzel (in SDEI); 3 males, **SWEDEN**, Sm, Högsby, Hornsö, Hornsö Kronopark, vicinity of Skärsgölarna, near end of Nya Kringlavägen, birch fen, Malaise trap, 30.vi–10.vii.2004, Swedish Malaise Trap Project (no. 6672 in PKHH, no. 2870, 2871 in SMNH).

Description. See Tuomikoski (1960); for antennal flagellomere 4, see Fig. 84 A, for apical part of front tibia, see Fig. 84 B, for hypopygium, see Figs. 84 C–F.

Discussion. *Corynoptera triacantha* was described from the holotype male from Finland (Tuomikoski 1960) and *C. fritzi* was described from the holotype male from Germany (Rulik *et al.* 2001). We have compared the holotypes and there is no doubt about the conspecificity.

Corynoptera triacantha is similar to *C. andalusica*, *C. angustior, C. gemellata, C. flavosignata, C. hemiacantha, C. membranigera* and *C. patula*. It is distinguished from all by the more comma-shaped gonostylus and by having a gap between the apicalmost and the two more basally placed gonostylar megaseta, from all but *C. membranigera* by its relatively long gonostylar megasetae, and from *C. andalusica, C. hemiacantha* and *C. gemellata* by having the apico-mesial part of the gonostylus impressed. *Corynoptera triacantha* differs from *C. membranigera* by having the megasetae evenly curved, not basally curved but otherwise straight, and by having the two basalmost ones close to each other, not in an equidistant row.

Distribution. **Finland** (Salmela & Vilkamaa 2005, Tuomikoski 1959, Vilkamaa *et al.* 2007), **Germany** (Fritz 1982, Heller 1999, 2002a, Rudzinski 1995, Rulik *et al.* 2001: as *C. fritzi*), **Great Britain** (Menzel *et al.* 2006: as C. *Fritzi*), **Sweden** (Heller *et al.* 2009).

***Corynoptera andalusica* sp. n.**
Figs. 85 A–D

Holotype male. **SPAIN**, Andalusia, Jimena de la Frontera, humid cork oak forest by a brook (*Rubus*, *Olea*, grasses), yellow pan trap, ii.1995, W. Wilden (in SDEI). *Paratypes*. 56 males, same data as holotype (no. 3676, 3677 in PKHH, others in SDEI); 36 males, same data again but iii–iv.1995; 2 males, Andalusia, Jimena de la Frontera, *Eucalyptus* forest with bushes, yellow pan trap, ii–iv.1995, W. Wilden (in SDEI); 8 males, macchia-type, dry, cork oak forest with shrubs, yellow pan trap, iii–iv.1995, W. Wilden (in SDEI); 1 male, 2 females, Huesca, Esplus, bait trap on pig carrion, 10.i–15.iii.1999, M. Castillo Miralbes (in SDEI); 9 males, 3 females, same data as previous but 13.i–15.iv.1999 (in SDEI). *Other material.* 1 male, **GREECE**, Kerkini mountains, Kerkini, Malaise trap, 25.iv–1.v.2005, G. Ramel (no. 6126 in PKHH).

Description. Male. **Head**. Brown, maxillary palpus very pale brown, antenna concolorous with face. Eye bridge 3 facets wide. Face with 8 scattered dark longer and shorter setae. Clypeus with 1 dark seta. Maxillary palpus with 3 palpomeres; palpomere 1 longest, palpomere 2 as long or slightly longer than palpomere 3; palpomere with 1 (2) long sharp seta, with a dorsal patch of sensilla; palpomere 2 with 1(2) long sharp seta and 3–4 shorter truncate setae, flagellomere 3 with 2–3 short truncate setae. Antennal flagellomere 4, Fig. 85 A, 2.8–3.2 times as long as wide, the neck shorter than the width of flagellomere, the longest setae slightly longer than the width of flagellomere. **Thorax**. Unicolorous brown, setae pale. Anterior pronotum with 2–4 setae. Episternum 1 with 4–10 setae. **Wing**. Length 1.2–1.4 mm. Width/length 0.35–0.40. R1/R 0.55–0.70. c/w 0.65–0.70. r-m shorter than bM, r-m/bM 0.80–0.95, both r-m and bM non-setose. Haltere pale brown. **Legs**. Pale yellowish brown. Apical part of front tibia, Fig. 85 B: tibial organ with pale vestiture, forming a comb-like row with a few scattered elements. Front tibial spur slightly longer than the tibial width. **Abdomen**. Brown. Setae pale. **Hypopygium,** Figs. 85 C, D. Brown,

as abdomen. Gonocoxa longer than gonostylus. The ventral setosity of gonocoxa sparse, the setae at the the mesial margin not elongated. Gonostylus elongated, the mesial side slightly impressed on apical third; the setosity sparse, apicomesially with a few elongated setae; without an apical tooth, with 3 megasetae, the megasetae subequal in size, slightly curved. Tegmen simple, broader than long, without a dorsal finger-like process.

Discussion. Corynoptera andalusica is very similar to *C. gemellata* and *C. hemiacantha*. It differs from both by having a broader baso-ventral part of the gonocoxa and by having the gonostylar megasetae equally spaced, not with a gap separating the apicalmost one; also from *C. hemiacantha* by lacking a finger-like process dorsally on the tegmen and from *C. gemellata* by a less distinctly impressed mesial side of the gonostylus and shorter gonostylar megasetae. All the three species are similar to *C. angustior, C. flavosignata, C. patula* and *C. triacantha*. For distinguishing characters, see under *C. patula*, and *C. triacantha*. See also under *C. membranigera* and *C. semipedestris.*

Distribution. **Greece** (this study), **Spain** (Heller & Menzel 2004: as *C. hemiacantha*), (Castillo Miralbes 2002: as *C. semipedestris*).

Etymology. Latinized from the name of the Spanish community where the type locality is situated and means Andalusian.

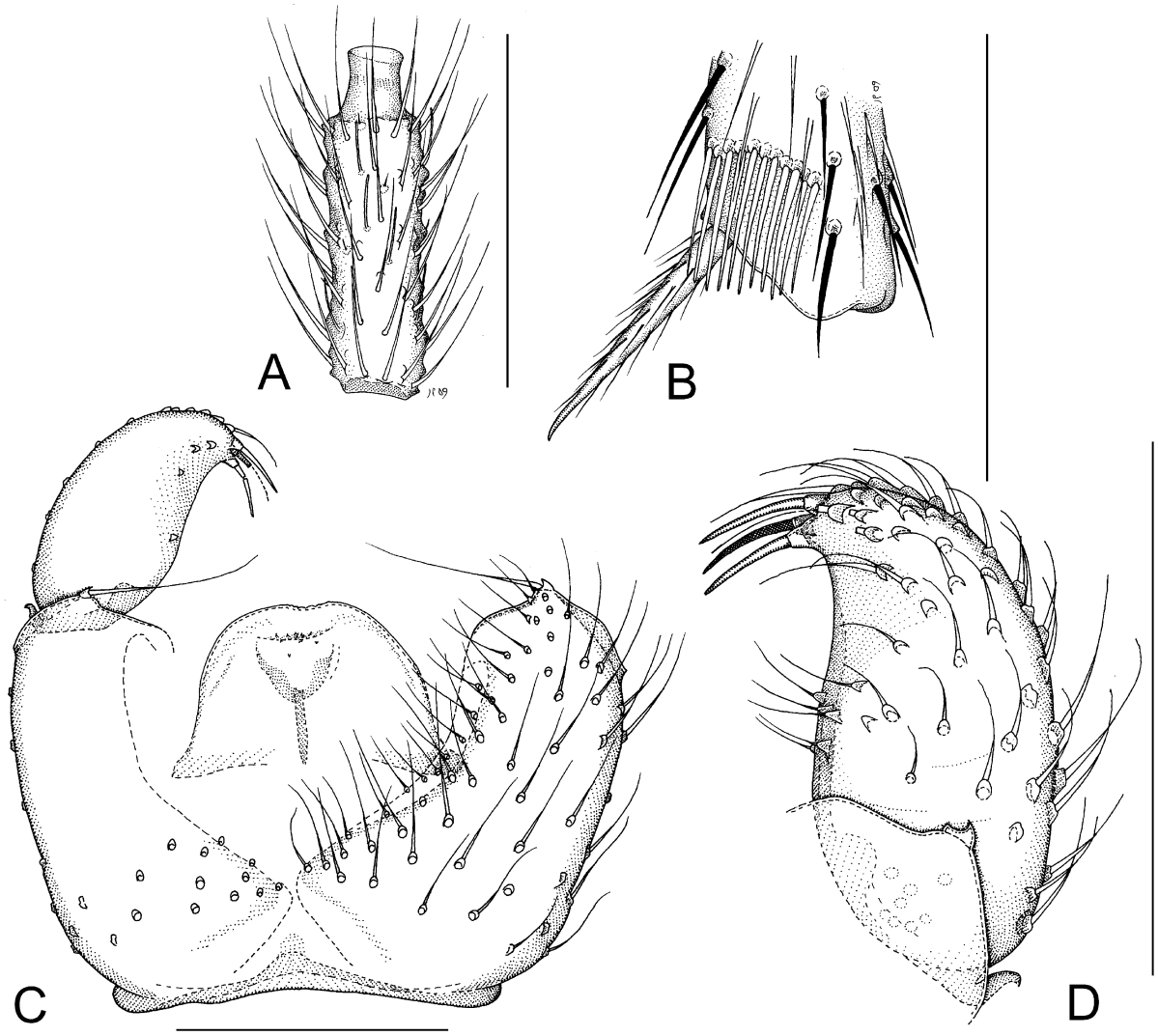

FIGURE 85. *Corynoptera andalusica* sp. n. (holotype). **A.** Antennal flagellomere 4. **B.** Apical part of front tibia, prolateral view. **C.** Part of hypopygium, ventral view. **D.** Gonostylus, ventral view. Scale 0.1 mm.

***Corynoptera gemellata* sp. n.**
Figs. 86 A, B

Material studied. Holotype male. **CZECH REPUBLIC**, Bohemia, Lom u Mostu, small pond with shallow shore and *Typha* vegetation, some willows and wide open fields in the surroundings, small pond, 280 m, 50°35'10"N 13°41'30"E, Malaise trap, 14.v–15.vi.1998, M. Barták (in SDEI). *Paratype*. 1 male, same data as holotype (in SDEI).

Description. Male. **Head**. Brown, maxillary palpus very pale brown, antenna concolorous with face. Eye bridge 3 facets wide. Face with 6–7 scattered dark longer and shorter setae. Clypeus with 1 dark seta. Maxillary palpus with 2–3 palpomeres; palpomere 1 longer than palpomere 2 , palpomere 3 shortest; palpomere 1 with one long sharp seta, with a dorsal patch of sensilla; palpomere 2 with 1 long sharp seta and 3–6 shorter truncate setae, palpomere 3 with 2 short truncate setae. Antennal flagellomere 4 2.1–2.7 times as long as wide, the neck shorter than the width of flagellomere, the longest setae slightly longer than the width of flagellomere. **Thorax**. Unicolorous brown, setae dark. Anterior pronotum with 2 setae. Episternum 1 with 2–3setae. **Wing.** Length 1.1 mm. Width/length 0.35. R1/R 0.50. c/w 0.60–0.65. r-m and bM subequal in length, r-m/bM ca. 1.0, both r-m and bM non-setose. Haltere pale brown. **Legs**. Pale yellowish brown. Front tibial organ with pale vestiture, forming a comb-like row with a few scattered elements. Front tibial spur as long as the tibial width. **Abdomen**. Brown. Setae dark. **Hypopygium,** Figs. 86 A, B. Brown, paler than abdomen. Gonocoxa longer than gonostylus. The ventral setosity of gonocoxa sparse, the setae at the apical part of the mesial margin not elongated. Gonostylus elongated, the mesial side slightly impressed on apical third; the setosity sparse and rather short, apicomesially with a few elongated setae; without an apical tooth, with 3 megasetae, the megasetae subequal in size, long, slender and slightly curved. Tegmen simple, without a dorsal finger-like process.

Discussion. *Corynoptera gemellata* is very similar to *C. andalusica* and *C. hemiacantha* and the species may easily be confused. *Corynoptera gemellata* differs from both by longer gonostylar megasetae and more strongly impressed mesial surface of the gonostylus; also from *C. hemiacantha* by lacking a short finger-like process dorsally on the tegmen and from *C. andalusica* by a narrower baso-ventral part of the gonocoxa. See under *C. patula*. *Corynoptera gemellata* is also similar to *C. angustior, C. flavosignata, C. patula* and *C. triacantha*. For distinguishing characters and additional discussion, see under *C. patula* and *C. triacantha*. See also under *C. membranigera* and *C. semipedestris.*

Etymology. Latin, *gemellata*, doubled, twin-born, referring to the close similarity to *Corynoptera hemiacantha*.

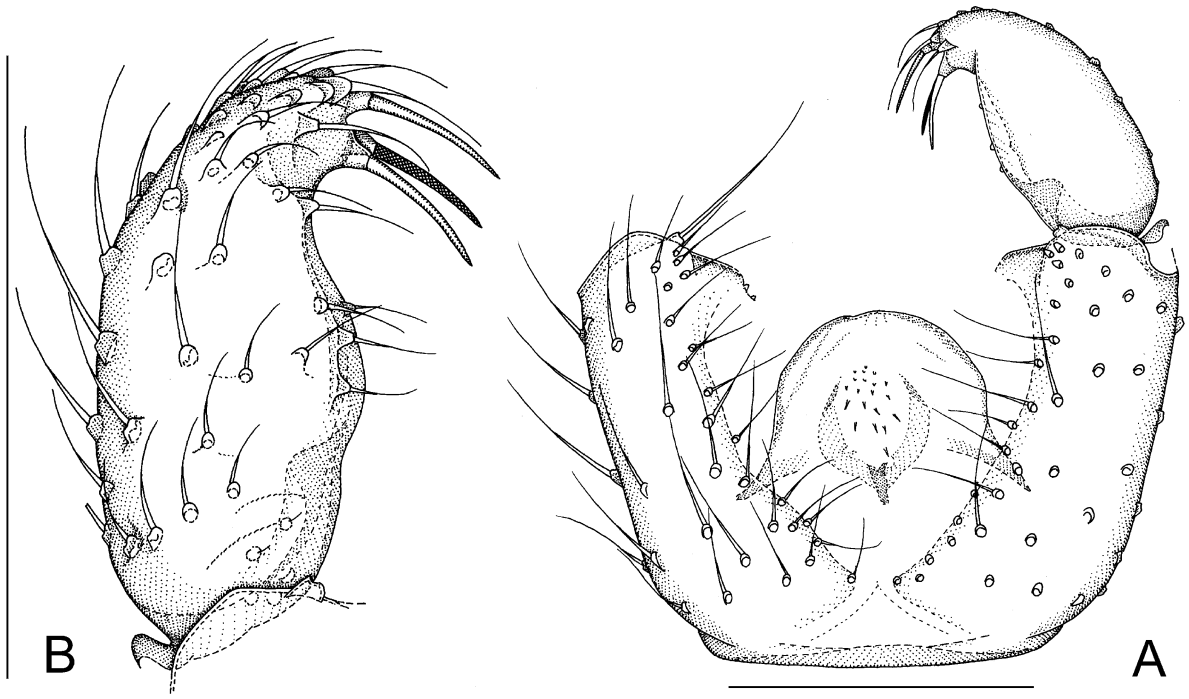

FIGURE 86. *Corynoptera gemellata* sp. n. (holotype). **A.** Part of hypopygium, ventral view. **B.** Gonostylus, ventral view. Scale 0.1 mm.

***Corynoptera hemiacantha* Mohrig & Mamaev, 1992**
Figs. 87 A, B

Corynoptera hemiacantha Mohrig & Mamaev, in Mohrig *et al.*, 1992: 200.

Material studied. 1 male, **BULGARIA**, near Sofia, sweep-net, 2.vi.1987, Dimitrova (holotype, no. 1479 in PWMP); 1 male, **GREECE,** Meteora near Kalambaka, dry grassland with *Quercus suber*, sweep-net, 8–11.v.1993, F. Röschmann (no 2303 in PWMP).

Description. See Mohrig and Mamaev (1992); for hypopygium and gonostylus, see Figs. 87 A and B.

Discussion. Corynoptera hemiacantha was described from a single male. The hypopygium of the holotype is mounted with the dorsal side upwards and the ventral structures are not quite clearly visible. *Corynoptera hemiacantha* is very similar to *C. andalusica* and *C. gemellata*, and to a lesser extent with *C. angustior*, *C. flavosignata*, *C. patula* and *C. triacantha*. It differs from all of these by having a short finger-like process dorsally on the tegmen. For additional discussion, see under *C. andalusica*, *C. gemellata*, *C. patula* and *C. triacantha.* See also under *C. membranigera* and *C. semipedestris.*

Distribution. **Bulgaria** (Mohrig, Dimitrova & Mamaev 1992), **Greece** (Röschmann & Mohrig 1996: as *C. triacantha*), **Hungary** (Rulik *et al.* 2001).

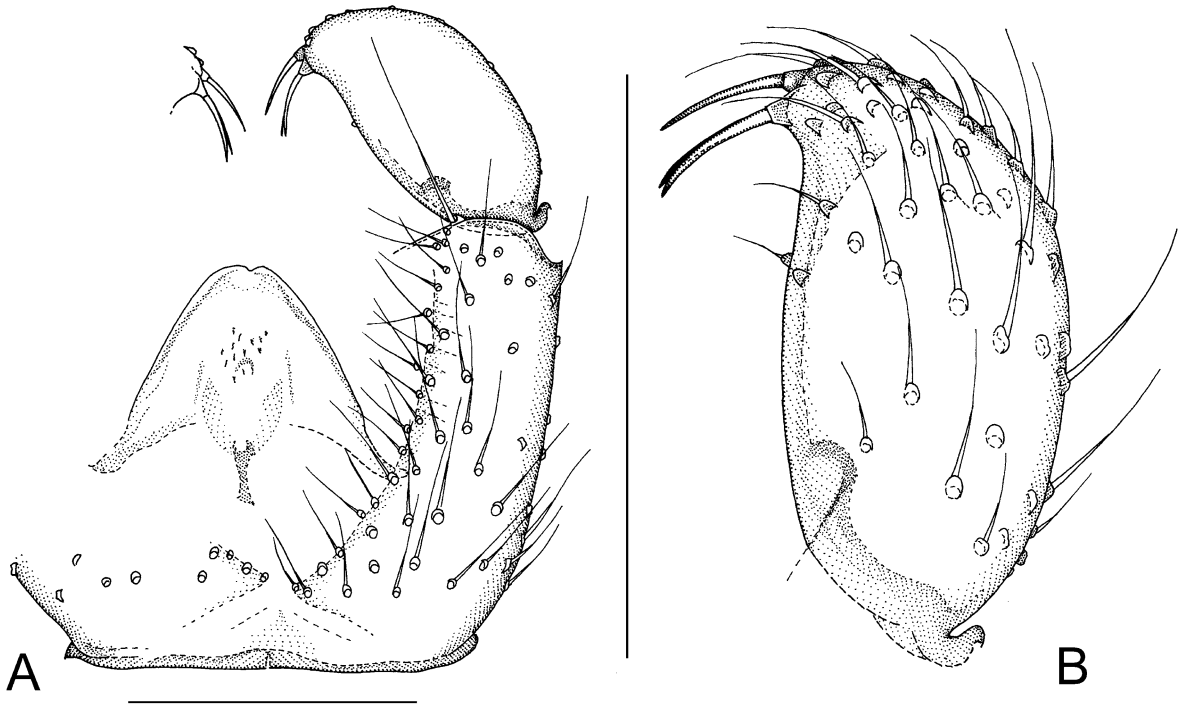

FIGURE 87. *Corynoptera hemiacantha* Mohrig & Mamaev (holotype). **A.** Part of hypopygium, ventral view. **B.** Gonostylus, ventral view. Scale 0.1 mm.

***Corynoptera flavosignata* Menzel & Heller, 2006**
Figs. 88 A–D

Corynoptera flavosignata Menzel & Heller, in Menzel *et al.*, 2006: 32.

Material studied. 1 male, **GERMANY**, TH, Apfelstädter Ried Nature Reserve, meadow with cabbage thistle, yellow pan trap, 1.vii.1985, Weipert (holotype, in SDEI); 4 males, BB, Altkünkendorf, Schorfheide, reed, photoeclector, 24.vii.1995, Nötzold (paratypes, no. 1133, 1135, 1136, 1139 in PKHH); 4 males, 1 female, HE, Upper Rhine, Lampertheim Nature Reserve, 21.v.1979, H.-G. Fritz (no. 2066, 2088, 2100 in PWMP).

Description. See Menzel *et al.* (2006); for antennal flagellomere 4, see Fig. 88 A, for apical part of front tibia, see Fig. 88 B, for hypopygium, see Figs. 88 C and D.

Discussion. *Corynoptera flavosignata* was described from the holotype male from Germany and several paratype males from Czech Republic, Germany and Great Britain. We have not re-studied the British paratypes and it is possible that a proportion of them belong to *C. patula*.

Corynoptera flavosignata is similar to *C. andalusica*, *C. angustior*, *C. gemellata*, *C. hemiacantha*, *C. patula* and *C. triacantha*. It is distinguished from all by having the antennal scapus and pedicellus yellow, not concolorous with the brown antennal flagellum. For additional discussion of distinguishing characters see under *C. patula* and *C. triacantha*. See also under *C. membranigera* and *C. semipedestris*.

Distribution. **Czech Republic** (Menzel *et al.* 2006), **Germany** (Menzel *et al.* 2006), **Great Britain** (Menzel *et al.* 2006).

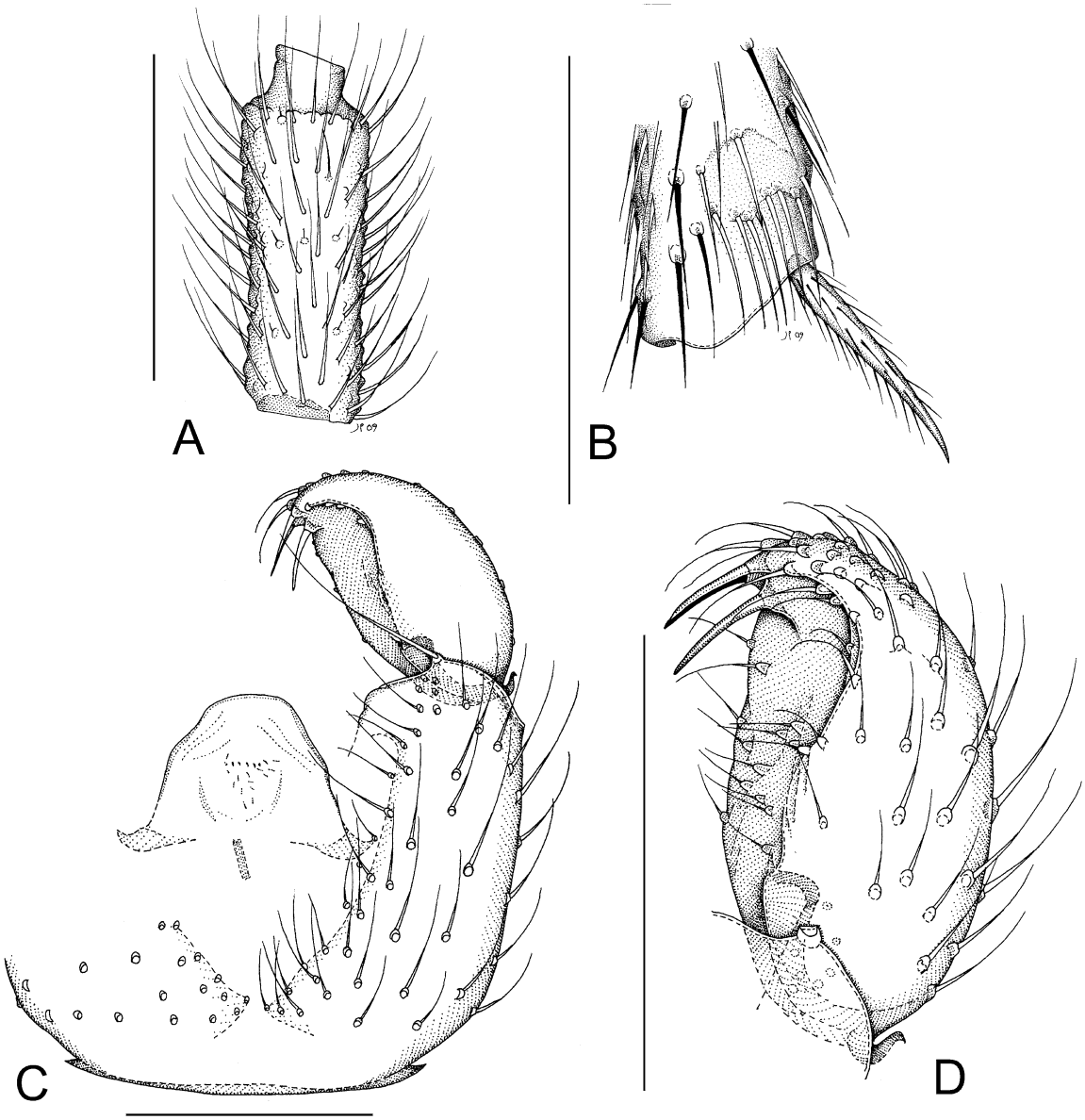

FIGURE 88. *Corynoptera flavosignata* Menzel & Heller (paratypes from Germany). **A.** Antennal flagellomere 4. **B.** Apical part of front tibia, prolateral view. **C.** Part of hypopygium, ventral view. **D.** Gonostylus, ventral view. Scale 0.1 mm.

***Corynoptera patula* sp. n.**
Figs. 89 A–D

Material studied. Holotype male. **GREAT BRITAIN**, England, Wiltshire, Salisbury Plain Training Area, ca. 30 km of Salisbury, 119–125 m, calcareous grassland, sweep-net, 31.v.2003, Ismay & Schulten (in SDEI). *Paratypes*. 5 males, same data as holotype (in SDEI); 3 males, **CZECH REPUBLIC**, Bohemia, Bilina-Štipánov, shore of brook Lutovský, 1 km from Štipánov, 380 m, 50°32'00"N 13°51'30"E, Malaise trap, M. Barták, 25.vi–24.vii.1998 (no. 1574 in PWMP and in SDEI); 1 male, Bohemia, Bilina-Chloumek hill, between Kostolmlaty and Štipánov, 480 m, step at oak forest edge, 50°32'30"N 13°51'30"E, yellow pan trap, 13–14.v.1998, M. Barták (in SDEI); 6 males, **GERMANY**, BW, Malsch, Heckelbachklamm, Malaise trap, 3–17.v.2003, D. Doczkal (no. 7025–7030 in PKHH);1 male, HE, Niederbeisheim, mixed forest with oak, pine and beech, sweep-net, 17.vi.2007, B. Rulik (no. 6691 in PKHH); 1 male, RP, Gönnersdorf, managed grassland with fruit trees, Malaise trap, 14–21.v.1994, K. Cölln (no. 1894 in PKHH); same data but 13.vi.1994, Cölln (no 1906 in PKHH); 1 male, RP, Mürmes Nature Reserve, NW of Ellscheid, mixed forest with beech and oak, sweep-net, 12.vi.1999, F. Menzel (in SDEI); 1 male, ST, Rübeland, Blauer See, mixed forest with spruce and maple, sweep-net, 9.vi.2001, Heller (no. 3421 in PKHH); 1 male, same data as previous but F. Menzel (in SDEI); 2 males, SH, Heikendorf, Korügen, beech forest, yellow dish trap, 27.iv–31.v.2008, K. Heller (no. 6373 in PKHH); 1 male, same data as previous but sweep-net, 28.v.2007 (no. 5567 in PKHH); 1 male, same data again but 30.v.2007 (no. 5572 in PKHH); 2 males, TH, Apfelstädter Ried Nature Reserve, pasture, shore of Waidbach, 25.vii.1985, Weipert (in SDEI); 2 males, TH, Apfelstädter Ried Nature Reserve, soil, *Cirsium oleracea* meadow, 1.vii.1985, Weipert (in SDEI); 1 male, same data as previous but 13.vii.1985; 1 male, TH, Hainich National Park, mixed forest at Thiemsburg, sweep-net, 18.vi.2005, K. Heller (no. 4363 in PKHH); 1 male, TH, Rabis near Jena, dry slope, 26.vi.1993, M. Jaschhof (no. 2182 in PWMP); 2 males, **SWITZERLAND**, ZH, Sihlwald near Zurich, photoeclector, 12.ix.1996, K. Schiegg (no. 2503, 2504 in PKHH); *Other material*. 1 male, **SRI LANKA**, Nuwara Eliya (as Nurelia Ceylon), no other data (in SDEI).

Description. Male. **Head**. Brown, maxillary palpus very pale brown, antenna concolorous with face. Eye bridge 3 facets wide. Face with 5–7 scattered dark longer and shorter setae. Clypeus with 1 dark seta. Maxillary palpus with 3 palpomeres; palpomere 1 longer than palpomere 3, palpomere 2 shortest; palpomere 1 with one long sharp seta, with a dorsal patch of sensilla; palpomere 2 with 1 long sharp seta and 2–5 shorter truncate setae, palpomere 3 with 4–7 short truncate setae. Antennal flagellomere 4, Fig. 89 A, 2.5–3.5 times as long as wide, the neck shorter than the width of flagellomere, the longest setae slightly longer than the width of flagellomere. **Thorax**. Unicolorous brown, setae dark. Anterior pronotum with 2–3 setae. Episternum 1 with 3–8 setae. **Wing.** Length1.5–1.7 mm. Width/length 0.35–0.40. R1/R 0.55–0.75. c/w 0.65–0.80. r-m longer than bM, r-m/bM 1.30–1.75, both r-m and bM non-setose. Haltere pale brown. **Legs**. Pale yellowish brown. Apical part of front tibia, Fig. 89 B: tibial organ with dark vestiture, forming a comb-like row with a few scattered elements. Front tibial spur slightly longer than the tibial width. **Abdomen**. Brown. Setae dark. **Hypopygium,** Figs. 89 C, D. Brown, paler than abdomen. Gonocoxa slightly longer than gonostylus. The ventral setosity of gonocoxa sparse, the setae at the apical part of the mesial margin not elongated. Gonostylus tumid, the mesial side strongly impressed on apical half; the setosity sparse, apicomesially with a few elongated setae; without an apical tooth, with 3 subapical megasetae, the megasetae subequal in size, slender slightly curved. Tegmen simple, without a dorsal finger-like process.

Discussion. Corynoptera patula is very similar to *C. angustior* and *C. flavosignata*. It is distinguished from both by its conspicuously broader gonostylus, from *C. angustior* also by its more robust antennal flagellomeres and from *C. flavosignata* by having the antenna unicolorous brown, not bicolorous with yellow scapus and pedicellus and brown flagellum. All the three species are also similar to *C. andalusica*, *C. gemellata*, *C. hemiacantha* and *C. triacantha*. The three first species differ by having the mesial side of the gonostylus only slightly or not at all impressed, *C. triacantha* differs by having a conspicuous gap between the apicalmost and the two more basally placed gonostylar megasetae and by having the gonostylus comma-shaped, with a narrow apical part. See also under *C. membranigera* and *C. semipedestris.*

Distribution. **Germany** (Heller 1999: as *C. saccata* and *C. irmgardis*), (Menzel *et al.* 2002: as *C. hemiacantha*), **Great Britain** (Menzel *et al.* 2006: as *C. hemiacantha*).

Etymology. The name is Latin, *patula*, broad, referring to the broad gonostylus when compared with the similar *Corynoptera angustior, C. flavosignata* and *C. hemiacantha*.

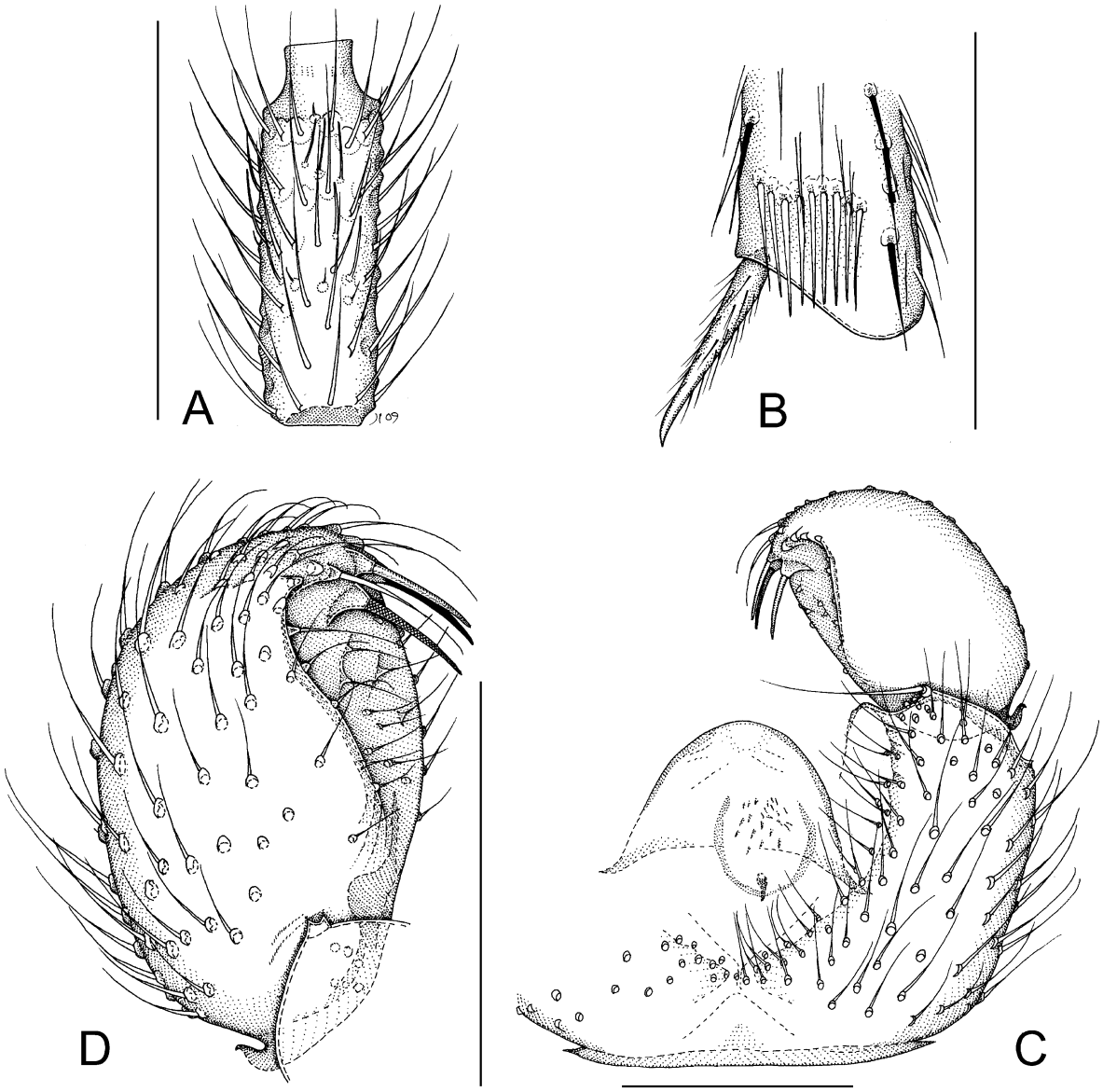

FIGURE 89. *Corynoptera patula* sp. n. (A, C, D holotype, B paratype from Germany). **A.** Antennal flagellomere 4. **B.** Apical part of front tibia, prolateral view. **C.** Part of hypopygium, ventral view. **D.** Gonostylus, ventral view. Scale 0.1 mm.

***Corynoptera angustior* sp. n.**
Figs. 90 A–D

Material studied. Holotype male. **CZECH REPUBLIC**, Bohemia, Horni Lomná, near Mionši, edge of wood, 550 m, YPWT, 49º33'N 18º40'E, Barták (in SDEI). *Paratypes*. 8 males, same data as holotype (in SDEI); 1 male, Bohemia, Bilina, Bezovka wood, 200 m, 50°32'51"N 13°48'13"E, 1.vi.1996, M. Barták (in SDEI); 3 males, **GERMANY**, SH, Flensburg, Marienhölzung, forest, Malaise trap, 12–19.vii.1999, Barkemeyer (no. 2028, 2029 in PKHH); 1 male, 2 females, same data as previous but 26.vii–2.viii.1996 (no. 2042 in PKHH); 2 males, 3 females, same data again but 16–23.viii.1996 (no. 2046, 2047 in PKHH); 1 male, same data again but 27.vi–4.vii.1997 (no. 2895 in PKHH); 2 males, same data again but 25.vii–1.viii.1997 (no. 2899 in PKHH); 2 males, 2 females, same data again but 8–15.viii.1997 (no. 2901, 2902 in PKHH); 1 male, same data again but 26.v–2.vi.1999 (no. 3086 in PKHH); 1 male, same data again but 14–21.vii.1999 (no. 3081 in PKHH).

Description. Male. **Head**. Brown, maxillary palpus very pale brown, antenna concolorous with face. Eye bridge 3 facets wide. Face with 5–7 scattered dark longer and shorter setae. Clypeus with 1–2 dark setae. Maxillary

palpus with 3 palpomeres; palpomeres 1 and 3 subequal in length, or palpomere 3 longer, palpomere 2 shortest; palpomere 1 with one long sharp seta, with a dorsal patch of sensilla; palpomere 2 with 1 long sharp seta and 3–5 shorter truncate setae, palpomere 3 with 4–6 short truncate setae. Antennal flagellomere 4, Fig. 90 A, 2.6–3.5 times as long as wide, the neck shorter than the width of flagellomere, the longest setae longer than the width of flagellomere. **Thorax**. Unicolorous brown, setae dark. Anterior pronotum with 2 setae. Episternum 1 with 4 setae. **Wing.** Length 1.4–1.5 mm. Width/length 035–0.40. R1/R 0.30–0.70. c/w 0.65–0.75. r-m and bM variable in length, r-m/bM 0.95–1.45, both r-m and bM non-setose. Haltere pale brown. **Legs**. Yellow. Apical part of front tibia, Fig. 90 B: tibial organ with dark vestiture, forming a comb-like row with a few scattered elements. Front tibial spur as long as the tibial width. **Abdomen**. Pale brown. Setae dark. **Hypopygium,** Figs. 90 C, D. Brown, paler than abdomen. Gonocoxa longer than gonostylus. The ventral setosity of gonocoxa sparse, the setae at the apical part of the mesial margin not elongated. Gonostylus elongated, the mesial side slightly impressed on apical half; the setosity sparse, apicomesially with a few elongated setae; without an apical tooth, with 3 megasetae, the megasetae subequal in size, slender and slightly curved. Tegmen simple, without a dorsal finger-like process.

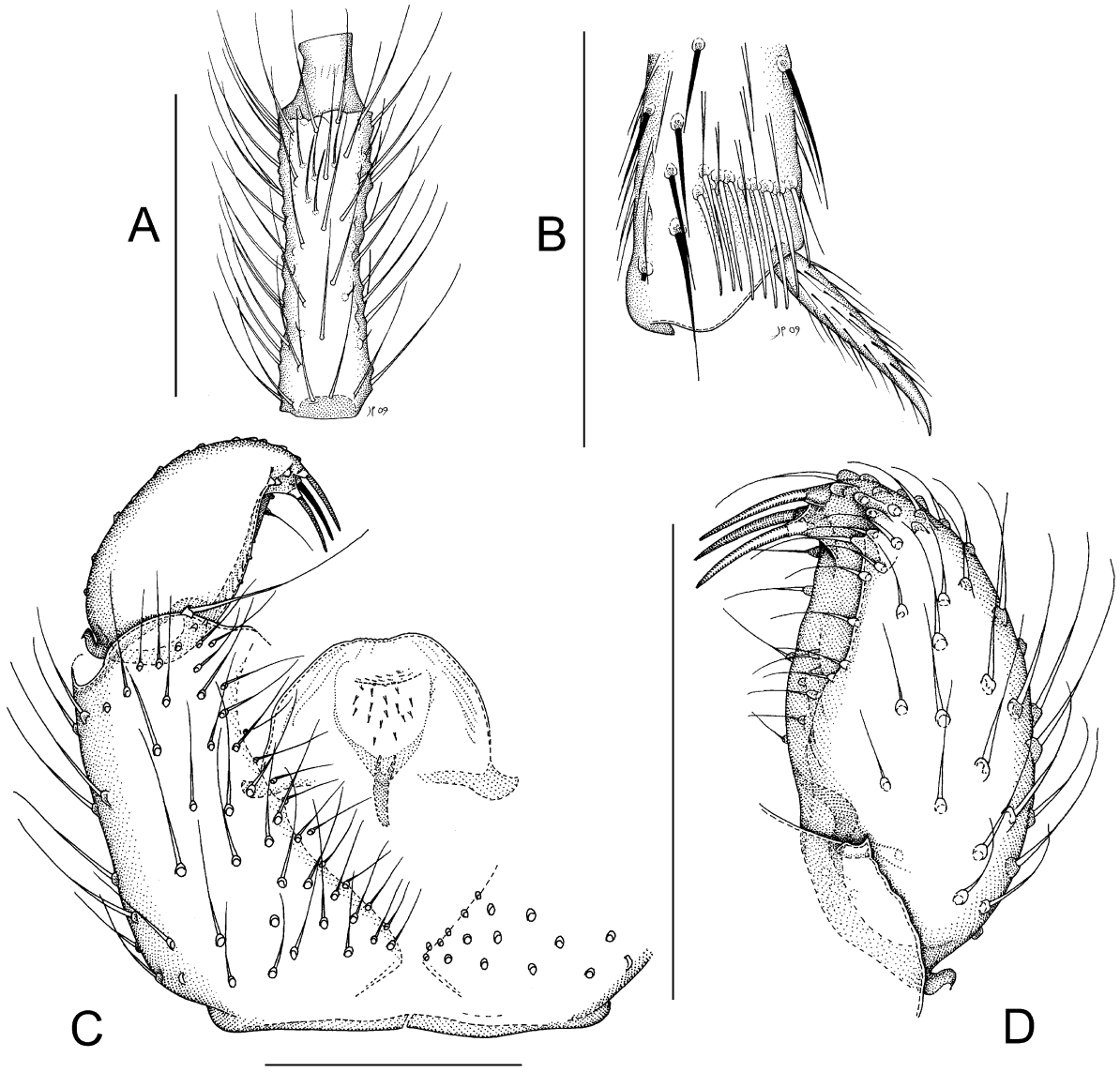

FIGURE 90. *Corynoptera angustior* sp. n. (holotype). **A.** Antennal flagellomere 4. **B.** Apical part of front tibia, prolateral view. **C.** Part of hypopygium, ventral view. **D.** Gonostylus, ventral view. Scale 0.1 mm.

Discussion. In some specimens of *Corynoptera angustior* a very tiny apical tooth is visible on the gonostylus. *Corynoptera angustior* is similar to *C. andalusica, C. angustior, C. flavosignata, C. gemellata, C. hemiacantha,* and *C. patula.* For further discussion, see under *C. patula*. See also under *C. membranigera* and *C. semipedestris.*

Etymology. The name is Latin, *angustior*, narrower, referring to the narrower gonostylus when compared with the similar *Corynoptera patula*.

Corynoptera semipedestris Mohrig & Blasco-Zumeta, 1996

Figs. 91 A, B, C

Corynoptera semipedestris Mohrig & Blasco-Zumeta, 1996: 106.

Material studied. 1 male, **SPAIN**, Monegros region, Zaragoza, Pina de Ebro, Retuerta de Pina, *A. cristati-L. sparti*, colour dish, 25.iii.1991, Blasco-Zumeta (holotype, no. 34 in PWMP).

Description. See Mohrig and Blasco-Zumeta (1996); for antennal flagellomere 4, see Fig. 91 A, for hypopygium, see Figs. 91 B and C.

Discussion. *Corynoptera semipedestris* is known only on the basis of the holotype. *Corynoptera semipedestris* resembles *C. andalusica, C. angustior, C. flavosignata, C. gemellata, C. hemiacantha, C. triacantha* and *C. patula*, especially those without a strongly impressed mesial side of the gonostylus (*C. andalusica, C. gemellata and C. hemiacantha*). It is distinguished from all of these by the ventral setosity of the gonocoxa and gonostylus which is nearly twice as dense as in the other species. With species resembling *C. saccata*, it also differs by the longer and more slender gonostylar megasetae.

Distribution. **Spain** (Mohrig & Blasco-Zumeta 1996)

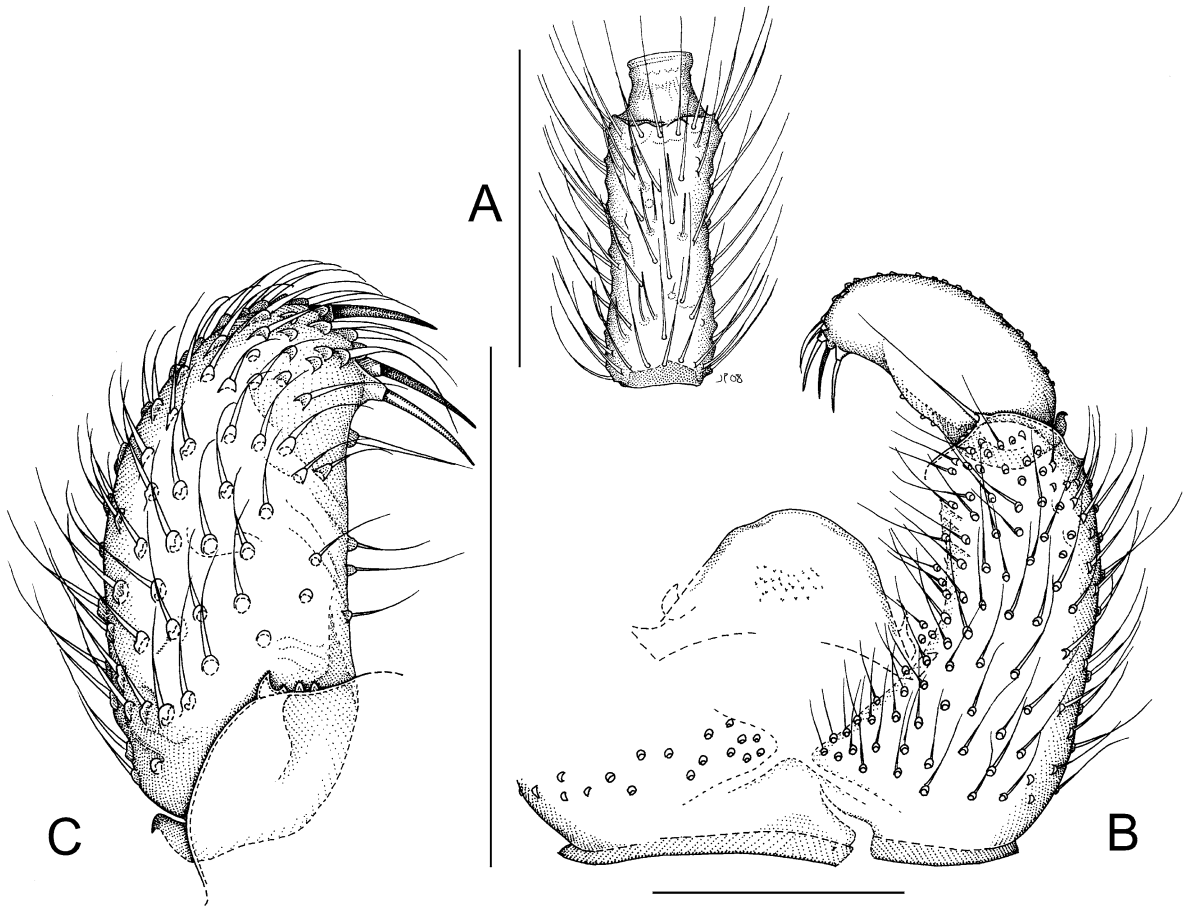

FIGURE 91. *Corynoptera semipedestris* Mohrig & Blasco-Zumeta (holotype). **A.** Antennal flagellomere 4. **B.** Part of hypopygium, ventral view (aedeagal apodeme omitted). **C.** Gonostylus, ventral view. Scale 0.1 mm.

***Corynoptera controversa* sp. n.**
Figs. 92 A–D

Material studied. Holotype male. **RUSSIA**, **Primorsk region**, Suputinsk (= Ussuriysk) Nature Reserve, 23.vi.1969, Krivoshapov (no. 1570 in PWMP).

Description. Male. **Head**. Pale brown, maxillary palpus very pale brown, antenna pale. Eye bridge 3 facets wide. Head in poor condition with not all characters seen. Antennal flagellomere 4, Fig. 92 A, 2.3 times as long as wide, the neck shorter than the width of flagellomere, the longest setae shorter than the width of flagellomere. **Thorax**. Unicolorous brown, setae dark. Anterior pronotum with 3 setae. Episternum 1 with 5 setae. **Wing**. Length 1.4 mm. Wings in poor condition in the specimen, width not measured. R1/R 0.75. c/w 0.75. r-m longer than bM, r-m/bM 1.35, both r-m and bM non-setose. Haltere pale brown. **Legs**. Pale yellowish brown. Apical part of front tibia, Fig. 92 B: tibial organ with dark and fine vestiture, forming a comb-like row. Front tibial spur as long as the tibial width. **Abdomen**. Brown. Setae dark. **Hypopygium,** Figs. 92 C, D. Brown, paler than abdomen. Gonocoxa longer than gonostylus. The ventral setosity of gonocoxa dense, a few of the setae at the apical part of the mesial margin greatly elongated. Gonostylus roundish, the mesial side strongly impressed on apical third; the setosity sparse, apicomesially with a few elongated setae; without an apical tooth, with 2 megasetae, the megasetae subequal in size, straight. Tegmen simple, triangular, without a dorsal finger-like process.

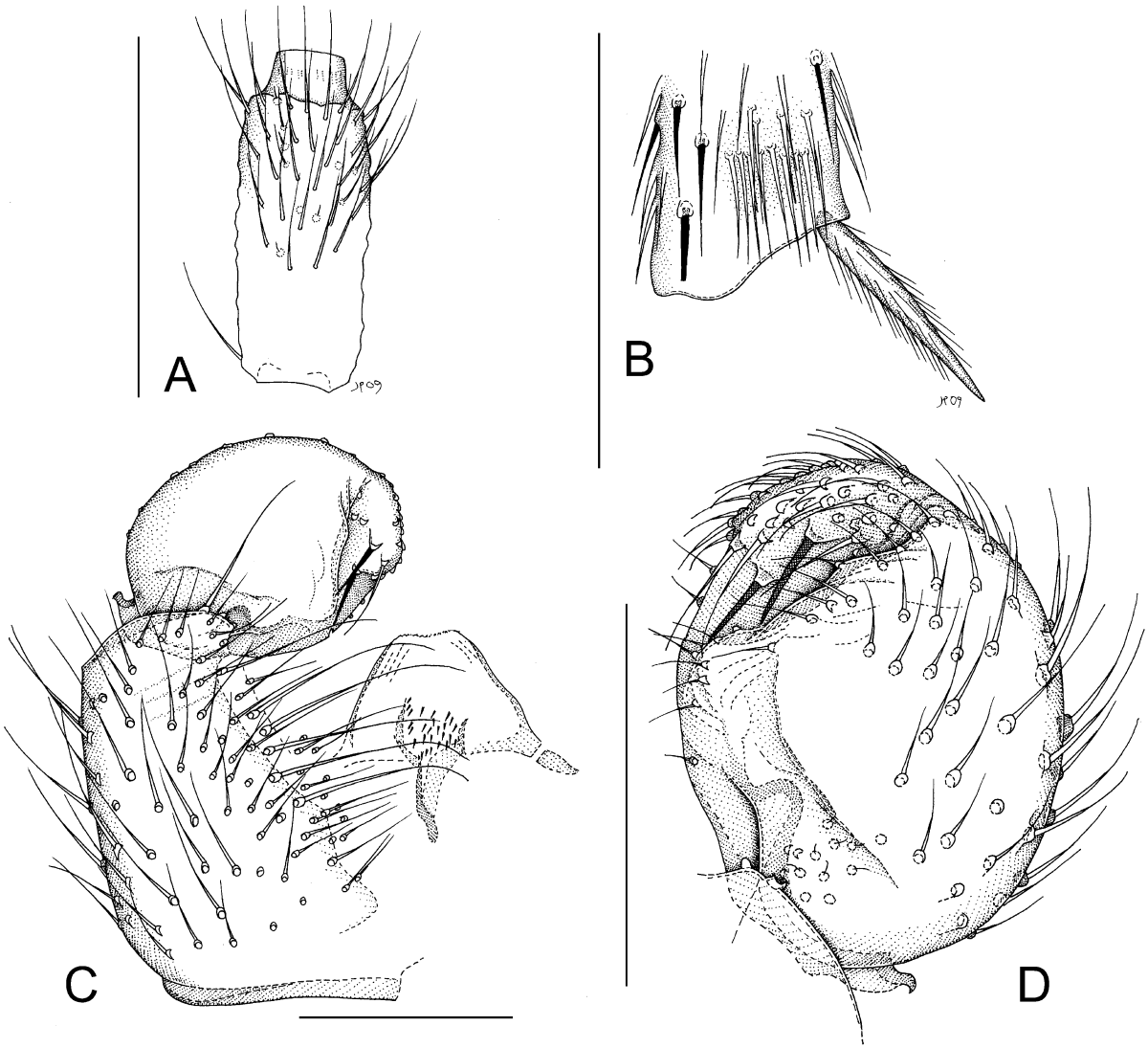

FIGURE 92. *Corynoptera controversa* sp. n. (holotype). **A.** Antennal flagellomere 4. **B.** Apical part of front tibia, prolateral view. **C.** Part of hypopygium, ventral view. **D.** Gonostylus, ventral view. Scale 0.1 mm.

Discussion. By the tumid gonostylus with two subapically placed megasetae and the lack of the apical tooth, *Corynoptera controversa* resembles *C. polana*. It differs by having the gonostylus almost as broad as long, not nearly twice as long as broad as in *C. polana*. The tumid gonostylus has a superficial similarity to *C. flavicauda* and *C. hypopygialis*, but these species have an apical tooth and three megasetae. See also under *C. marinae*.

Etymology. The name is Latin, *controversa*, controversial. It is Werner Mohrig's unpublished name for this species and probably refers to the confusing set of characters in the gonostylus.

Corynoptera marinae Mohrig & Krivosheina, 1986

Figs. 93 A–G

Corynoptera marinae Mohrig & Krivosheina, in Mohrig *et al.*, 1986: 31.

Material studied. 4 males, **FINLAND**, Obb, Tervola, Piilola (7347560: 3406921), 65 m, by a spring, Malaise trap, 28.viii–3.x.2004, J. Salmela (in MZH); 3 males, FINLAND, Obb, Tervola, Ruuttulampi (7347594:3409659), 70 m, by a spring, Malaise trap, 28.viii–3.x.2004, J. Salmela (in MZH); 1 male, same data but 1–28.viii. (in MZH); 2 males, Obb, Sompujärvi (7320427:3415362), 90 m, by a spring, Malaise trap, 1–28.viii.2004, J. Salmela (in MZH); 1 male, Obb, Tervola, Alalaki (7351852:3414388), 80 m, by a spring, Malaise trap, 28.viii–3.x.2004, J. Salmela (in MZH); 1 male, Li, Inari, Tsarmitunturi (7623483: 3555297), 340 m, by a spring, Malaise trap, 1–21.viii.2004, J. Salmela (in MZH); 1 male, Ks, Kalliovaara, spruce/birch/pine forest, Malaise trap, 2–25.viii.2004, Jaschhof (no. 6257 in PKHH); 3 males, Tb, Saarijärvi, W Saaripuro, N Pyhä-Häkki National Park, 62.52°N 25.26°E, 140 m, spruce/birch/alder/pine forest along stream sweep-net, 3.vii.2004, M. Jaschhof (no. 6322 in PKHH and in MZH); 1 male, **RUSSIA**, **Primorsk region**, Ussuriysk Nature Reserve, sweep-net, 14.ix.1968, B. Mamaev (holotype, no. 1473 in PWMP); 1 male, Ussuriysk Nature Reserve, Malaise trap, 30.vi–10.vii.1991, P. Vilkamaa (in MZH); 3 males, same locality but sweep-net, 12.vii.1991, P. Vilkamaa (in MZH); 2 males, same data as previous but 13.vii. (in MZH); 1 male, Kedrovaya Pad Nature Reserve, 18.vii.1991, P. Vilkamaa (in MZH).

Redescription. Male. **Head**. Pale brown, maxillary palpus very pale brown, antenna concolorous with face. Eye bridge 3 facets wide. Face with 10–16 scattered pale setae. Clypeus with 1 pale seta. Maxillary palpus with 3 palpomeres; palpomeres 1 and 3 subequal in length, longer than palpomere 2; palpomere 1 with 1 (rarely 2) long sharp seta, with dorsal patch of sensilla; palpomere 2 with 1(rarely 2) long sharp seta and 3–5 shorter truncate setae, palpomere 3 with 5–6 short truncate setae. Antennal flagellomere 4, Fig. 93 A, 2.4–3.1 times as long as wide, the neck fairly long but shorter than the width of flagellomere, the longest setae longer than width of flagellomere. **Thorax**. Unicolorous brown, setae pale. Anterior pronotum with 2 setae. Episternum 1 with 1–4 setae. **Wing**. Length 1.3–1.5 mm. Width/length 0.40–0.45. R1/R 0.70–0.95. c/w 0.65–0.75. r-m shorter or longer than bM, r-m/bM 0.65–1.15, r-m non-setose or with 2 setae, bM non-setose. **Legs**. Pale yellowish brown. Apical part of front tibia, Fig. 93 B: the modified vestiture dark, forming a comb-like row. Front tibial spur longer than the tibial width. **Abdomen**. Yellowish brown. Setae pale. **Hypopygium,** Figs. 93 C–G. Brown, concolorous with abdomen. Gonocoxa slightly longer than gonostylus. The ventral setosity of gonocoxa rather dense, many setae of the mesial margin strongly elongated. Gonostylus tumid, broadest subapically; the setosity sparse, apicomesially with a few elongated setae; without an apical tooth; with 1 apical and 2 subapical perpendicular slender megasetae, the latter close to each other, both with conspicuous basal bodies.

Discussion. Corynoptera marinae was earlier known only by its holotype and one additional male from the Primorsk region, Russia and by one male from Taiwan (Mohrig *et al.* 1986, Rudzinski 2008). The species is not especially similar to any other species, but resembles somewhat *C. polana* and *C. controversa* by the tumid gonostylus lacking an apical tooth. *Corynoptera marinae* differs by having three gonostylar megasetae instead of two (the third one not visible in Figs. 93 C, D), by having apico-lateral transverse pocket-like structures and a dorsal finger-like process on its tegmen. See also under *C. paracantha*.

Distribution. **Finland** (this study), **Russia, Primorsk region** (Mohrig *et al.* 1986), **Taiwan** (Rudzinski 2008).

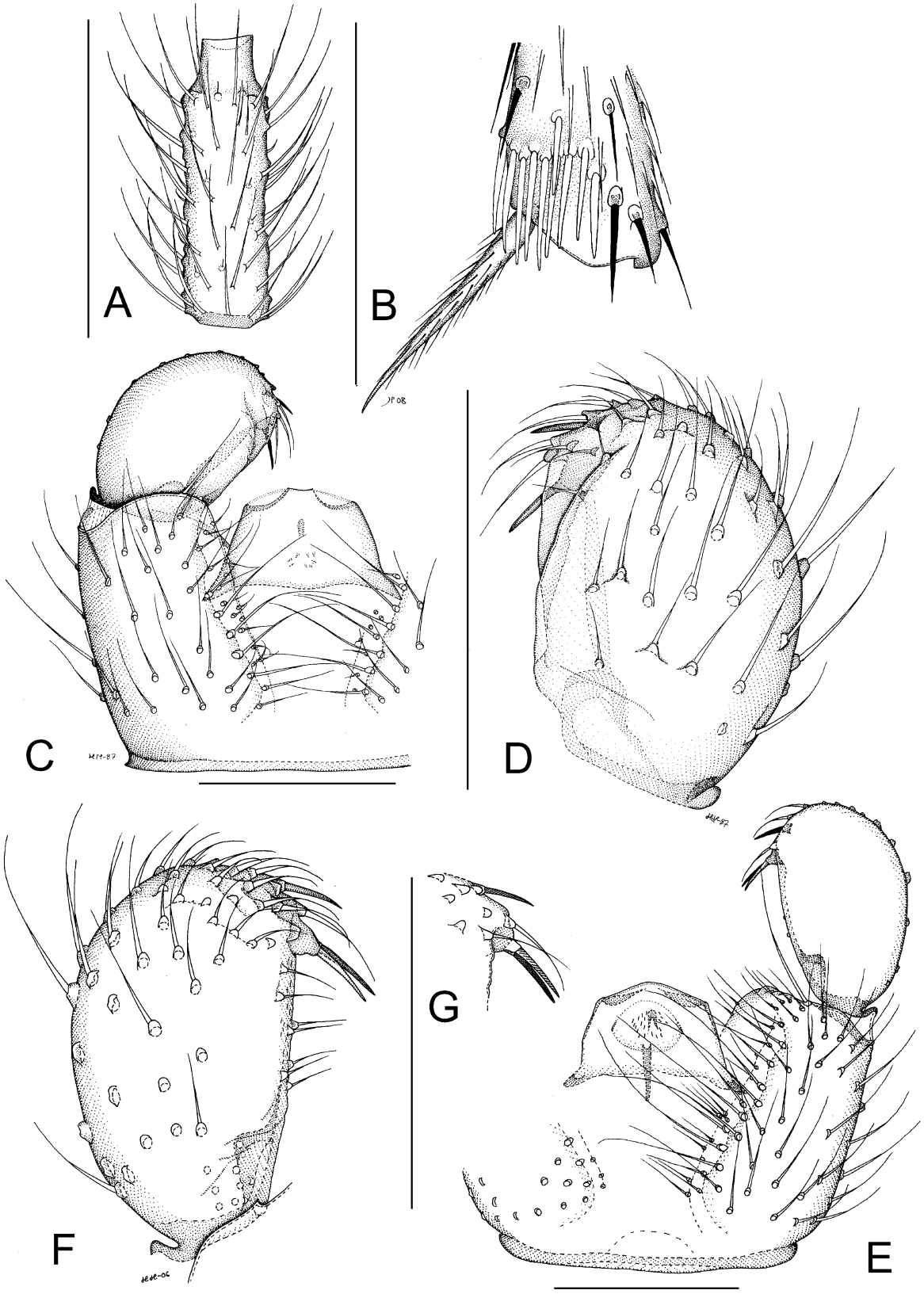

FIGURE 93. *Corynoptera marinae* Mohrig & Mamaev (A, C, D from Russia, Primorsk region, B, G holotype, E, F, G from Finland). **A.** antennal flagellomere 4. **B.** Apical part of front tibia, prolateral view. **C, E**. Part of hypopygium, ventral view (aedeagal apodeme omitted in C). **D, F**. Gonostylus, ventral view. **G.** apex of gonostylus, ventral view. Scale 0.1 mm.

***Corynoptera polana* Rudzinski, 2009**
Figs. 94 A–D

Corynoptera polana Rudzinski, 2009: 39.

Material studied. 1 male, **FINLAND**, N, Espoo, R. Frey (in MZH), 1 male, N, Espoo, 1963, R. Frey (in MZH); 2 males, Oa, Kauhajoki, Kauhaneva (6910078: 3261767), bog, Malaise trap, 8.vi–13.vii.2003, J. Salmela (in MZH); 1 male, same data as previous but 6911038: 3260915, 13.viii–4.x.2003 (in MZH); 4 males, same data again but 6905982: 3259549, 13.viii–4.x.2003 (in MZH); 1 male, Tb, Pyhä-Häkki Nature Reserve, (6974133:3421487), *Pinus sylvestris*, photoeclector, 2006, J. Penttinen (in MZH); 1 male, Ab, Turku, Ruissalo, <100 m, mixed broad-leaf forest, sweep-net, 27.vi.2004, M. Jaschhof (in MZH); 5 males, Ab, Turku, Ruissalo, <100 m, mixed deciduous forest, aspirator, 27.vi.2004, M. Jaschhof (in MZH); 1 male, same data as previous but 28.vi.2004 (in MZH); 1 male, Tb, Saarijärvi, W Saaripuro, N Pyhä-Häkki National Park, 140 m, spruce/birch/alder/pine forest along stream, aspirator, 3.vii.2004, M. Jaschhof (in MZH); 2 males, Kb, Lieksa, Patvinsuo National Park, Autiovaara, 63.08°N 30.37°E, 180 m, spruce/birch/aspen forest, sweep-net and aspirator, 7.vii.2004, M. Jaschhof (in MZH); 1 male, Obb, Kivalo (7358718:3488134), spruce hardwood mire by a brook, Malaise trap, 6.vii–3.viii.2004, J. Salmela (in MZH); 1 male, Li, Inari, Tsarmitunturi, mesotrophic spring, Malaise trap, 6.vii–1.viii.2004, J. Salmela (in MZH); 1 male, Kn, Kuhmo, Elimyssalo Nature Reserve, spruce/birch/aspen forest, sweep-net, 7.viii.2004, M. Jaschhof (no. 6366 in PKHH); 10 males, Kn, Hiidenportti National Park, Porovaara, spruce/birch/aspen forest, sweep-net, 10.vii.2004, M. Jaschhof (in MZH and no. 6456–6459 in PKHH); 6 males, same data as previous but but 11.vii.2004 (no. 6302–6304 in PKHH and 9040–9042 in MZH); 9 males, Kb, Patvinsuo National Park, Autiovaara, spruce/birch/aspen forest, sweep-net, 7.vii.2004, M. Jaschhof (no. 6311, 6312 in PKHH, no. 9044, 9045 in MZH, no. 177 in PASS); 1 male, **GERMANY**, BY, Berchtesgaden National Park, Klaustal, emergence trap, 8.vii.2009, Lehmann (no. 7578 in PKHH); 16 males, 1 female, **RUSSIA**, **Kaliningrad region**, Zehlau, raised bog, pitfall trap, 5.vii.1994, D. Mossakowski (no. 3462–3468, 3481, 3482 in PKHH); 1 male, **Krasnodar region**, 30.vi.1967, B. Mamaev (no. 1567 in PWMP); 1 male, **SLOVAKIA**, Poľana Biosphere Reserve, Zadná Poľana National Nature Reserve, spruce forest, Malaise trap, 6.v–3.vii.2006, J. Roháček & J. Ševčík (holotype, in SMOC); 1 male, Lipovec, beech forest, sweep-net, 3.viii.2007 (no. 5678 in PKHH); 2 males, **SWEDEN**, Sö, Tyresta National Park SE Stockholm, 59º10'N 18º19'E, Malaise trap over *Populus* log, 28.vii–20.ix.2000, B. Viklund, L.-O. Wikars & H. Ahnlund (in SDEI); 2 males, Ög, Ödeshög, Omberg, Storpissan, old Norway spruce wood, Malaise trap, 28.v–5.vii.2005, Swedish Malaise Trap Project (no. 2126, 2127 in SMNH); 1 male, **UKRAINE**, Zakarpatye near Rakhiv, 30.vi.1963, B. Mamaev (no. 1566 in PWMP).

Redescription. Male. **Head**. Brown, maxillary palpus very pale brown, antenna concolorous with face. Eye bridge 2–3 facets wide. Face with 7–10 scattered dark longer and shorter setae. Clypeus non-setose or with 1 dark seta. Maxillary palpus with 3 palpomeres; palpomere 1 longer than palpomere 2, palpomere 3 shortest; palpomere 1 with one long sharp seta, with a dorsal patch of sensilla; palpomere 2 with 1 (rarely 2) long sharp seta and 3–6 shorter truncate setae, palpomere 3 with 4–6 short truncate setae. Antennal flagellomere 4, Fig. 94 A, 2.2–3.1 times as long as wide, the neck shorter than the width of flagellomere, the longest setae longer than the width of flagellomere. **Thorax**. Pale brown, scutum slightly darker, the setae dark. Anterior pronotum with 2–3 setae. Episternum 1 with 2–4setae. **Wing**. Length 1.2–1.4 mm. Width/length 0.45 (rarely 0.40). R1/R 0.55–0.70 c/w 0.65–0.85. r-m and bM variable in length, r-m/bM 0.80–1.25, both r-m and bM non-setose. Haltere pale brown. **Legs**. Pale yellowish brown. The modified vestiture of the front tibial organ dark, forming a comb-like row with a few scattered elements. Front tibial spur slightly longer than the tibial width. **Abdomen**. Brown, paler than thorax. Setae dark. **Hypopygium,** Figs. 94 A, B, C. Brown, paler than abdomen. Gonocoxa slightly longer than gonostylus. The ventral setosity of gonocoxa sparse, a few greatly elongated setae at the apical part of the mesial margin. Gonostylus slightly elongated and apically narrowed, the mesial side slightly impressed on apical third; the setosity sparse, apicomesially with a few elongated setae; without an apical tooth, with 2 megasetae subequal in size, the apical one straight, the subapical curved, the latter on a distinct basal body, on its ventral side a long curved seta. Tegmen simple, without a dorsal finger-like process.

Discussion. Corynoptera polana was recently described from one male from Slovakia (Rudzinski 2009). We have seen the holotype our material is undoubtedly conspecific with it. *Corynoptera polana* is similar to *C. controversa* but has a longer gonostylus, nearly twice as long as broad instead of only slightly longer than broad. *Corynoptera polana* is also similar to *C. marinae* except for having only two gonostylar megasetae. It seems that the ventralmost of the two subapical megasetae in *C. marinae* have been replaced by a characteristic long and curved but otherwise normal seta in *C. polana*. Furthermore, *C. polana* differs from *C. marinae* by lacking the dorsal finger-like process and transverse apico-lateral pocket-like structures on the tegmen. See also under *C. paracantha.*

Distribution. **Finland** (this study), **Russia, Kaliningrad region** and **Krasnodar region** (this study), **Slovakia** (Rudzinski 2009), **Sweden** (this study), **Ukraine** (this study)

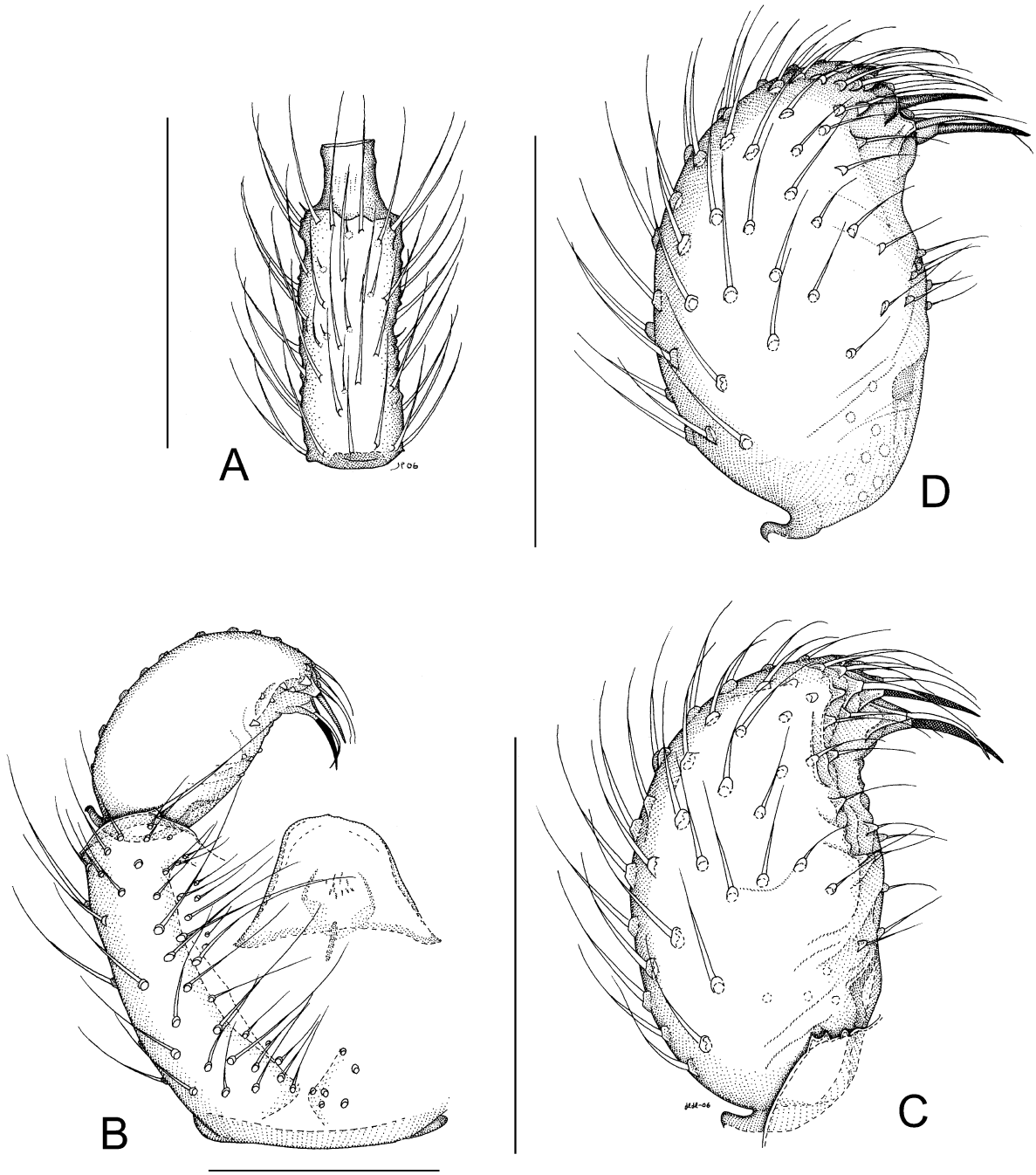

FIGURE 94. *Corynoptera polana* Rudzinski (A, B, C from Sweden, D from Finland). **A.** Antennal flagellomere 4. **B.** Part of hypopygium, ventral view. **C, D.** Gonostylus, ventral view. Scale 0.1 mm.

***Corynoptera paracantha* sp. n.**
Figs. 95 A–D

Material studied. Holotype male. **JAPAN**, Kyushu, Kagoshima, Mt. Shiroyama, xerophyll forest, exhaustor, 17.ix.1995, M. Jaschhof (in SDEI).

Description. Male. **Head**. Brown, maxillary palpus very pale brown, antennal flagellum concolorous with face, scape and pedicel yellow. Eye bridge 3 facets wide. Face with 7 scattered dark longer and shorter setae. Clypeus unclear in the specimens studied. Maxillary palpus with 3 palpomeres; palpomeres 1 and 3 subequal in length, palpomere 2 shorter; palpomere 1 with one long sharp seta, with a dorsal patch of sensilla; palpomere 2 with 1 long sharp seta and 3–4 shorter truncate setae, palpomere 3 with 5–6 short truncate setae. Antennal flagellomere 4, Fig. 95 A, 1.4–1.7 times as long as wide, the neck very short, the longest setae slightly shorter than the width of flagellomere. **Thorax**. Yellow, scutum slightly darker. Setae dark. Anterior pronotum with 2–4 setae. Episternum 1 with 2–3 setae. **Wing**. Length 0.8 mm. Width/length 0.50. R1/R 0.55–0.70. c/w 0.60. r-m slightly shorter than bM, r-m/bM 0.85, both r-m and bM non-setose. Haltere pale brown. **Legs**. Yellow. Apical part of front tibia, Fig. 95 B: tibial organ with dark vestiture, forming a comb-like row with a few scattered elements. Front tibial spur slightly longer than the tibial width. **Abdomen**. Brown. Setae dark. **Hypopygium,** Figs. 95 C, D. Pale brown. Gonocoxa slightly longer than gonostylus. The ventral setosity of gonocoxa sparse, a few of the setae at the apical part of the mesial margin greatly elongated. Gonostylus tumid, the mesial side slightly impressed on apical third; the setosity sparse, apicomesially with a few elongated setae; without an apical tooth, with 3 megasetae, the megasetae subequal in size, slightly curved. Tegmen slightly broader than long, modified with roundish dorsal apicolateral shoulders, medial apicoventral process, and a short dorsal finger-like process, and a long aedeagus.

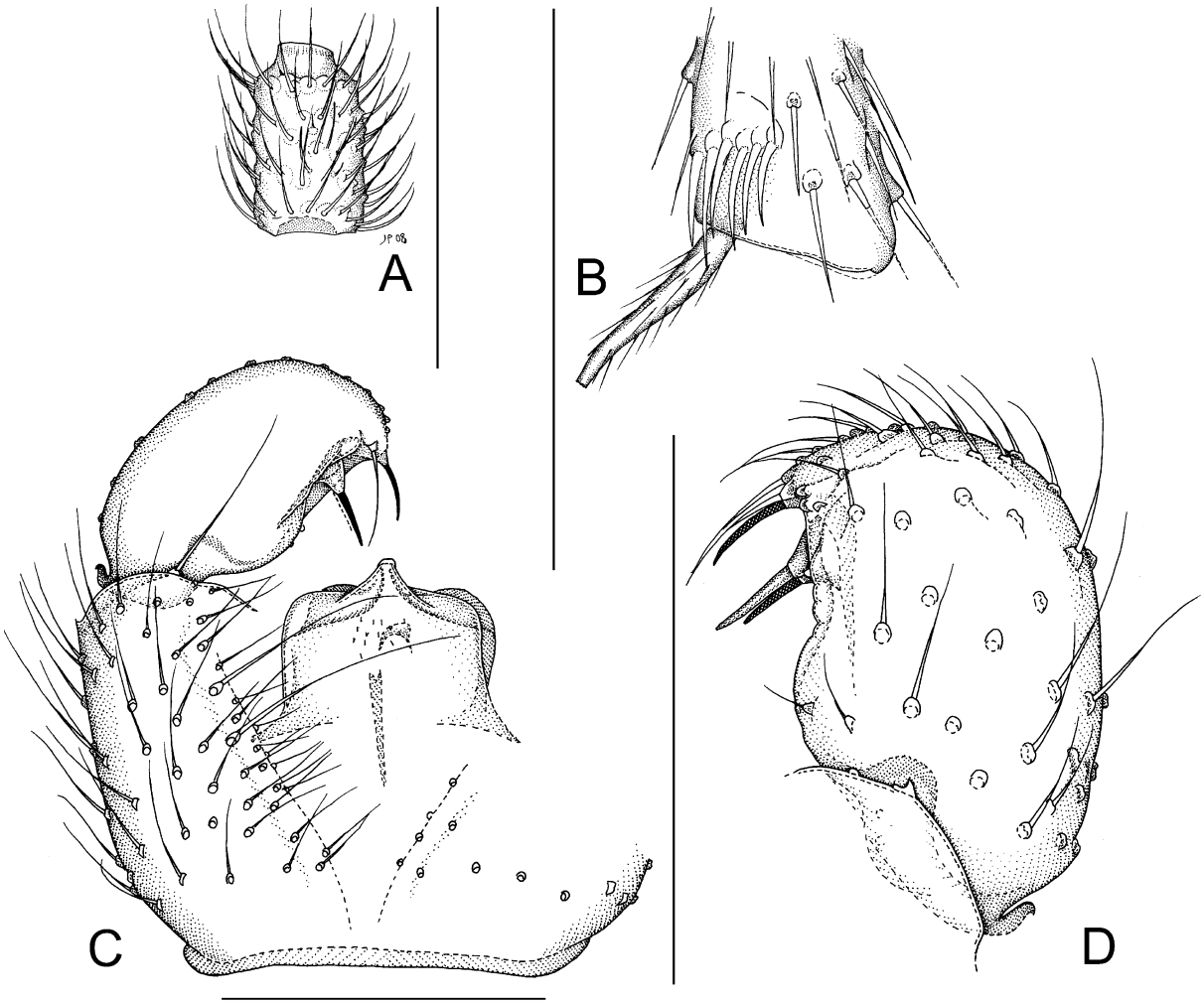

FIGURE 95. *Corynoptera paracantha* sp. n. (holotype). **A.** Antennal flagellomere 4. **B.** Apical part of front tibia, prolateral view. **C.** Part of hypopygium, ventral view. **D.** Gonostylus, ventral view. Scale 0.1 mm.

Discussion. *Corynoptera paracantha* is very similar to *C. collicola*, with both the shape of gonostylus and tegmen, and by the antenna with a bright yellow scape and pedicel and short flagellomeres. The two species can be distinguished by the number and shape of the megasetae: *C. paracantha* has three megasetae, one apical and two subapical ones, whereas *C. collicola* has one apical and one subapical, which is longer, procurved and apically tapered. Both the species are also similar to *C. marinae* and in to a lesser extent *C. polana* by their tumid gonostylus, *C. paracantha* being similar to *C. marinae* by having three gonostylar megasetae, *C. collicola* to *C. polana* with its two gonostylar megasetae. Both species differ from *C. marinae* and *C. polana* e.g. by having strong postero-lateral shoulders and a posteromedial lobe on the tegmen. See also under *C. anodon*.

Etymology. The name is derived from the Greek words *para* (near, beside, by) and *akantha*, thorn, referring to the closely placed mesial megasetae on the gonostylus.

***Corynoptera collicola* sp. n.**
Figs. 96 A–D

Material studied. *Holotype male*. **JAPAN**, Kyushu, Kagoshima, Mt. Terayama, mixed xerophyll forest (*Cryptomeria japonica*), exhaustor, sweep-net, 17.ix.1995, M. Jaschhof (in SDEI).

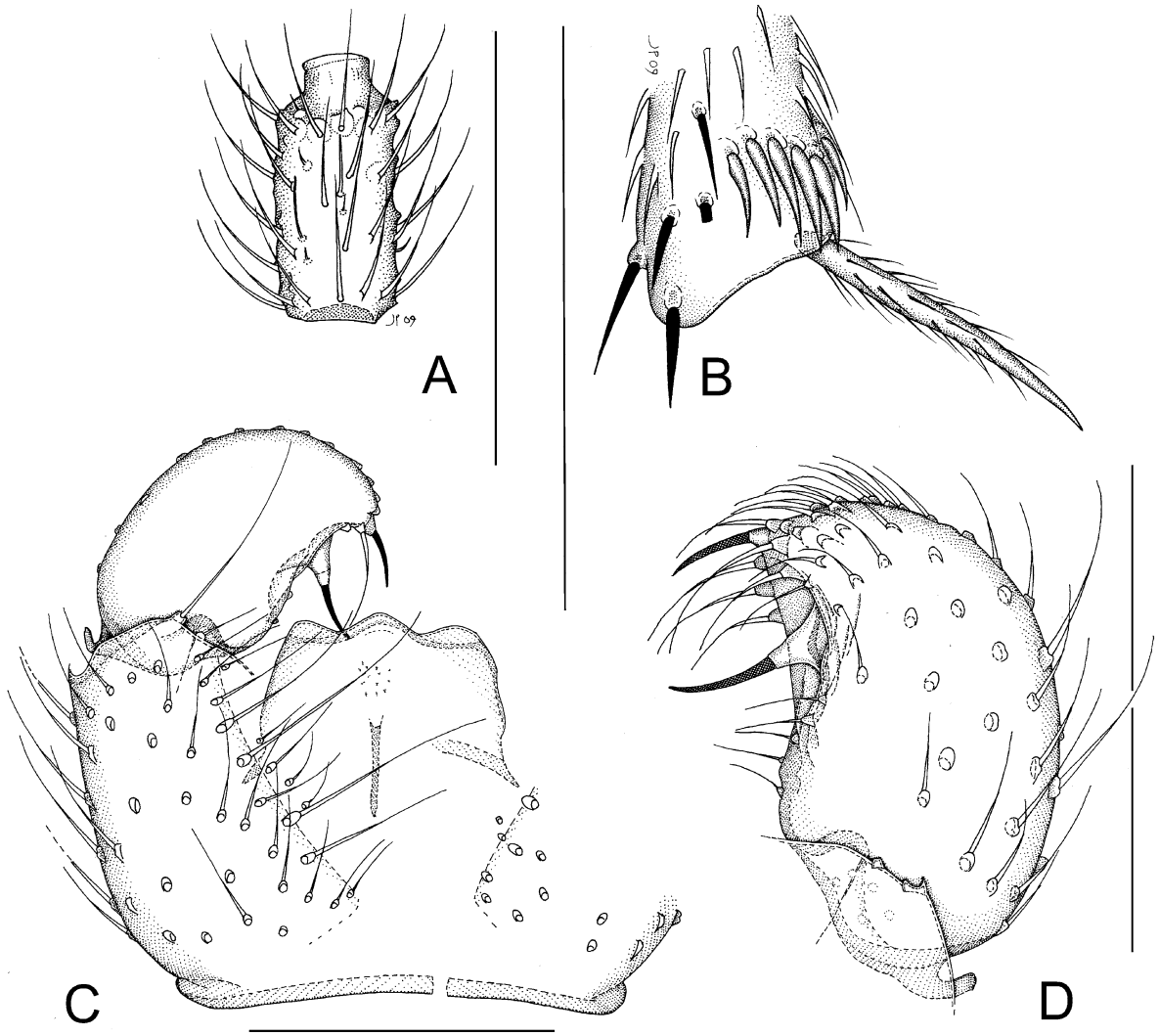

FIGURE 96. *Corynoptera collicola* sp. n. (holotype). **A.** Antennal flagellomere 4. **B.** Apical part of front tibia, prolateral view. **C.** Part of hypopygium, ventral view. **D.** Gonostylus, ventral view. Scale 0.1 mm.

Description. Male. **Head**. Brown, maxillary palpus very pale brown, scape and pedicel of antenna yellow, flagellomeres concolorous with face. Eye bridge 3 facets wide. Setae of face and clypeus not very visible in the

specimen studied. Maxillary palpus with 3 palpomeres; palpomeres 1 and 3 subequal in length, palpomere 2 shorter; palpomere 1 with one long sharp seta, with a dorsal patch of sensilla; palpomere 2 with 1 long sharp seta and 4 shorter truncate setae, palpomere 3 with 5 short truncate setae. Antennal flagellomere 4, Fig. 96 A, 1.9 times as long as wide, the neck shorter than the width of flagellomere, the longest setae slightly shorter than the width of flagellomere. **Thorax**. Yellowish brown, setae dark. Anterior pronotum with 2 setae. Episternum 1 with 3 setae. **Wing**. Length 1.0 mm. Width/length 0.60. R1/R 0.80. c/w 0.70. r-m and bM subequal in length, r-m/bM ca. 1.0, both r-m and bM non-setose. Haltere pale brown. **Legs**. Yellow. Apical part of front tibia, Fig. 96 B: tibial organ with dark vestiture, forming a short comb-like row with a few scattered elements. Front tibial spur slightly longer than the tibial width. **Abdomen**. Pale brown. Setae dark. **Hypopygium,** Figs. 96 C, D. Yellow, paler than abdomen. Gonocoxa slightly longer than gonostylus. The ventral setosity of gonocoxa sparse, a few of the setae at the apical part of the mesial margin greatly elongated. Gonostylus tumid, the mesial side slightly impressed on apical third; the setosity sparse and rather short, apicomesially with a few elongated setae; without an apical tooth, with 2 megasetae, the apicalmost recurved, the basalmost megaseta slightly larger, procurved, on a distinct basal body. Tegmen without a dorsal finger-like process.

Discussion. See under *Corynoptera paracantha.*

Etymology. The name is composed of the Latin words *collis*, hill, and *-cola*, inhabitant, referring to the type locality on a mountain.

***Corynoptera bipartita* Mohrig & Krivosheina, 1985**

Figs. 97 A–G

Corynoptera bipartita Mohrig & Krivosheina, in Mohrig *et al.*, 1985: 252
Corynoptera bisulca Mohrig & Mamaev, in Mohrig *et al.*, 1987: 96. **New synonymy**.

Material studied. 1 male, **FINLAND**, Ab, Karjaa (66714:33219), Prästkärret, by spring, thinned spruce forest, Malaise trap, 22.vi–3.vii.1999, J. Ilmonen (in MZH); 4 males, Ta, Lammi, Evo, Kotinen Nature Reserve Malaise trap, 5–27.vii.2004, Yakovlev (in MZH); 1 male, same data as previous but 22.vii–12.viii.204 (in MZH); 2 males, Sb, Kangaslampi, Malaise trap, 17–29.vii.2004, N. Laurenne (in MZH); 2 males, Ks, Taivalkoski, Oikarinoja (7253200:3562178), puro, 1.vi–3.vii.2006, J. Salmela (in MZH); 1 male, Obb, Tervola, Hirviaapa (7347480:3418500), 65 m, *Scorpium* fen, by spring, Malaise trap, 28.vi–3.viii.2004 (in MZH); 1 male, Tb, Saarijärvi, W Saaripuro, N Pyhä-Häkki National Park, 140 m, spruce/birch/alder/pine forest along stream, aspirator, 3.vii.2004, M. Jaschhof (no. 6432–6434 in PKHH, 9118–9119 in MZH); 1 male, Kb, Patvinsuo National Park, Autiovaara, spruce/birch/aspen forest, sweep-net, 7.vii.2004, M. Jaschhof (no. 9046 in MZH); 2 males, Ab, Turku, Ruissalo, 60.26°N 22.11°E, <100 m, mixed deciduous forest, sweep-net, 27.vi.2004, M. Jaschhof (no. 9153 in MZH, 6418 in PKHH); 1 male, Kb, Lieksa, Koivusuo Strict Nature Reserve, spruce/birch/aspen forest, Malaise trap, 16.vi–15.vii.2004, M. Jaschhof (no. 6282 in PKHH); 1 male, Ab, Vihti, Salmi, bushes along forest edge, sweep-net, 27.v.2004, M. Jaschhof (no 181 in PASS); 1 male, Ta, Seitseminen N. P., Kuru, N Pitkäjärvi, birch/pine swamp, Malaise trap, 1.vii–24.viii.2004, M. Jaschhof (no. 6479 in PKHH); 1 male, Hiidenportti National Park, Porovaara, spruce/birch/aspen forest, sweep-net, 10.vii.2004, M. Jaschhof (no. 6455 in PKHH); 1 male, **JAPAN**, Kyushu, Kagoshima Pref., Mt. Kinpou, sclerophyll forest, 600 m, sweep-net, 18.ix.1995, M. Jaschhof (in SDEI); 1 male, Oita Pref., Taketa, sclerophyll forest, bamboo, sweep-net, 13.x.1995, M. Jaschhof (in SDEI); 1 male, Oita Pref., Saganoseki, sclerophyll forest, exhaustor, 16.x.1995, M. Jaschhof (in SDEI); 3 males, Shikoku, Kochi Pref., Kochi City, Asakura, Asakura Shrine, dry evergreen deciduous forest, 100 m, sweep-net, 6.xi.1998, M. Jaschhof (in KUEC); 1 male, Honshu, Hyogo Pref., Mt. Hyonosen, deciduous forest (*Fagus crenatus* and bamboo), 1200 m, sweep-net, 28.ix.1995, M. Jaschhof & Yagi (in SDEI); 1 male, **RUSSIA**, **Amur region**, Seya Nature Reserve, mixed forest with birch, sweep-net, 9.vi.1982, N. Krivosheina (holotype, in PWMP); 1 male, **Tuva**, Ishtii-Khem, 11.vi.1974, B. Mamaev (holotype of *C. bisulca*, in PWMP); 1 male, **Primorsk region**, Sakhalin, Kholmsk, Pionery, 22–26.vi.1993, S. Kholin & A. Nilsson (in SMNH); 1 male, 35 km SE Tshuguevka, 31.v.1993, L. Zerche (in SDEI); 2 males, **Vologda region**, Kadnikov, mixed forest, sweep-net, 8.vii.1962, N. Krivosheina (no. 2179 in PWMP).

Description. See Mohrig *et al.* (1985, 1987); for antennal flagellomere 4, see Fig. 97 A, for apical part of front tibia, see Fig. 97 B, for hypopygium, see Figs. 97 C–G.

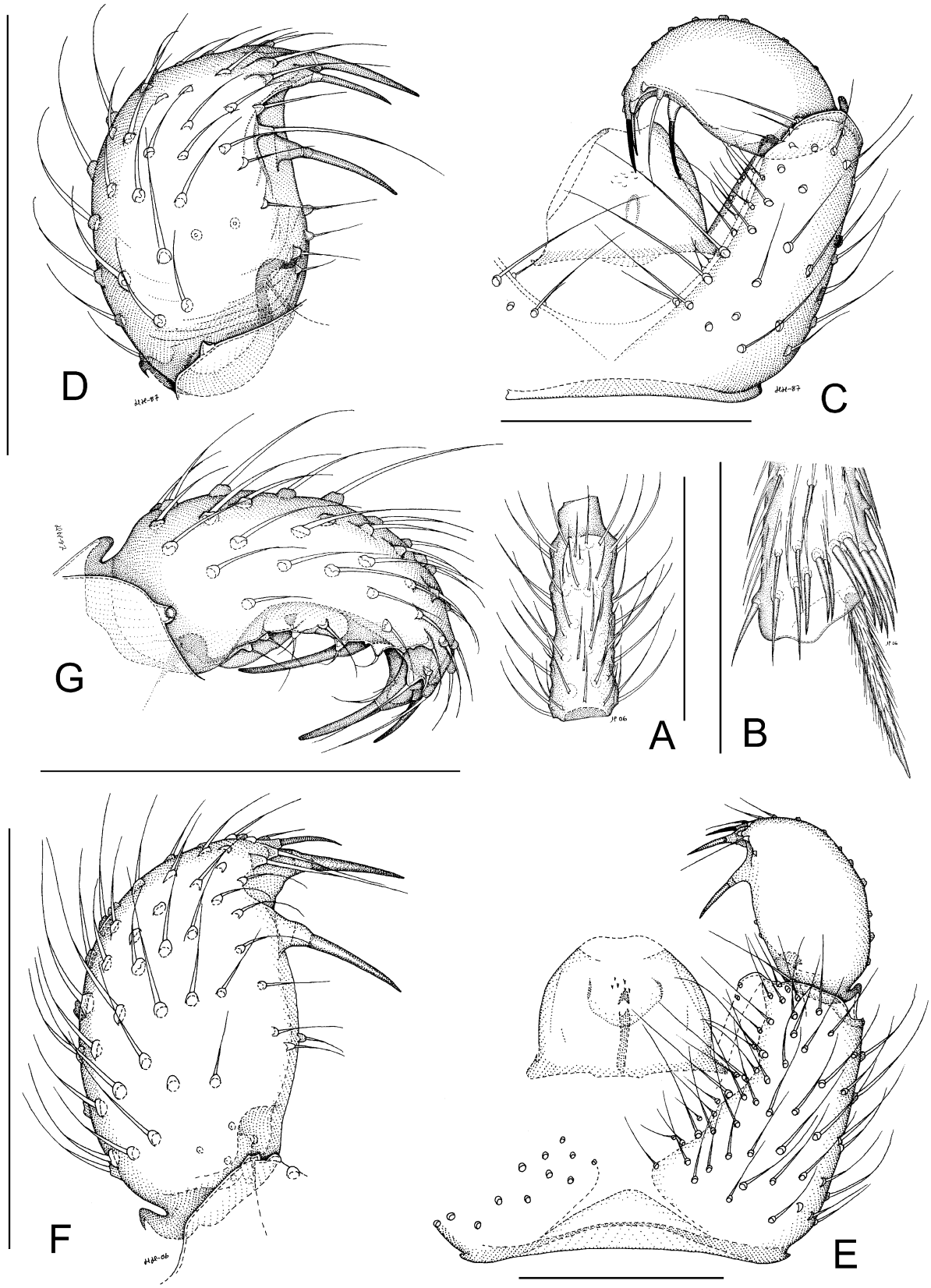

FIGURE 97. *Corynoptera bipartita* Mohrig & Krivosheina (A, B, F, E from Finland, C, D from Russia, G holotype of *C. bisulca* Mohrig & Mamaev). **A.** Antennal flagellomere 4. **B.** Apical part of front tibia, prolateral view. **C, E.** Part of hypopygium, ventral view (aedeagal apodeme omitted in C). **D, F, G.** Gonostylus, ventral view. Scale 0.1 mm.

Discussion. *Corynoptera bipartita* was described from the holotype male from the Amur region, Russia (Mohrig *et al.* 1985), and *C. bisulca* was described from the holotype, paratype and one additional male from the Tuva

republic, Russia (Mohrig *et al.* 1987). We have compared the holotypes and there is no doubt about the synonymy. For distinguishing the species, see under *C. adustula* and *C. anodon.*

Distribution. **Finland** (this study), **Germany** (Rudzinski 2006), **Japan** (Sasakawa 2003), **Russia, Tuva** (Mohrig *et al.* 1987), **Russia, Amur region** (Mohrig *et al.* 1985b), **Primorsk region** and **Vologda region** (this study).

***Corynoptera anodon* sp. n.**
Figs. 98 A, B

Material studied. Holotype male. **JAPAN**, Ryukyu Islands, Okinawa Pref., Iriomote Island, Funaura, sclerophyll forest, exhaustor, 5–6.x.1995, M. Jaschhof (in SDEI). *Paratype.* 1 male, same data as holotype (in SDEI).

Description. Male. **Head**. Brown, maxillary palpus very pale brown, antenna concolorous with face. Eye bridge 3 facets wide. Face with 4–7 scattered dark longer and shorter setae. Clypeus non-setose. Maxillary palpus with 3 palpomeres; palpomere 1 longer than palpomere 3, palpomere 2 shortest; palpomere 1 with one long sharp seta, with a dorsal patch of sensilla; palpomere 2 with 1 long sharp seta and 2–3 shorter truncate setae, palpomere 3 with 4–5 short truncate setae. Antennal flagellomere 4 2.1–2.3 times as long as wide, the neck shorter than the width of flagellomere, the longest setae slightly longer than the width of flagellomere. **Thorax**. Scutum pale brown, pleura yellow, setae dark. Anterior pronotum with 2 setae. Episternum 1 with 2 setae. **Wing**. Length 0.9 mm. Width/length 0.40. R1/R 0.65. c/w 0.80. r-m longer than bM, r-m/bM 1.25, both r-m and bM non-setose. Haltere pale brown. **Legs**. Pale yellowish brown. Front tibial organ with dark vestiture, forming a comb-like row. Front tibial spur slightly longer than the tibial width. **Abdomen**. Tergite pale brown, otherwise yellow. Setae dark. Hypopygium, Figs. 98 A, B. Brown, concolorous with abdomen. Gonocoxa slightly longer than gonostylus. The ventral setosity of gonocoxa sparse, a few of the setae at the apical part of the mesial margin greatly elongated. Gonostylus narrowed apically; the setosity sparse, apicomesially with a few elongated setae; without an apical tooth, with 3 megasetae, the two mesial megasetae close to each other, subequal in size, the lateral one smaller. Tegmen with a dorsal finger-like process.

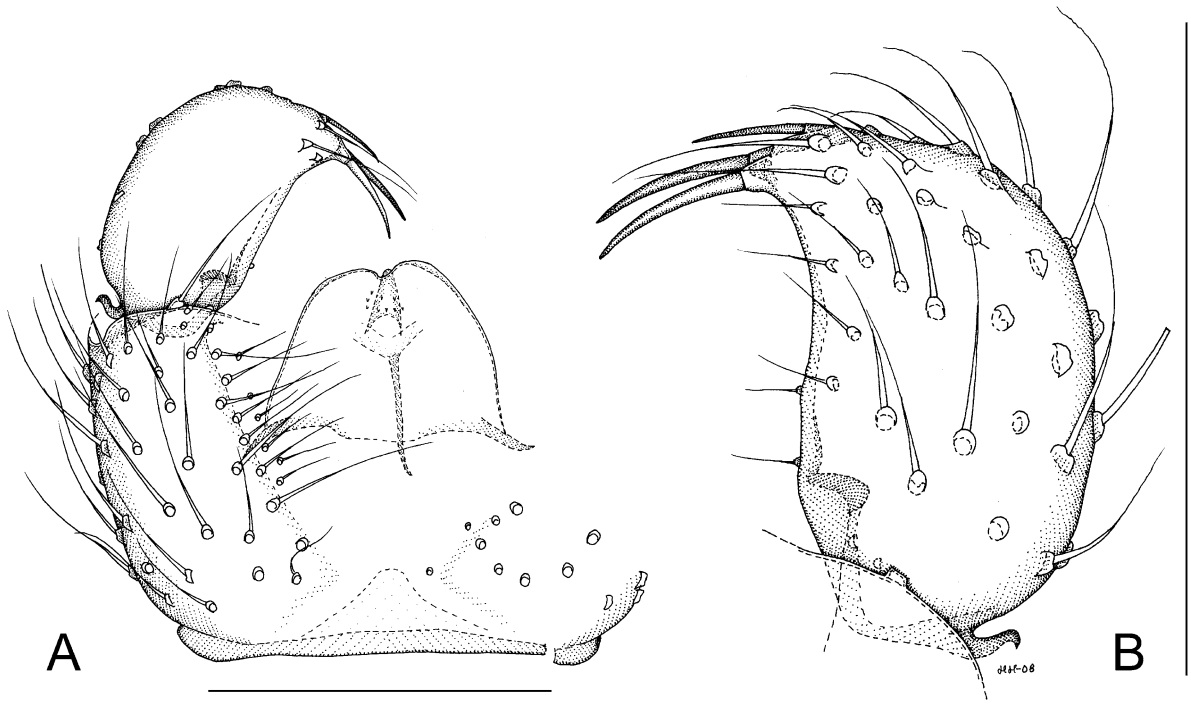

FIGURE 98. *Corynoptera anodon* sp. n. (holotype). **A.** Part of hypopygium, ventral view. **B.** Gonostylus, ventral view. Scale 0.1 mm.

Discussion. Corynoptera anodon is similar to *C. bipartita* but differs by having all the three gonostylar megasetae close together instead of having one shifted into a more basal position, and by having a much larger finger-like

process dorsally on the tegmen. *Corynoptera anodon* is similar also to *C. marinae*, but the latter has a more tumid gonostylus with one of the gonostylar megasetae in a more apical position than the other two. *Corynoptera anodon* resembles also *C. paracantha* by having three megasetae on the gonostylus, one of which is at an apical position, the other two close to each other at a subapical position. *Corynoptera anodon* differs from *C. bipartita* and *C. paracantha* by having a strongly attenuated gonostylus apically, and by having much smaller apicalmost megaseta than the others.

Etymology. The name is Greek, *anodon*, without tooth, referring to the lack of an apical tooth on the gonostylus.

***Corynoptera membranigera* (Kieffer, 1903)**
Figs. 99 A, B

Sciara membranigera Kieffer, 1903: 201.
Corynoptera trispina Tuomikoski, 1960: 63. Synonymy by Menzel and Mohrig (2000: 230).
Psilosciara membranigera, Kieffer, 1909: 246

Material studied. 1 male, **FINLAND**, Ab, Vihti, Vihtijärvi, 15.vii.1959, R. Tuomikoski (lectotype of *C. trispina* Tuomikoski, in MZH); 2 males, same data as previous (paralectotypes of *C. trispina* Tuomikoski, in MZH); 2 males, same data again but 23.vii.1959 (in MZH); 1 male, Ab, Turku, Ruissalo, Härkälänlahti, 15–28.vi.1977, R. Mannila (in MZH); 2 males, same data again but 15–30.vi.1977 (in MZH); 2 males, Ab, Taivassalo, Orikvuori, Malaise trap, 11.vi–18.vii.2003, Mukkala & Haarto (in MZH); 1 male, Ab, Västanfjärd, bushes and secondary mixed forest, sweep-net, 27.vi.2004, M. Jaschhof (no. 6545 in PKHH); 3 males, N, Espoo, Noux, pitfall trap, 8.vi–10.vii.1989, Biström & Vilkamaa (in MZH); 1 male, N, Helsinki, Degerö, at light, 2.vii.1961, R. Tuomikoski (in MZH); 1 male, Ta, Somero, 2–3.viii.1986, H. Hippa (in MZH); 1 male, Ta, Somero, Koisthuhta, 28–29.vi.1986, H. Hippa (in MZH), 1 male, same data as previous but 27–28.vii.1986 (in MZH); 1 male, Ta, Kangasala, Ponsa, 10.viii.1986, J. Tuiskunen (in MZH); 1 male, same data as previous but 19.vii.1986 (in MZH); 1 male, Ta, Lammi, Biological Station 21.vii.1987, H. Hippa (in MZH); 1 male, same locality but 12.viii.1986, J. Tuiskunen (in MZH); 3 males, Ta, Urjala, Kivijärvi Nature Reserve (6770:308), grove, Malaise trap, 6.vii–3.viii.2003, J. Salmela & O. Härmä (in MZH); 1 male, **DENMARK**, Bornholm, Almindingen, Ekkodalen, Corylus forest, sweep-net, 2.viii.2004, K. Heller (no. 2137 in ZSMC); 1 male, Bornholm, Donedalen, sweep-net, K. Heller, 30.vii.2004 (no. 4309 in PKHH); 1 male, **GERMANY**, BW, Bad Buchau, Federsee, Malaise trap, 24.v–14.vii.2003, D. Doczkal (no. 4509 in PKHH); 1 male, BW, Bad Rotenfels, Birkenkopf, avalanche forest, Malaise trap, 21.vi–12.vii.2003, D. Doczkal (no. 71 in PDDG); 3 males, BW, Belchen, Malaise trap, 28.v–3.vii.2003, D. Doczkal (no. 82 in PASS, no. 2243, 2251 in ZSMC); 1 male, BY, mixed forest at lake Freibergsee, sweep-net, 16.viii.2001 (no. 3503 in PKHH); 1 male, HE, Niederbeisheim, mixed forest with oak, pine and beech, sweep-net, 17.vi.2007, K. Heller (no. 5589 in PKHH); 1 male, MV, Klein Nemerow, 29.vii.1985, K. Lembke (no. no. 2308 in PWMP);1 male, MV, Potthagen near Greifswald, beech/alder/birch forest, sweep-net, 30.vi.1995, M. Jaschhof (no. 5421 in PKHH); 1 male, NW, Wermelskirchen, forest, K. Heller, 2.vii.1993 (no. 333 in PKHH); 1 male, RP, Kirchheimbolanden, Albertskreuz, Nature Reserve, Malaise trap, 4–19.vii.2001, D. Doczkal (no. 4813 in PKHH); 1 male, same data as previous but 23.v–7.vi.2002 (no. 4898 in PKHH); 1 male, SH, Schwentinental-Raisdorf, beech forest, sweep-net, 21.viii.2004, K. Heller, (no. 2138 in ZSMC); 1 males, SH, Siggen, beech/oak forest, photoeclector, 2–16.ix.1986, T. Tischler (no. 530 in PKHH); 2 males, same data but 1–15.vi.1987 (no. 559, 560 in PKHH); 1 male, TH, Hainich National Park, beech forest, sweep-net, 18.vi.2005, K. Heller (no. 4408 in PKHH); 2 males, **ITALY**, Como, Brunate, 1000–1200 m, 10.vii.1986, H. Hippa (in MZH); 1 male, same data as previous but 1000–1800 m, 11.vii.1986 (in MZH); 2 males, South Tyrol, Platten, spruce forest, sweep-net, 27.vii.2002, K. Heller (no. 3849, 3850 in PKHH); 1 male, South Tyrol, St. Magdalena, spruce forest at Spielbühl, 1600 m, sweep-net, 23.vii.2002, K. Heller (no. 3871 in PKHH); 1 male, **LATVIA**, "Pinsary", 20.viii.1988, V. Spungis (no. 2984 in PWMP); 4 males, **LUXEMBOURG**, Waldbredimus, beech forest, sweep-net, 3.viii.2003, K. Heller (no. 4047–4050); 1 male, **RUSSIA**, **Karelia**, Kivach, poplar stand, window trap, 23–30.vi.1986, Yakovlev (in MZH); 1 male, **Moscow region**, Pavlovskaya, sweep-net, vi–vii.1962, B. Mamaev (no. 2313 in PWMP); 3 males, **SLOVAKIA**, Lipovec, beech forest, sweep-net, 3.viii.2007, K. Heller (no 5664, 5666, 5671 in PKHH); 2 males, **SWEDEN**, Up, Stockholm, N. Djurgården, mixed forest, pitfall trap, 15–29.vi.1992, T. Kronestedt & B. Viklund (in SMNH); 1 male, same data as previous but 13–

27.vii.1992 (in SMNH); 1 male, same data again but 10–24.viii.1992 (in SMNH); 1 male, Ån, Örnsköldvik, Skuleskogen National Park, Långrå, brook ravine in mixed forest, Malaise trap, Swedish Malaise Trap Project, 29.viii–1.x.2003, (no. 1230 in SMNH); 2 males, Bo, Stenungsund, Ödsmål, Hällsberget, deciduous forest in southern slope, Malaise trap, 30.vii–11.viii.2004, Swedish Malaise Trap Project (no. 939 in SMNH, no. 5808 in PKHH); 1 male, Sm, Nybro, Alsterbro, mixed forest, Malaise trap, 25–30.viii.2005, Swedish Malaise Trap Project (no. 6811 in PKHH); 1 male, same data but 4–10.vii.2006 (no. 1191 in SMNH); 2 males, **SWITZERLAND**, ZH, Sihlwald near Zurich, photoeclector, 24.v–19. vi.1996, K. Schiegg (no. 2290, 2388 in PKHH); same data but 15.viii–12.ix.1996 (no. 2499 in PKHH).

Description. See Kieffer (1903), Menzel and Mohrig (2000), Tuomikoski, (1960); for hypopygium, see Figs. 99 A and B.

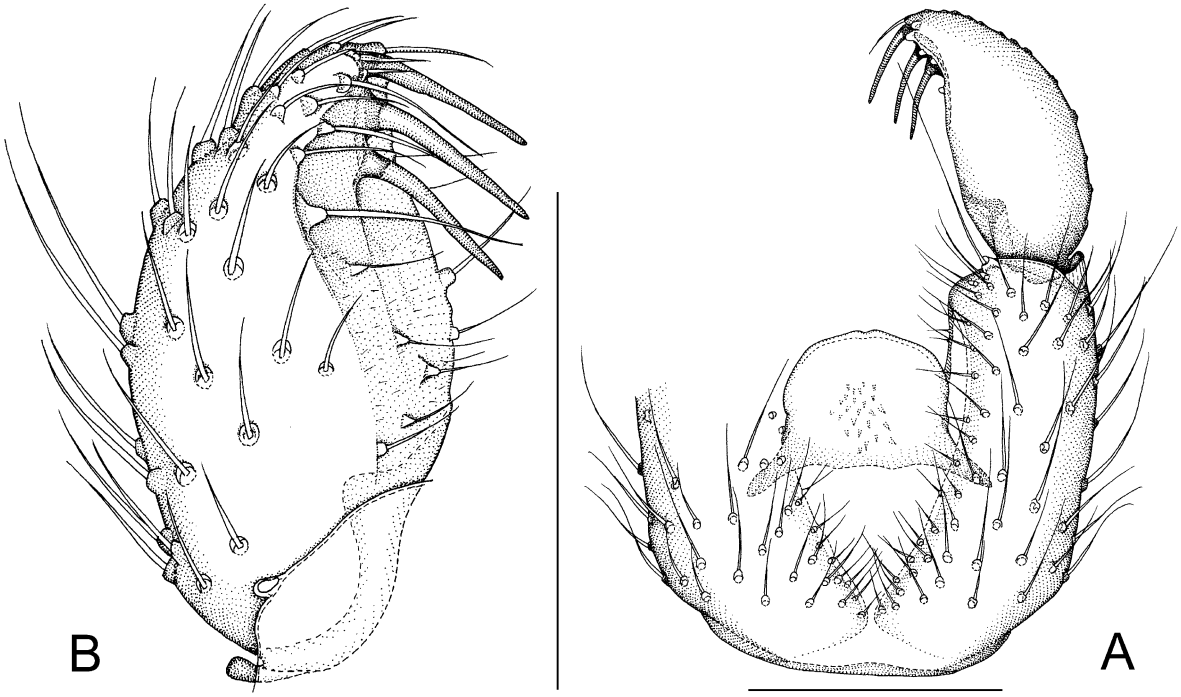

FIGURE 99. *Corynoptera membranigera* (Kieffer) (A from Finland, B paralectotype of *C. trispina* Tuomikoski). **A.** Part of hypopygium, ventral view (aedeagal apodeme omitted). **B.** Gonostylus, ventral view. Scale 0.1 mm.

Discussion. Although Kieffer's (1903) type material of *Corynoptera membranigera* from France is lost, Menzel and Mohrig (2000) could identify it and considered it the same as *C. trispina* Tuomikoski, 1960. Later Menzel and Heller (2007) designated the lectotype for *Corynoptera trispina.*

Corynoptera membranigera resembles *C. furcifera, C. saccata* and *C. parcitata* by lacking the apical tooth and by having three subequal megasetae with even distances from each other at the apex of the gonostylus. It also resembles *C. andalusica, C. angustior, C. gemellata, C. flavosignata, C. hemiacantha, C. patula* and *C. triacantha*, although all of these species have one of the megasetae farther away from the others (see also the discussion under *C. flavosignata* in Menzel *et al.*, 2006). Unlike any of these species, *C. membranigera* has robust megasetae, which are subbasally slightly angulate but otherwise rather straight, not evenly curved. Furthermore, the megasetae are at the same vertical level in a subapical row, instead being at different levels.

Distribution. **Czech Republic** (Menzel *et al.* 2000, Rudzinski 2000), **Denmark** (this study), **Finland** (Tuomikoski 1960: as *C. trispina*), (Vilkamaa *et al.* 2007), **France** (Kieffer 1903), **Germany** (Bogenschütz 2005, Menzel 2006, Menzel & Heller 2006, Menzel *et al.* 2003), (Fritz 1982, Heller 2004, Holstein & Funke 1993, Hövemeyer 1997, 1992, Rudzinski 2006, (Metzner & Menzel 1996, Rudzinski 1989b, 1992d, Schulz 1996, Thiede 1977: as *C. trispina*), **Great Britain** (Menzel *et al.* 2006), **Hungary** (Rulik *et al.* 2001), **Ireland** (Menzel *et al.* 2006), **Italy** (Heller & Menzel 2004), **Latvia** (this study), **Luxembourg** (Heller & Menzel 2004), **Romania** (Hondru 1965: as *C. trispina*), **Russia, Altay region** (Komarova 1995a: as *C. trispina*), **Karelia** and **Moscow region** (this study), **Slovakia** (this study), **Sweden** (Heller *et al.* 2009), **Switzerland** (Schiegg *et al.* 1999: as *C. trispina*).

***Corynoptera bicuspidata* (Lengersdorf, 1926)**
Figs. 2 A, 100 A–E, 101 A, B, C

Sciara bicuspidata Lengersdorf, 1926: 126.
Corynoptera gymnops Tuomikoski, 1960: 62. Synonymy by Menzel and Mohrig (1993: 71).
Corynoptera bicuspidata, Menzel & Mohrig, 1993: 71.

Material studied. 1 male, **FINLAND**, Ab, Vihti, Vihtijärvi, 20.vi.1958, R. Tuomikoski (lectotype of *C. gymnops* Tuomikoski; hereby designated in order to fix the name of the species, in MZH); 9 males, N, Helsinki, Botanical Garden, 18.vi.1959, R. Tuomikoski (paralectotypes of *C. gymnops*, in MZH);1 male, Ab, Korppoo, Jurmo, 16.v–17.vii.1968, P.T. Lehtinen (in MZH); 1 male, N, Helsinki, Käpylä, Taivaskallio, v.1988, H. Hippa (in MZH); 1 male, Ta, Urjala, Kivijärvi Nature Reserve (60°59'N 23°26'E; the square 6770:308), Malaise trap, 20.iv–5.x.2003, Salmela & Härmä (in MZH); 1 male, same data as previous but 3.vi–6.vii.2003 (in MZH); 1 male, Kb, Patvinsuo National Park, Autiovaara, spruce/birch/aspen forest, sweep-net, 7.vii.2004, M. Jaschhof (no. 6309 in PKHH); 1 male, **GERMANY**, BB, Golzow near Eberswalde, white pan trap, 27.vii.1992, Sommer (in SDEI), 1 male, Mark Brandenburg, Brodowin near Eberswalde, kl. Rummelsberg N, dry grassland, slope, blue pan trap, 27.vii.1992, Sommer (in SDEI); 1 male, BB, district Barnim, Grumsin, Kranich, photoeclector at vertical beech-rootplate, 10.viii.1999, Schulz & Taeger (in SDEI); 1 male, BW, Bad Rotenfels, Birkenkopf avalanche forest, Malaise trap, 16.ix–30.x.2003, D. Doczkal (no. 4566 in PKHH); same data as previous but 21.vi–12.vii.2003 (no. 69 in PDDG); 1 male, BW, Sandweier, dry grassland, Malaise trap, 10–22.vii.2006, D. Doczkal (no. 135 in PASS); 10 males, 7 females, SH, Blumenthal, wood of alder and willow, breeding under photoeclector, 10–19.v.2000, H. Arp (no. 3140–3144, 3147, 3191, 3723 in PKHH); same data as previous but 19.v–14.vi.2000 (no. 3304 in PKHH); same data again but oak wood, 1.iv–1.v.2001, R. Nötzold (no. 3714 in PKHH); 1 male, **GREAT BRITAIN**, England, Essex, Chigwell Row, Chigwell Row Wood TQ4693, 65–75 m, old forest with *Quercus, Corylus* and *Rubus*, window trap, 15.ix.2002, Ismay & Schulten (in SDEI); 1 male, **GREECE**, Kerkini mountains, Malaise trap, 11–17.iv.2005, G. Ramel (no. 6174 in PKHH); 1 male, same data as previous but 25.iv–1.v.2005 (no. 6180 in PKHH); 3 males, **MOROCCO**, Quirgane, garden, 18.iv.1996, Kassebeer (in PKHH); 1 male, Lac Oiouahe, 13.iv.1996, Kassebeer (in PKHH); 1 male, 1 female, **RUSSIA**, **Kamchatka**, Kozyrevsk, birch, 15.vi.1984, N. Krivosheina (no. 2067 in PWMP); 1 male, **SPAIN**, Gupizkoa, Oiartzun, Oieleku, Aiako Harria National Park, beech forest, Kaila-trap on *Fomes fomentarius*, vi.2006, S. Pagola (no. 7102 in PKHH); 2 males, **SWEDEN**, Pi, Arjeplog, L. Sädvajaure (northern end), 500 m, subalpine birch forest, Malaise trap, 7.vii–12.viii.2005, M. & C. Jaschhof (no. 5873, 6023 in PKHH); 1 male, Sm, Nybro, Bäckebo, Grytsjöns Nature Reserve, old aspen forest in boulder terrain, Malaise trap, 18.v–15.vi.2006, Swedish Malaise Trap Project (no. 2918 in SMNH); 1 male, Up, Stockholm, Ekudden, Flatensjön, *Quercus*, yellow dish, 12.viii–2.ix.1995, B. Viklund (no. 122 in); 1 male, **SWITZERLAND**, BE, Limpach valley, north of Wengi towards Messen, maize field, window- trap, 13.viii.1987, P. Duelli (in SDEI).

Description. See Lengersdorf (1926), Tuomikoski (1960); for wing, see Fig. 2 A, for apical part of front tibia, see Fig. 101 A, for hypopygium, see Figs. 100 A–E and 101 B and C.

Discussion. Corynoptera bicuspidata was described from Austria (Lengersdorf 1926). *Corynoptera gymnops* Tuomikoski, described from Finland, was later synonymized by Menzel and Mohrig (2000). We follow this interpretation, although Tuomikoski's (1960) specimens from Finland differ slightly from all the other material (Figs. 100 D versus A, B, C, E). One of the specimens of *C. bicuspidata* from Greece has an unusual gonostylus, with a membranous pit and with a flagellate seta on both sides (Figs. 101 B, C). We believe that it is only a teratological specimen. A normal specimen was found from the same locality. Both of these Greek specimens have two palpomeres.

Corynoptera biscuspidata resembles *C. arboris*, *C. cincinnata*, *C. furcifera*, *C. parcitata* and *C. saccata* and can easily be mixed with them. *Corynoptera bicuspidata* is distinguished from all by more attenuated apical part of the gonostylus and by having the gonostylar megasetae rather short, elongate conical and pointed. In *C. cincinnata* the megasetae are also pointed but they are much longer and not found in such a tight apical group as in *C. bicuspidata*. In *C. bicuspidata* the anal lobe of the wing is unusually reduced, but this character may be difficult to use for routine identification purpose. See also under *C. romana*.

Distribution. **Austria** (Franz 1989, Lengersdorf 1926a), **Czech Republic** (Menzel *et al.* 2000), **Finland** (Tuomikoski 1960, Vilkamaa *et al.* 2007), **Germany** (Heller 2004, Menzel *et al.* 1990, 2003), **Greece** (this study), **Great Britain** (Menzel *et al.* 2006), **Morocco** (this study), **Poland** (Lengersdorf 1929a), **Russia, Kamchatka** (this study), **Spain** (this study), **Sweden** (Heller *et al.* 2009), **Switzerland** (this study).

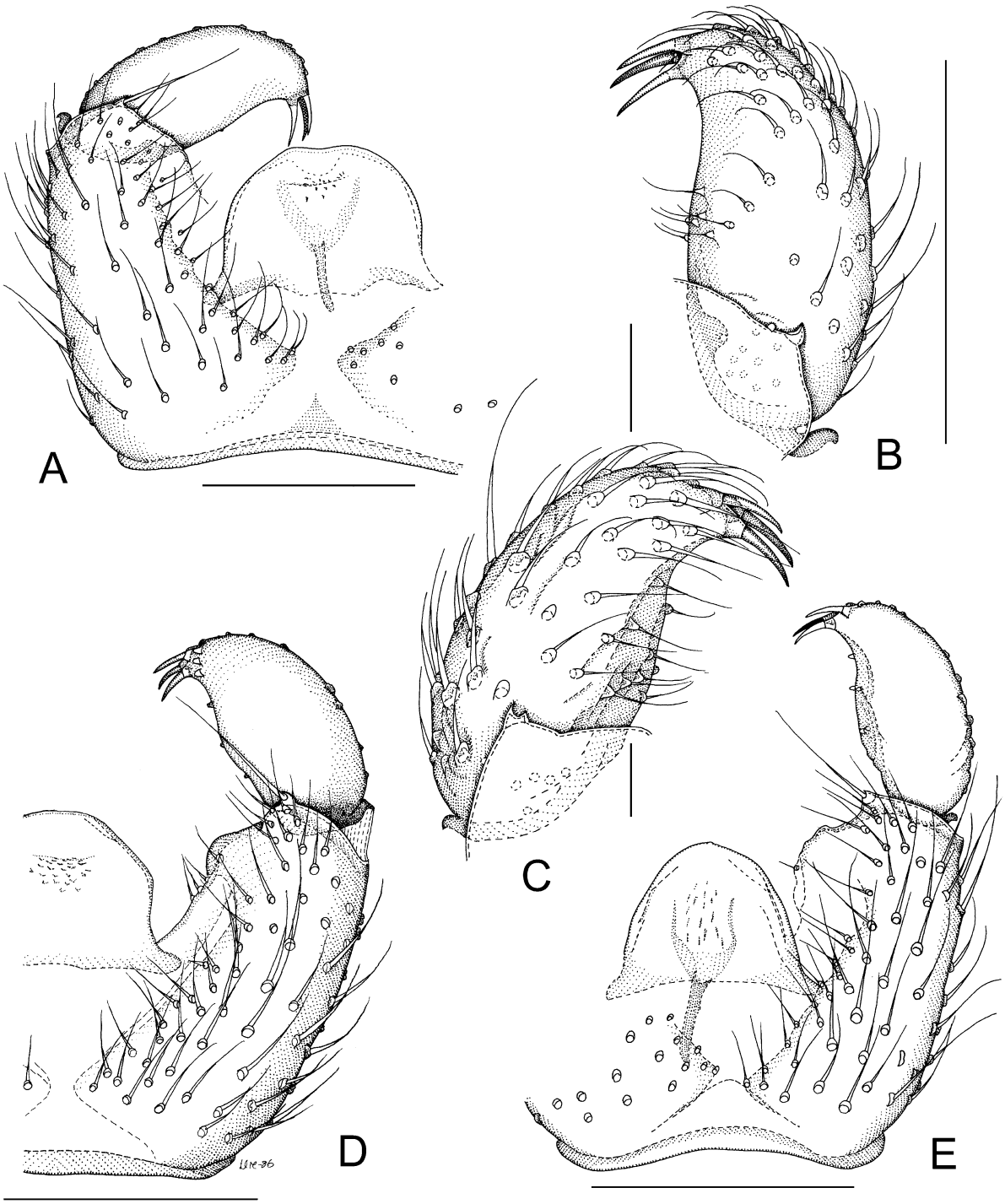

FIGURE 100. *Corynoptera bicuspidata* (Lengersdorf) (A, B from Morocco, C from Germany, D lectotype of *C. gymnops* Tuomikoski, E from England). **A, D, E.** Part of hypopygium, ventral view (aedeagal apodeme omitted in D). **B, C.** Gonostylus, ventral view. Scale 0.1 mm.

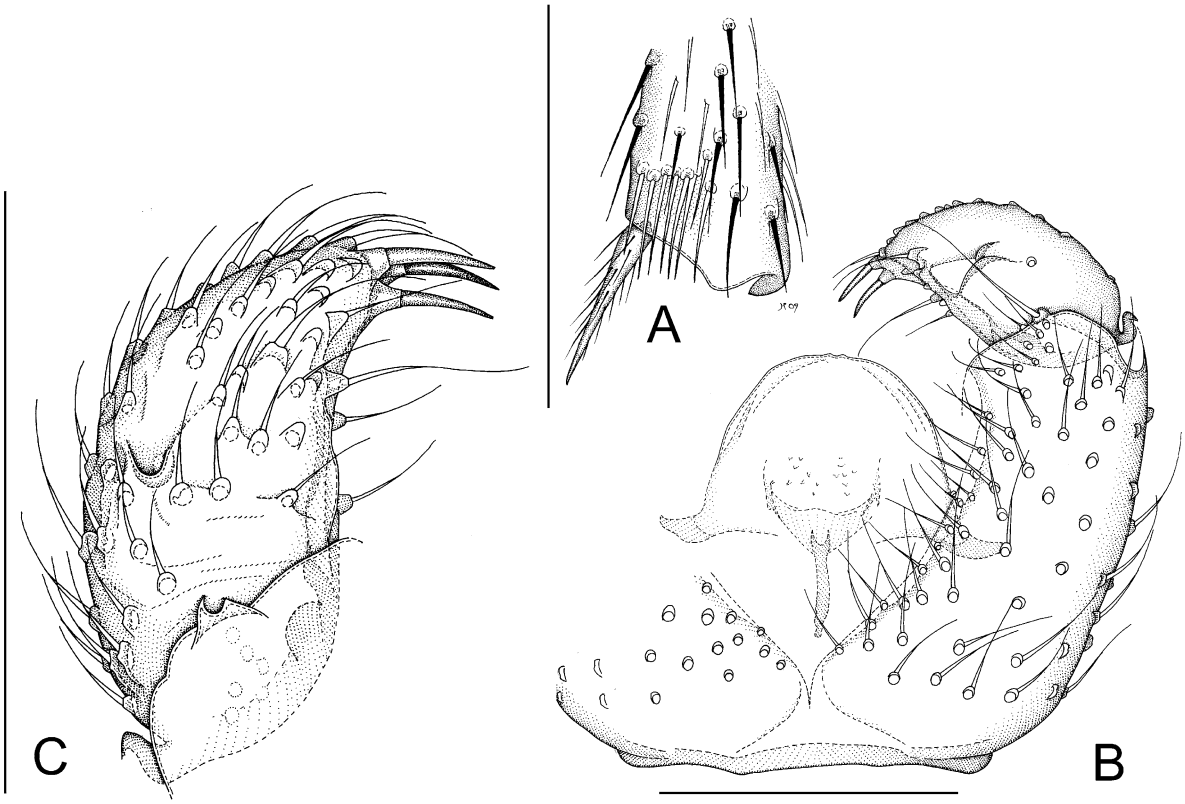

FIGURE 101. *Corynoptera bicuspidata* (Lengersdorf) (from Greece, Beles). **A.** Apical part of front tibia, prolateral view. **B.** Part of hypopygium, ventral view. **C.** Gonostylus, ventral view. Scale 0.1 mm.

***Corynoptera saccata* Tuomikoski, 1960**
Figs. 102 A–D, 103 A–D

Corynoptera saccata Tuomikoski, 1960: 63.
nec *Corynoptera arboris* Fritz, 1982: 257. Unjustified synonymy by Menzel and Mohrig (2000: 232).

Material studied. 1 male, **AUSTRIA**, NÖ, Obere Lobau Nature ReserveNE Vienna, 152 m, photoeclector, compost rye field, 8.v.1991, Idinger (in SDEI); 1 male, **CANADA**, **Ontario**, Guelph, Arbor, old field, pan trap, 18.v.1987, R. Gagné (in SMNH); 2 males, same data as previous but 21.v. (in SMNH); 2 males, **CZECH REPUBLIC**, Bohemia, Bilina-Jirásek III, dump restoration with alder/larch mixed forest, 230 m, 50º33’30’’N 13º47’50’’E, Malaise trap, 14.v–23.vii.1998, Barták (in SDEI); 1 male, **FINLAND**, Ab, Lohja, Paloniemi, forest, 10–12.vi.1958 (lectotype, hereby designated in order to fix the name of the species, in MZH); 1 male, same data as previous (paralectotype, in MZH); 1 male, A, Åland, Jomala, Kungsö, (668860:310194), grove-like wood, Malaise trap, 15.vi–27.vii.2007, O. Autio & J. Salmela (in MZH); 2 males, A, Finström, Holmsjön S (670235:310277), Malaise trap, 21.iv–16.vi.2007, Salmela & Autio (in MZH); 2 males, same data as previous but 16.vi–28.vii.2007 (in MZH); 2 males, Ab, Turku, Ruissalo, 8–9.vi.1978, R. Mannila (in MZH); 11 males, Ab, Turku, Ruissalo, Härkälänlahti, 15–28.vi.1978, R. Mannila (in MZH); 5 males, Ab, Taivassalo, Orikvuori, Malaise trap, 11.vi–18.vii.2003, Mukkala & Haarto (in MZH); 3 males, Ab, Lohja, Torhola, 22.viii.1986, Biström & Hippa (in MZH); 1 male, same data as previous but 23.x.1984–21.v.1985 (in MZH); 1 male, Ab, Vihti, Salmi, bushes along forest edge, sweep-net, 27.v.2004, M. Jaschhof (no. 9127 in MZH); 1 male, Ab, Västanfjärd, bushes and secondary mixed forest, sweep-net, 27.vi.2004, M. Jaschhof (no. 6549 in PKHH); 3 males, N, Helsinki, Käpylä, Taivaskallio, 2.vii.1985, H. Hippa (in MZH); 3 males, N, Tuusula, Ruotsinkylä, 2.vi–1.vii.1969, V. Huhta (in MZH); 1 male, N, Sipoo, Hindsby, grove, Malaise trap, 6–14.vii.2004, P. Vilkamaa (in MZH); 1 male, same data as previous but 29.vi–12.vii.2006 (in MZH); 1 male, N, Sipoo, Hindsby, forest, Malaise trap, 25.vi–5.vii.2005, P. Vilkamaa (in MZH); 1 male, N, Sipoo, Hindsby, forest on cliff slope, Malaise trap, 13–29.vi.2006, P. Vilkamaa (in MZH); 1 male, Ka, Virolahti,

Siikasaari,7.v–13.ix.1970, S. Kännö (in MZH); 1 male, same data but 10.v–13.ix. (in MZH); 2 males, Ta, Urjala, Kivijärvi Nature Reserve (60°59'N 23°26'E; the square 6770:308), Malaise trap, 3.vi–6.vii.2003, Salmela & Härmä (in MZH); 3 males, same data but 6.vii–3.viii. (in MZH); 1 male, same data as previous but 15.ix–5.x. (in MZH); 3 male, Oa, Ilmajoki, Kivistönmäki, Malaise trap, 12.vii–6.ix.2003, J. Salmela (in MZH); 1 male, same data as previous but 26.iv–3.vi. (in MZH); 1 male, Tammela, Liesjärvi National Park, 60.39°N 23.54°E, <100 m, dry, mossy spruce forest, Malaise trap, 29.v–26.vi.2004, M. & C. Jaschhof (in MZH); 1 male, Tb, Toivakka, Ruostesuo (688:3443), Malaise trap, 8.vi–1.vii.2003, J. Salmela (in MZH); 1 male, Ks, Kuusamo, Juuma, 12.vii.1985, H. Hippa (in MZH); 2 males, St, Yläne, Vaskijärvi Strict Nature Reserve, spruce/birch/pine forest, sweep-net, 27.viii.2004, M. Jaschhof (no. 6333 in PKHH, no. 9084 in MZH); 1 male, Kl, Parikkala, Lake Siikalahti, birch/alder swamp forest, sweep-net, 24.vi.2004, M. Jaschhof (no. 6425 in PKHH); 1 male, **DENMARK**, Bornholm, Donedalen, alder forest, at waterfall, sweep-net, 30.vii.2004, K. Heller (no. 4310 in PKHH); 1 male, **GERMANY**, BB, Chorin Mooskuten 19.v.1993, M. Sommer (in SDEI); 3 males, BW, Malsch, Heckelbachklamm, Malaise trap, 3–17.v.2003, D. Doczkal (no. 4924 in PKHH, no. 123 in PDDG); 2 males, BW, Malsch, poplar forest, Malaise trap, 16.ix–8.x.2004, D. Doczkal (no. 4659, 4792 in PKHH); 1 male, MV, Abtshagen, alder/ash/beech forest, sweep-net, 5.vi.1995, M. Jaschhof (no. 5337 in PKHH); 3 males, MV, Greifswald, Ladebow, swamp forest, yellow pan trap, 16.v.1993, M. Jaschhof (no. 2275–2277); 1 male, NW, Cologne, district Poll, garden, Malaise trap, 8–13.v.1990, J. Franzen (no. 2942 in PKHH); 3 males, 1 female, HE, Upper-Rhine, 1979, H.-G. Fritz (no. 2063–2065 in PWMP); 1 male, RP, Gönnersdorf, managed grassland with fruit trees, Malaise trap, 6–13.vi.1994, K. Cölln (no. 1906 in PKHH); 1 male, SH, Flensburg, Marienhölzung, forest, Malaise trap, 2–9.viii.1996 (no. 2027 in PKHH); 1 male, SH, Heikendorf, garden, Malaise trap, 28.vi–6.vii.1997, K. Heller (no. 2417 in PKHH); 2 males, SH, Heikendorf, Korügen, beech forest, sweep-net, 28.v.2007, K. Heller (no. 5569 in PKHH); 2 males, same data as previous but yellow dish, 27.iv–31.v.2008 (no. 6374 in PKHH); 1 male, SH, Kiel, district Meimersdorf, hedgerow, pitfall trap, 18.v–1.vi.1993, K. Heller (no. 323 in PKHH); 2 males, SH, Meggerdorf, Alte Sorge Nature Reserve, bog, Malaise trap, 24.v–1.vi.1995, K. Heller, (no. 1008, 1009 in PKHH); same data but 16.viii–1.ix.1995 (no. 1199 in PKHH); same data as previous but 31.v–15.vi.1996 (no. 1519 in PKHH); same data again but wet meadow, photoeclector, 16.ix–10.x.1996 (no. 2645 in PKHH); 4 males, 1 female, SH, Rade, border of small pond in field, photoeclector, 29.iv–13.v.1999, K. Heller (no. 2854, 2856, 3044 in PKHH); 1 male, same data as previous but wet meadow, Malaise trap, 20–27.v.1999 (no. 2934 in PKHH); 4 males, SH, Siggen, beech/oak forest, photoeclector, 15–29.iv.1985, T. Tischler (no. 562–565 in PKHH); 1 male, SH, Speicherkoog, embankment area, photoeclector, 15–30.v.1995, T. Tischler (no. 7038 in PKHH); 1 male, SH, Trent near Plön, bog, Malaise trap, 17–24.v.1993, C. Kassebeer (no. 692 in PKHH); 1 male, SN, Leipzig, Burgaue, meadow, 4–19.v.1993, S.I. Erlacher & S.K. Metzner (in SDEI); 1 male, ST, Rübeland, Kaltes Tal meadow, sweep-net, 9.vi.2001, K. Heller (no. 3440 in PKHH); 1 male, TH, Hainich National Park, mixed forest at Thiemsburg, sweep-net, 18.vi.2005, K. Heller (no. 4367 in PKHH); 1 male, **GREAT BRITAIN**, Oxon, Wytham Woods by Wytham (NW of Oxford), deciduous forest beech/oak/maple/chestnut, sweep-net, 21.viii.2002, F. Menzel (in SDEI); 2 males, **MOROCCO**, Guelmin, Abeina, wadi at palm oasis, exhaustor, 8./10.i.1994, M. Jaschhof (no 2106, 2107 in PWMP); 1 male, **NETHERLANDS**, Tilburg, Kaaistoep, Malaise trap, 2–9.v.1998, W. van Zuijlen (no. 49 in NNKN); 1 male, **RUSSIA**, **Adygeya Republic**, Guzeripl, forest at shore of River Belaya, sweep-net, 30.vii.1994, W. Mohrig (no. 2297 in PWMP); 1 male, **SPAIN**, Majorca, Alcudia, swimming pool, 26.04.1995, K. Heller (no. 1423 in PKHH); 2 males, Otinyent, 13.viii.2008, S. Teruel (no. 6397, 6398 in PKHH); 1 male, **SWEDEN**, Bo, Stenungsund, Ödsmål, Hällsberget, broad leaved deciduous forest in southern slope, Malaise trap, 30.vii–11.viii.2004, Swedish Malaise Trap Project (no. 944 in SMNH); 1 male, Sk, Klippan, Skäralid, valley below northern Lierna, rich beech forest, Malaise trap, 14.vii–6.viii.2004, Swedish Malaise Trap Project (no. 6747 in PKHH); 1 male, Sm, Nybro, Bäckebo, Grytsjöns Nature Reserve, old moist hay-making meadow, Malaise trap, 13–24.viii.2005, Swedish Malaise Trap Project (no. 6798 in PKHH); 3 males, Sm, Gränna, Lönnemålen, next to old cellar, Norway spruce forest with big harvested ashes, Malaise trap, 14.vi–1.vii.2005, Swedish Malaise Trap Project (no. 6717–6719 in PKHH); 1 male, Sö, Tyresta National Park SE Stockholm, 59º10'N 18º19'E, 1999 forest fire site (*Pinus*), Malaise trap [area 5], 26.v–21.vii.2001, B. Viklund, L.-O. Wikars & H. Ahnlund (in SDEI); 10 males, Up, Stockholm, N. Djurgården, mixed forest, pitfall trap, 1–15.vi.1992, T. Kronestedt & B. Viklund (in SMNH); 7 males, same data as previous but 15.vi–29.vi.1992 (in SMNH); 2 males, same data again but 29.vi–13.vii.1992 (in SMNH); 1 male, N, Up, Stockholm, N. Djurgården, N. Lappis, Malaise trap, 13.vi–4.vii.1994, A. Heinakroon (in SMNH); 1 male, Up, Lövstabruk, Malaise trap, 9–12.vi.1992, H. Hippa & B. Gustavsson (in SMNH); 1 male, Öl, Mörbylånga, Skogsby, Gamla Skogsby, meadow

with bushes, Malaise trap, 20.v–28.vi.2006, Swedish Malaise Trap Project (no. 2651 in SMNH); 2 males, **SWITZERLAND**, ZH, Sihlwald near Zurich, photoeclector, 15.viii–12.ix.1996, K. Schiegg (no. 2513 in PKHH).

Description. See Tuomikoski (1960); for antennal flagellomere 4, see Fig. 103 A, for apical part of front tibia, see Fig. 103 B, for hypopygium, see Figs. 102 A – D and 103 C and D.

Discussion. Corynoptera saccata was described by Tuomikoski (1960) from three males from southern Finland, of which two were found in the collection of MZH. We designate them as the lectotype and paralectotype.

There seems to be a slight variation among specimens regarding the exact position of the three gonostylar megasetae, these forming either a very aggregated or a more diffuse group (Figs. 102 A, B, 103 D versus 102 C, D, 103 C).

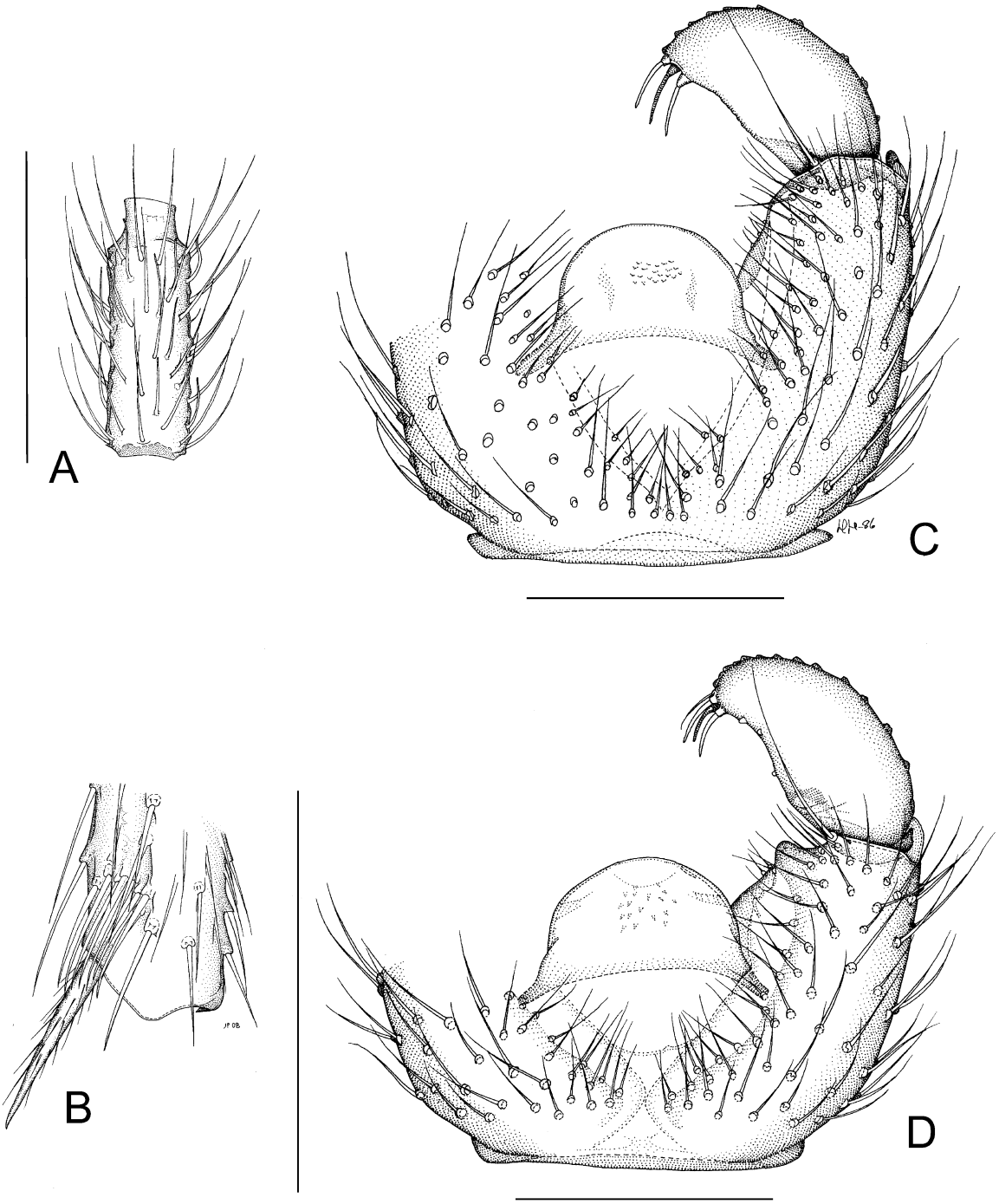

FIGURE 102. *Corynoptera saccata* Tuomikoski (from Finland). **A.** Antennal flagellomere 4. **B.** Apical part of front tibia, prolateral view. **C, D.** Part of hypopygium, ventral view (aedeagal apodeme omitted). Scale 0.1 mm.

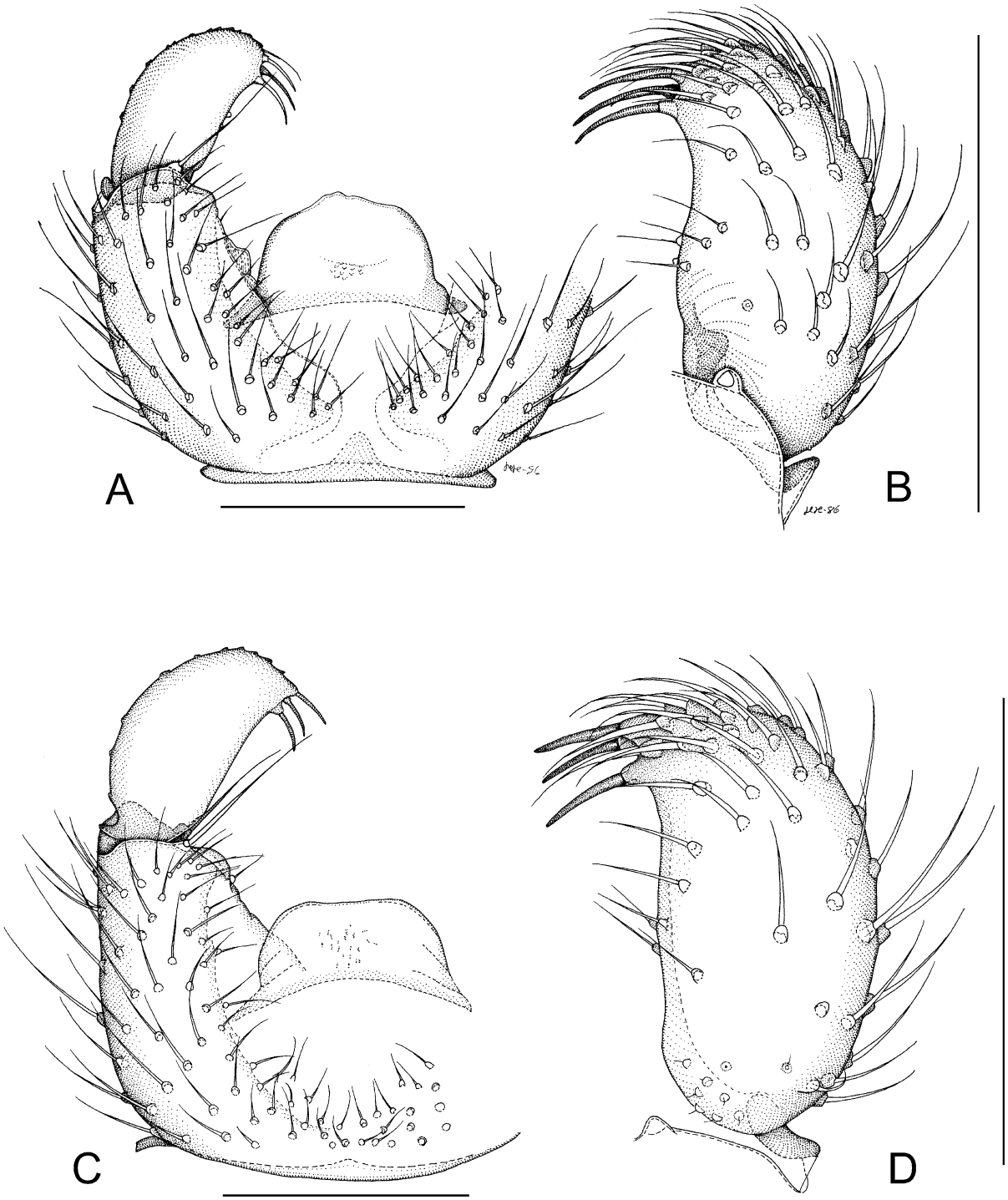

FIGURE 103. *Corynoptera saccata* Tuomikoski (A, B from Finland, C, D from England). **A, C.** Part of hypopygium, ventral view (aedeagal apodeme omitted in). **B, D.** Gonostylus, ventral view. Scale 0.1 mm.

Corynoptera saccata is very similar to *C. arboris* and it is not certain whether they represent different species. For further discussion, see under *C. arboris*. *Corynoptera saccata* is also very similar to *C. cincinnata* and *C. parcitata*. Both latter species differ from *C. saccata* by having evenly broad gonostylus, not tapering on the apical part, and by having shorter gonostylar megasetae, and *C. cincinnata* also by having them unusually sharp. *Corynoptera saccata* is also similar to *C. romana* and *C. furcifera*, but the latter are distinguished by having the vestiture of the front tibial organ in an unarranged patch without any sign of transverse comb-like arrangement. Furthermore, *C. romana* differs by having two-segmented maxillary palpus and *C. furcifera* by yellow, not dark antennal scapus and pedicellus. See also under *C. cincinnata*, *C. membranigera*, *C. parcitata* and *C. semisaccata*.

Distribution. **Austria** (Menzel 2001), **Canada** (this study), **Czech Republic** (Menzel *et al*. 2000, Rudzinski 1994b, 1998, 2000), **Denmark** (this study), **Finland** (Tuomikoski 1960, Vilkamaa *et al.* 2007), **Germany** (Fritz 1982, Heller 1999, 2002a, 1998, Hennicke *et al*. 1997, Hövemeyer 1996a, Menzel & Heller 2006, Menzel & Mohrig 1991, Menzel *et al.* 1990, 2002, 2003, Metzner & Menzel 1996, Rudzinski 1989b, 1993b, 1994c), **Great Britain** (Menzel *et al*. 2006), **Morocco** (this study), **Netherlands** (Heller & Menzel 2004), **Romania** (Hondru 1965), **Russia, Adygeya Republic** (this study), **Spain mainland and Balearic Islands** (Heller & Menzel 2004), **Sweden** (Heller *et al.* 2009), **Switzerland** (this study), **Turkey** (Rudzinski 1996).

***Corynoptera arboris* Fritz, 1982 restit.**
Figs Figs. 104 A–E

Corynoptera arboris Fritz, 1982: 257.
nec *Corynoptera saccata* Tuomikoski, 1960. Unjustified synonymy by Menzel and Mohrig (2000: 232).

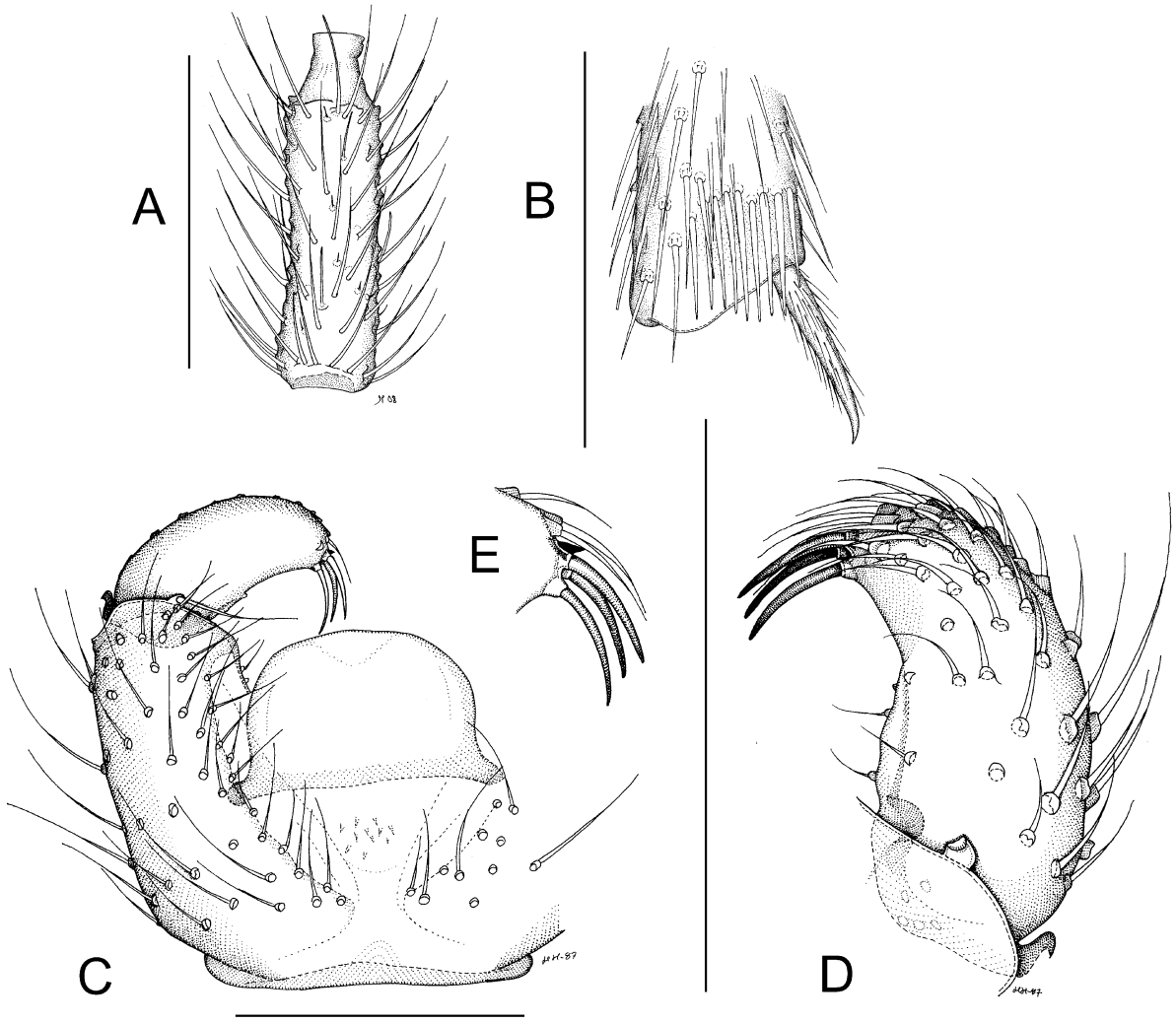

FIGURE 104. *Corynoptera arboris* Fritz (A, B holotype, C, D, E from Germany). **A.** Apical part of front tibia, prolateral view. **B.** Part of hypopygium, ventral view (aedeagal apodeme omitted). **C.** Gonostylus, ventral view. **D.** Apex of gonostylus, ventral view. Scale 0.1 mm.

Material studied. 1 male, **GERMANY**, HE, Upper Rhine, Lampertheim Nature Reserve, floodplain forest, photoeclector, 9.viii.1978, H.-G. Fritz (holotype, in ZMSC); 2 males, same data as previous but 20.ix.1978 (no. 2091, 2092 in PWMP); 1 male, same data again but 17–31.v.1979 (no. 2093 in PWMP); 4 males, HE, Upper Rhine, Küh-

kopf-Knoblochsaue Nature Reserve, floodplain forest, photoeclector, 1979, H.-G. Fritz (no. 2063–2065, 2094 in PWMP); 1 male, MV, Greifswald, central region, yellow pan, 8.vi.1994, W. Mohrig (no. 2101 in PWMP); 3 males, MV, Greifswald, Ladebow, swamp forest, yellow pan trap, 16.v.1993, M. Jaschhof (no. 2272–2274 in PWMP); 2 males, MV, Galenbecker See Nature Reserve, Mariawerth, grassland, photoeclector, 28.vii–10.x.1994, M. Jaschhof (no. 2299 in PWMP); 1 male, TH, Hainich National Park, mixed forest at Thiemsburg, sweep-net, 18.vi.2005, K. Heller (no. 4367 in PKHH); 1 male, 2 females, TH, Seebach near Mühlhausen, dry grassland, pitfall trap, Riedel, 1988 (in SDEI).

Description. See Fritz (1982); for antennal flagellomere 4, see Fig. 104 A, for apical part of front tibia, see Fig. 104 B, for hypopygium, see Figs. 104 C, D and E.

Discussion. Corynoptera arboris, described from the holotype male and an additional female from Germany (Fritz 1982), was regarded as a junior synonym of *C. saccata* by Menzel and Mohrig (2000). After studying the type material of both species, we do not regard the synonymy with certainty, and thus still regard the species as distinct. The holotype of *C. arboris* has a small apical tooth on its gonostylus which may be very difficult to see. The apical tooth is lacking in from the whole of the relatively large amount of material of *C. saccata* studied by us. Another distinguishing character between the species is the elongated antennal flagellomeres in *C. arboris*, the antennal flagellomere 4 being more than 3 times as long as wide, longer than in any specimen of *C. saccata* we studied. See also under *C. semisaccata*.

Distribution. **Germany** (Fritz 1982, Menzel & Heller 2006: as *C. saccata*).

Corynoptera cincinnata Mohrig & Blasco-Zumeta, 1996

Figs. 105 A–E

Corynoptera cincinnata Mohrig & Blasco-Zumeta, 1996: 105.

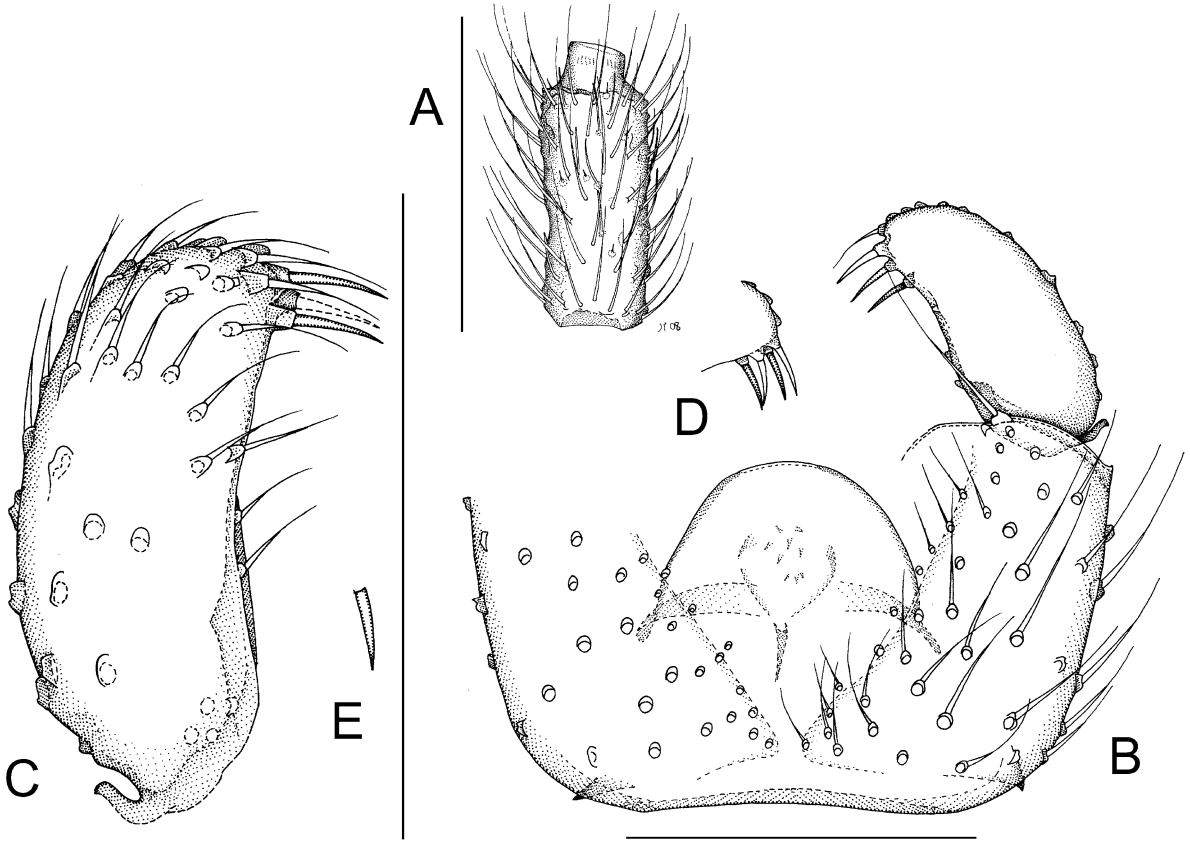

FIGURE 105. *Corynoptera cincinnata* Mohrig & Blasco-Zumeta (A, C, E holotype, B, D from Morocco). **A.** Antennal flagellomere 4. **B.** Part of hypopygium, ventral view. **C.** Gonostylus, ventral view. **D.** Apical part of gonostylus, ventral view. **E.** The detached megaseta of gonostylus. Scale 0.1 mm.

Material studied. 1 male, **GERMANY**, NW, Cologne, district Poll, garden, Malaise trap, 20–27.viii.2002, J. Franzen (no. 4234 in PKHH); 1 male, **ITALY**, Italian Sea-Alps, Entraque, 1000 m, dry slope with beech, oak, and birch, sweep-net, 29.v.1992, F. Röschmann (no. 1568 in PWMP); 1 male, **MOROCCO**, Quirgane, garden, Malaise trap, 21–29.iii.1996, Kassebeer (no. 1957 in PKHH); 1 male, same data as previous but 27.iii–3.iv.1996 (no. 2017 in PKHH); 1 male, **SPAIN**, Retuerta de Pina near Zaragoza, *Juniperus thurifera* forest, Malaise trap, 20.x.1991, J. Blasco-Zumeta (holotype, no. 33 in PWMP); 1 male, Vilassar, Barcelona, Malaise trap, 24–30.ix.1995, Jara (no. 3675 in PKHH).

Description. See Mohrig and Blasco-Zumeta (1996); for antennal flagellomere 4, see Fig. 105 A, for hypopygium, see Figs. 105 B–E.

Discussion. Corynoptera cincinnata was described from Spain on the basis of the holotype only (Mohrig & Blasco-Zumeta 1996) and has not been recorded since. It is very similar to *C. spiciceps*, the distinguishing characters being discussed under the latter. It is also similar to *C. bicuspidata*, *C. arboris*, *C. furcifera*, *C. parcitata* and *C. saccata*, from which it is distinguished e.g. by the very sharp gonostylar megasetae. *Corynoptera cincinnata* is distinguished from all these species, except from *C. parcitata*, by the evenly broad gonostylus, even on the apical part. One specimen from Morocco is asymmetrical by having four megasetae on the left side of the gonostylus, three on the right side (Figs. 105 B, D). The species is keyed only after three gonostylar megasetae because we believe that is the normal number. See also under *C. spiciceps.*

Distribution. **Germany** (this study), **Italy** (this study), **Morocco** (this study), **Spain** (Mohrig & Blasco-Zumeta 1996).

Corynoptera parcitata **Mohrig & Mamaev, 1986**

Figs. 106 A, B, C

Corynoptera parcitata Mohrig & Mamaev, in Mohrig *et al.*, 1986: 30.

Material studied. 1 male, **RUSSIA**, **Altay region**, Artybash, 26.vi.1981, M. Krivosheina (holotype, no. 2060 in PWMP); 2 males, Gorno-Altaysk, vi.1981, M. Krivosheina (no. 2061, 2062 in PWMP); 1 male, Artybash, pine/birch forest, Malaise trap, 1–4.vii.1985, L. Komarova (no. 4388 in PKHH).

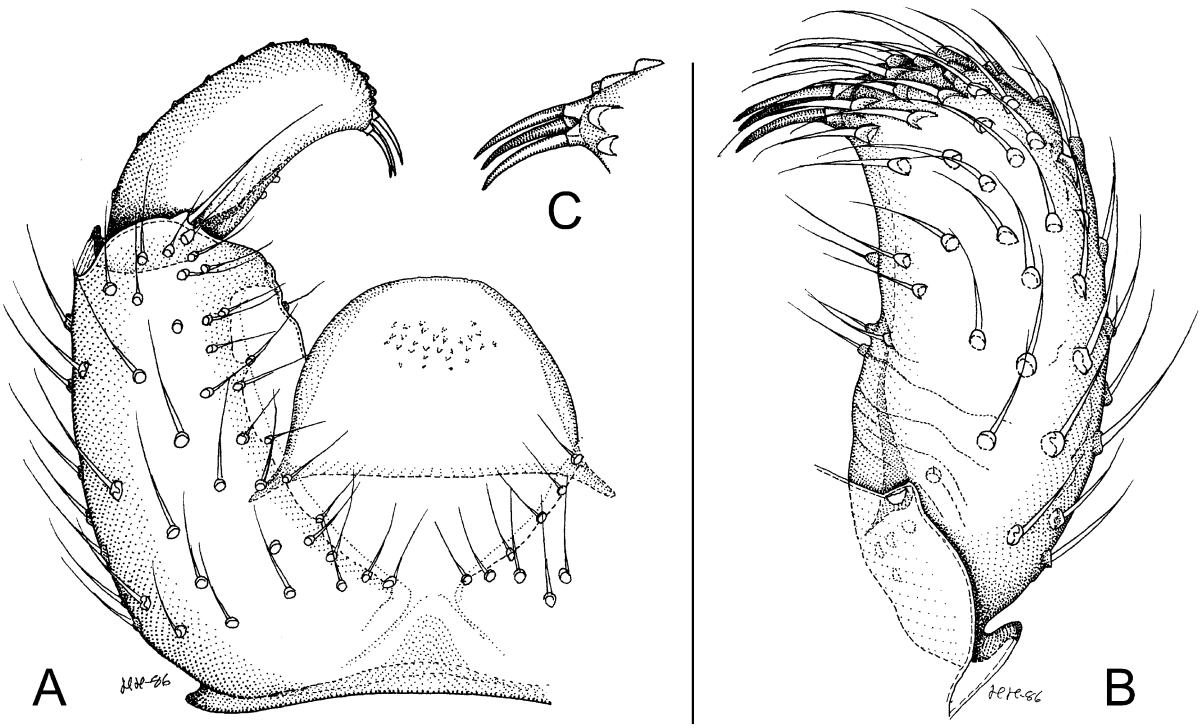

FIGURE 106. *Corynoptera parcitata* Mohrig & Mamaev (from Russia, Gorno-Altaisk). **A.** Part of hypopygium, ventral view. **B, D.** Gonostylus, ventral view (aedeagal apodeme omitted). **C.** Apical part of gonostylus, ventral view. Scale 0.1 mm.

Description. See Mohrig *et al.* (1986); for hypopygium, see Figs. 106 A, B and C.

Discussion. Only the holotype of *Corynoptera parcitata* from the Altay region, Russia, was earlier known. *Corynoptera parcitata* is very similar to *C. saccata* but can be distinguished by having an evenly broad gonostylus, not narrower on the apical part, and by having shorter gonostylar megasetae which are very close to each other. See also under *C. cincinnata* and *C. semipedestris*.

Distribution. **Russia, Altay region** (Mohrig *et al.* 1986).

***Corynoptera spiciceps* sp. n.**
Figs. 107 A, B, C

Material studied. Holotype male. **MOROCCO**, Quirgane, garden, Malaise trap, 8–13.iv.1996, C. Kassebeer (no. 1939 in SDEI).

Description. Male. **Head**. Brown, maxillary palpus very pale brown, antenna concolorous with face. Eye bridge 3 facets wide. Face with 8 scattered dark longer and shorter setae. Clypeus with 1 dark seta. Maxillary palpus with 2 palpomeres; palpomere 1 longer than palpomere 2; palpomere 1 with one long sharp seta, with a dorsal patch of sensilla; palpomere 2 with 1 long sharp seta and 4 shorter truncate setae. Antennal flagellomere 4 2.3 times as long as wide, the neck shorter than the width of flagellomere, the longest setae as long as the width of flagellomere. **Thorax**. Unicolorous pale brown, setae dark. Anterior pronotum with 4 setae. Episternum 1 with 4 setae. **Wing**. Both wings broken in the specimen studied. R1/R 0.65. r-m shorter than bM, r-m/bM 0.85, both r-m and bM non-setose. Haltere pale brown. **Legs**. Yellow. Front tibial organ with dark vestiture, forming a patch. Front tibial spur as long as the tibial width. **Abdomen**. Brown, paler than thorax. Setae dark. **Hypopygium,** Figs. 107 A, B, C. Brown, as abdomen. Gonocoxa longer than gonostylus. The ventral setosity of gonocoxa sparse, the setae at the apical part of the mesial margin not elongated. Gonostylus elongated, the mesial side slightly impressed on apical third; the setosity sparse, apicomesially with a few elongated setae; without an apical tooth, with 5 megasetae at apex, the megasetae subequal in size, straight or slightly curved. Tegmen with roundish subapical shoulders, without a dorsal finger-like process.

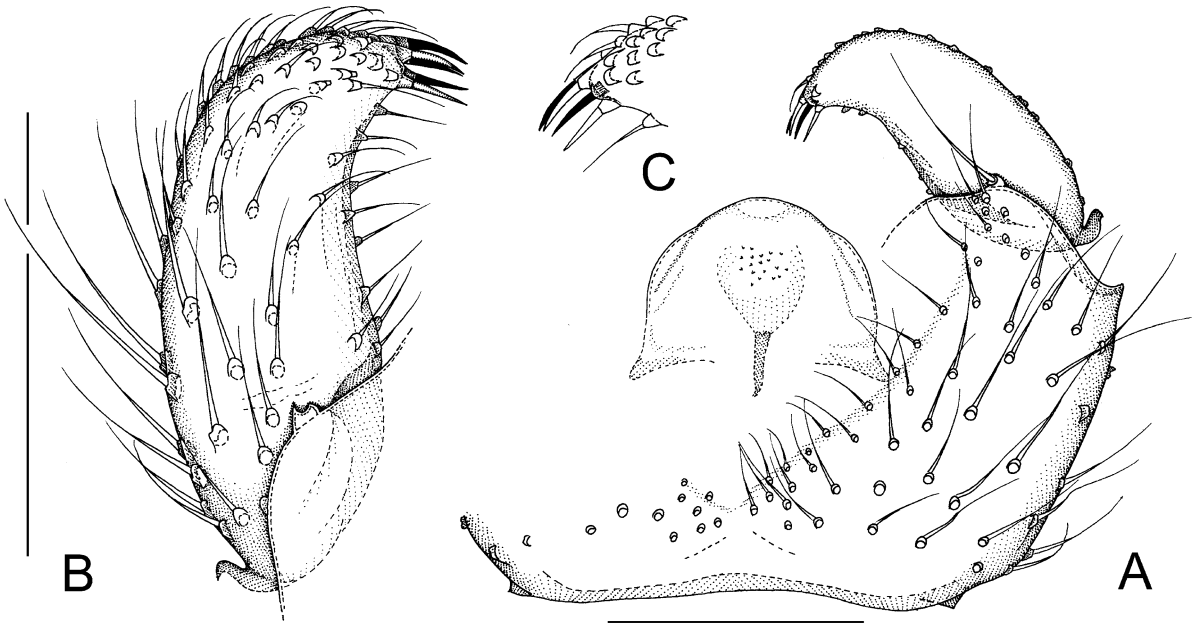

FIGURE 107. *Corynoptera spiciceps* sp. n. (holotype). **A.** Part of hypopygium, ventral view. **B.** Gonostylus, ventral view. **C.** Apical part of gonostylus, ventral view. Scale 0.1 mm, for C as B.

Discussion. *Corynoptera spiciceps* shares a common morphological form in the front tibial organ and the hypopygium with *C. arboris, bicuspidata, C. cincinnata, C. parcitata* and *C. saccata* without being especially similar to any of them. It differs from all but apparently occasional specimens of *C. cincinnata* by having more than

three gonostylar megasetae and by having the megasetae very sharp. *Corynoptera spiciceps* differs from *C. cincinnata* e.g. by an attenuated and curved, not evenly broad and straight, apical part of the gonostylus and by having much shorter gonostylar megasetae. *Corynoptera spiciceps* also resembles *C. praefurcifera* but have the vestiture in the front tibial organ partly arranged in a transverse comb-like row instead of being scattered. See also under *C. praefurcifera*.

Etymology. The name is derived from the Latin words *spica*, point and *caput, -ceps*, head, referring to the pointed apex of gonostylus.

Corynoptera furcifera Mohrig & Mamaev, 1987

Figs. 108 A–E

Corynoptera furcifera Mohrig & Mamaev, in Mohrig *et al.*, 1987: 97.
Corynoptera vitella Rudzinski & Drissner, 1992: 223. Synonymy by Menzel and Mohrig (2000: 252).

Material studied. 1 male, **BULGARIA**, Sofia, sweep-net, 2.vi.1987, B. Dimitrova (no. 1515 in PWMP); 1 male, **CZECH REPUBLIC**, Bohemia, Bilina-Holibka, stony steppe, 50º31'20''N 13º49'40''E, 13.v–14.vii.1998, Barták (in SDEI); 1 male, **FINLAND**, Ab, Vihti, Vihtijärvi, 27.vi.1960, R. Tuomikoski (in MZH); 1 male, Ab, Vihti, Vihtijärvi, 1960, R. Tuomikoski (in MZH); 1 male, Ab, Korppoo, Jurmo, 16.v–17.vi.1968, P.T. Lehtinen (in MZH); 1 male, Ta, Somero, Koisthuhta, 14–15.vi.1986, H. Hippa (in MZH); 1 male, N, Sipoo, Hindsby, deciduous forest, Malaise trap, 14–22.vii.2004, P. Vilkamaa (in MZH); 1 male, Ks, Kuusamo, Rinteenlammit (7363761:3611320), spring, 170 m, Malaise trap, 31.v.–3.viii.2005, J. Salmela (in MZH); 2 males, Kb, Outokumpu, Lake Sysmäjärvi, birch/alder forest, sweep-net, 18.vi.2004, M. Jaschhof (no. 6336 in PKHH, no. 9066 in MZH); 3 males, 1 female, **GERMANY**, BB, Altkünkendorf, nettle-meadow, photoeclector, 24.vi–24.vii.1995, R. Nötzold (no. 1128, 1129 in PKHH); 1 male, BY, Oberstdorf, Nebelhorn, alpine region, sweep-net, 21.viii.2001, K. Heller (no. 3581 in PKHH); 1 male, HE, Upper Rhine, Lampertheim Nature Reserve, photoeclector, 1978, H.-G. Fritz (no. 1525 in PWMP); 3 males, MV, Abtshagen, deciduous forest alder/ash/beech/oak, sweep-net, 5.vi.1995, M. Jaschhof (no. 5333 in PKHH); 3 males, MV, Altwarp, alder/birch/ash forest, sweep-net, 25.v.1995, M. Jaschhof (no. 5321 in PKHH); 1 male, 1 female, MV, Elisenhain near Greifswald, sweep-net, 4.v.1976, W. Mohrig (no. 1519 in PWMP); 1 male, MV, Greifswald, city, yellow pan trap, 14–16.vi.1994, W. Mohrig (no. 1538 in PWMP); same data but 14–17.vi.1995 (no. 1514, 1530, 1531 in PWMP); 1 male, MV, Gützkow, meadow at river Peene, yellow pan trap, 25.v.1994, M. Jaschhof (no. 1527 in PWMP); 5 males, MV, Gützkow, forest with beech/alder/ash, sweep-net, 27.v.1995, M. Jaschhof (no. 5280 in PKHH, no. 144, 145 in PASS, no. 2323, 2324 in ZMSC); 1 male, MV, Galenbecker See Nature Reserve near Heinrichswalde, alder forest, sweep-net, 30.vii.1992, M. Jaschhof (no. 1516 in PWMP); 2 males, same data as previous but exhaustor, 19.viii.1993 (no. 1523, 1524 in PWMP); 2 males, same data again but photoeclector, 28.iv–25.v.1994 (no. 1535 in PWMP); 2 males, same data again but yellow pan trap, 27.v.1994 (no. 1528, 1529 in PWMP); 1 male, same data again but photoeclector, 30.iv–31.v.1994 (no. 1534 in PWMP); 3 males, 1 female, same data again but photoeclector, 14.v–10.vi.1994 (no. 1536, 1537 in PWMP); 1 male, same data again but photoeclector, 29.vi–26.vii.1994 (no. 1533 in PWMP); 1 male, NW, Cologne, district Poll, garden, Malaise trap, 25.iv–2.v.2089, J. Franzen (no. 1281 in PKHH); 1 male, same data as previous but 4–13.ix.1994 (no. 2993 in PKHH); 1 male, NW, Ubbedissen near Bielefeld, training area, sweep-net, 12.vi.1994, K. Heller (no. 2993 in PKHH); 1 male, SH, Flensburg, Marienhölzung, forest, Malaise trap, 18–23.viii.1996 W. Barkemeyer, (no. 2048 in PKHH); 1 male, SH, Heikendorf, garden, Malaise trap, 16–28.v.2000, K. Heller (no. 3114 in PKHH); 1 male, SH, Heikendorf, Korügen, beech forest, sweep-net, 30.v.2007, K. Heller (no. 5573 in PKHH); 1 male, SH, Meggerdorf, Alte Sorge Nature Reserve, wet meadow, photoeclector, 31.v–17.vi.1996, K. Heller, (no. 2620 in PKHH); 1 male, SH, Siggen, beech/oak forest, photoeclector, 1–15.vi.1987, T. Tischler (no. 567 in PKHH); 1 male, SH, Wankendorf, alder swamp forest, photoeclector, 1–15.viii.1988, R. Hingst (no. 159 in PKHH); 1 male, same data but 9–23.v.1989 (no. 1509 in PWMP); 1 male, same data as previous but 20.vi–4.vii.1989 (no. 158 in PKHH); 8 males, same data again but 4–18.vii.1989 (no. 1510–1513, 1517, 1518, 1532 in PWMP); 1 male, same data but 19.v–2.vi.1992 (no. 467 in PKHH); 2 males, **GREECE**, Kerkini mountains, Kerkini marsh, Malaise trap, 21–27.iii.2007, G. Ramel (no. 6095 in PKHH, no. 22 in PGRK); 2 males, same data as previous but 4–10.iv.2007 (no. 5739 in PKHH); 1 male, same data again but 11–17.iv.2007 (no. 6089 in PKHH); same data again but 25.iv–1.v.2007 (no. 5722, 5723 in PKHH); Kerkini, pumping station, Malaise trap, 2–8.v.2007,

G. Ramel (no. 5713 in PKHH); 1 male, **RUSSIA**, **Tuva**, Ishtii-Khem, sweep-net, 8.vii.1974, B. Mamaev (holotype, no. 1506 in PWMP); 2 males, same data as previous (paratypes, no. 1507, 1508 in PWMP); 2 males, same data again, but 4.vii.1994 (paratypes, no. 1526, 1541 in PWMP); 1 male, M**oscow region,** Pavlovskaya, mixed forest, sweep net, 1962, B. Mamaev (no. 1542 in PWMP); 1 male, **Vologda region,** Kadnikov,mixed forest, sweep-net, 8.vii.1962, N. Krivosheina (no. 2179 in PWMP); 1 male, **SWEDEN**, Sk, Simrishamn, Stenshuvud National Park, Svaneholmskog, hornbeam forest, Malaise trap, 20–26vi.2005, Swedish Malaise Trap Project (no. 6664 in PKHH);

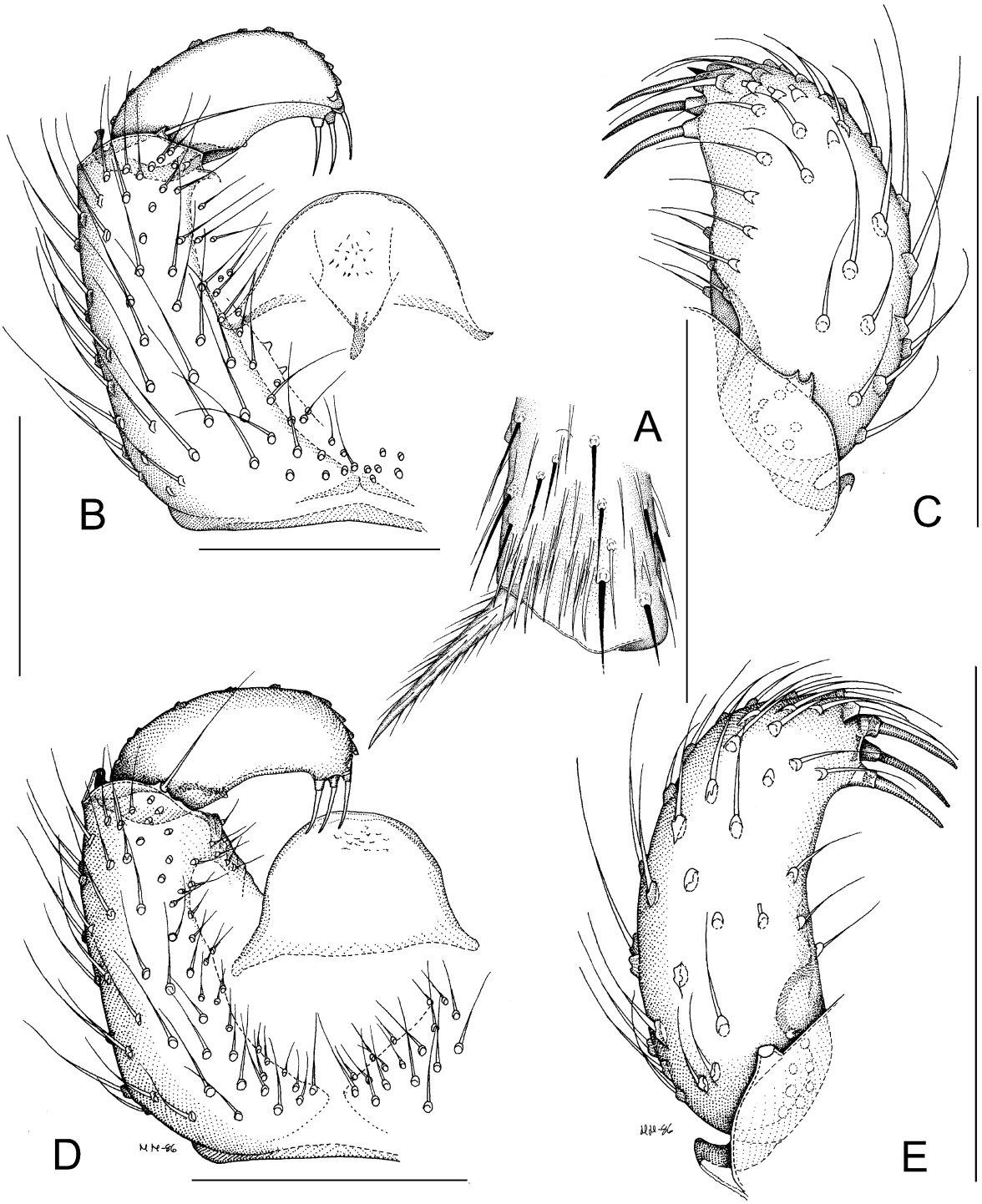

FIGURE 108. *Corynoptera furcifera* Mohrig & Mamaev (A, B from Germany, C from Finland, D, E paratype). **A.** Apical part of front tibia, prolateral view. **B, D.** Part of hypopygium, ventral view (aedeagal apodeme omitted in D). **C, E.** Gonostylus, ventral view. Scale 0.1 mm.

9 males, Ög, Ödeshög, Omberg, Storpissan, old Norway spruce wood, Malaise trap, 28.v–5.vii.2005, Swedish Malaise Trap Project (no. 1481, 1482, 1600–1602, 2118–2121 in SMNH); 9 males, Öl, Mörbylånga, Skogsby, Gamla Skogsby, meadow with bushes, Malaise trap, 20.v–28.vi.2006, Swedish Malaise Trap Project (no. 2332, 2333, 2338–2342, 2638, 2639 in SMNH); 1 male, 1 female, **SWITZERLAND**, ZH, Sihlwald near Zurich, window trap, 20.vi–8.vii.1996, K. Schiegg (no. 1775 in PKHH).

Description. See Mohrig *et al.* (1987) and Rudzinski and Drissner (1992); for apical part of front tibia, see Fig. 108 A, for hypopygium, see Figs. 108 B–E.

Discussion. Corynoptera furcifera was described on the basis of the holotype male, five paratype males from Tuva, Russia, and one additional male from Germany (Mohrig *et al.* 1987). We have not seen the holotype of *C. vitella* (Rudzinski & Drissner 1992) but there is no reason to doubt the synonymization by Menzel and Mohrig (2000). Some specimens of *C. furcifera* seem to have an apical tooth on the gonostylus (Fig. 108 C), some seem to lack it (Figs. 108 B, D, E). It is possible that the tooth is always present, but in some preparations it is completely concealed behind the megasetae in ventral view. *Corynoptera furcifera* is similar to *C. arboris* and *C. saccata*, but differs by having yellow antennal scapus and pedicellus, paler than the flagellum, instead of being brown and concolorous with the flagellum, and by having the vestiture of the front tibial organ in an unarranged patch without any trace of transverse comb-like arrangement. In the classification of Menzel and Mohrig (2000) *C. saccata* (including *C. arboris*) and *C. furcifera* cluster into different species groups on the basis of the latter character. See also *C. membranigera, C. romana* and *C. semipedestris*.

Distribution. **Austria** (Menzel 2001), **Bulgaria** (Mohrig, Dimitrova & Mamaev 1992), **Czech Republic** (Rudzinski 1994b, 1998: as *C. vitella*), **Germany** (Heller 1996, 2002a, Hennicke *et al.* 1997, Hövemeyer 1996b, 1998, Menzel & Heller 2006, Menzel *et al.* 1990, 2003, Metzner *et al.* 1999, Mohrig *et al.* 1987, Rudzinski 2006: as *C. vitella*), **Great Britain** (Menzel *et al.* 2006), **Greece** (Röschmann & Mohrig 1996), **Russia, Tuva** (Mohrig *et al.* 1987), **Russia, Moscow region** and **Vologda region** (this study), **Slovakia** (Rudzinski 2009), **Sweden** (Heller *et al.* 2009), **Switzerland** (Heller & Menzel 2004).

Corynoptera tiliacea Komarova, 2000

Corynoptera tiliacea Komarova, 2000a: 1366.

Description. See Komarova (2000a).

Discussion. *Corynoptera tiliacea* is known from the Altay region, Russia, on the basis of the holotype male only. The holotype has not been available to us and we have not discovered any other material. According to the description the species is similar to *C. furcifera* but the antennal scapus and pedicellus are concolorous brown with the flagellum, not yellowish. The gonostylus may have a short apical tooth which may have been overlooked by Komarova (2000a). In that case the species might be difficult to distinguish from *C. semisaccata*. *Corynoptera tiliacea* is also similar to *C. saccata* and *C. arboris*, but differs by having the vestiture of the front tibial organ in a patch without any sign of a transverse row-like arrangement.

Distribution. **Russia, Altay region** (Komarova 2000a).

Corynoptera subfurcifera Mohrig & Hövemeyer, 1992
Figs. 109 A, B, C

Corynoptera subfurcifera Mohrig & Hövemeyer, 1992: 272.
Corynoptera differa Rudzinski, 1994, in Rudzinski, 1994a: 300. Synonymy by Menzel and Mohrig (2000: 254).

Material studied. 1 male, **AUSTRIA**, ST, Gesäuse National Park, emergence trap, 28.viii.2008, Haseke (no. 7121 in PKHH); 1 male, **GERMANY**, NS, Göttingen, Drakenberg, meadow on lime stone, photoeclector, 25.vi–9.vii.1986 (holotype, no. 1543 in PWMP); 2 males, same data as previous (paratypes, no. 1544, 1545 in PWMP); 1 male, BW, Blaubeuren, Tiefental, gorge forest, Malaise trap, 11–14.iv.2008, R. Sipple (no. 9 in PRSE); 4 males, same data as previous but 31.vii–7.viii.2008 (no. 32. 36, 38 40 in PRSE); 5 males, same data again but 7.vii–28.viii.2008 (no. 51, 55, 66, 74, 80 in PRSE); 1 male, same data again but 28.vii–4.ix.2008 (no. 115 in PRSE); 1

male, same data but 4–11.ix.2008 (no. 126 in PRSE); 1 male, same data again but 9–16.x.2008 (no. 162 in PRSE); 1 male, BY, Lindau, forest at lake shore, sweep-net, 27.v.2004 (no. 4202 in PKHH); 1 male, ST, Rübeland, Harz, Klufthöhle, 20.x.1989, Eckert (no. 1478 in PWMP); 1 male, same data as previous but Schornsteinberghöhle, 21.x.1989 (no. 1546 in PWMP); 3 males, TH, Rabis near Jena, dry grassland, sweep-net, 26.vi.1993, M. Jaschhof (no. 1547–1549 in PWMP); 1 male, **ITALY**, Verona, Malcesine, Monte Baldo, 700–1700 m, 7.vii.1986, H. Hippa; I male, Como, Brunate, 800–1000 m, 9.vii.1986, H. Hippa (in MZH); 1 male, same data as previous but 1000–1200 m, 10.vii.1986 (in MZH), 2 males, same data again but Como, Cap C.A.O., 1000–1800 m (in MZH); 8 males, **SWEDEN**, Ög, Omberg, Bokskogsreservatet, beech forest, Malaise trap, 28.v–5.vii.2005, Swedish Malaise Trap Project (no. 6054 in PKHH, 1603–1608, 2959 in SMNH); 1 male, 1 female, **SWITZERLAND**, ZH, Sihlwald near Zurich, window trap, 20.vi–8.vii.1996, K. Schiegg (no. 1780 in PKHH); 1 male, same data as previous but 9–18.vii.1996 (no. 1771 in PKHH); 1 male, same data again but photoeclector, 15.viii–12.ix.1996 (no. 2506 in PKHH).

Description. See Mohrig and Hövemeyer (1992) and Rudzinski (1994); for hypopygium, see Figs. 109 A, B and C.

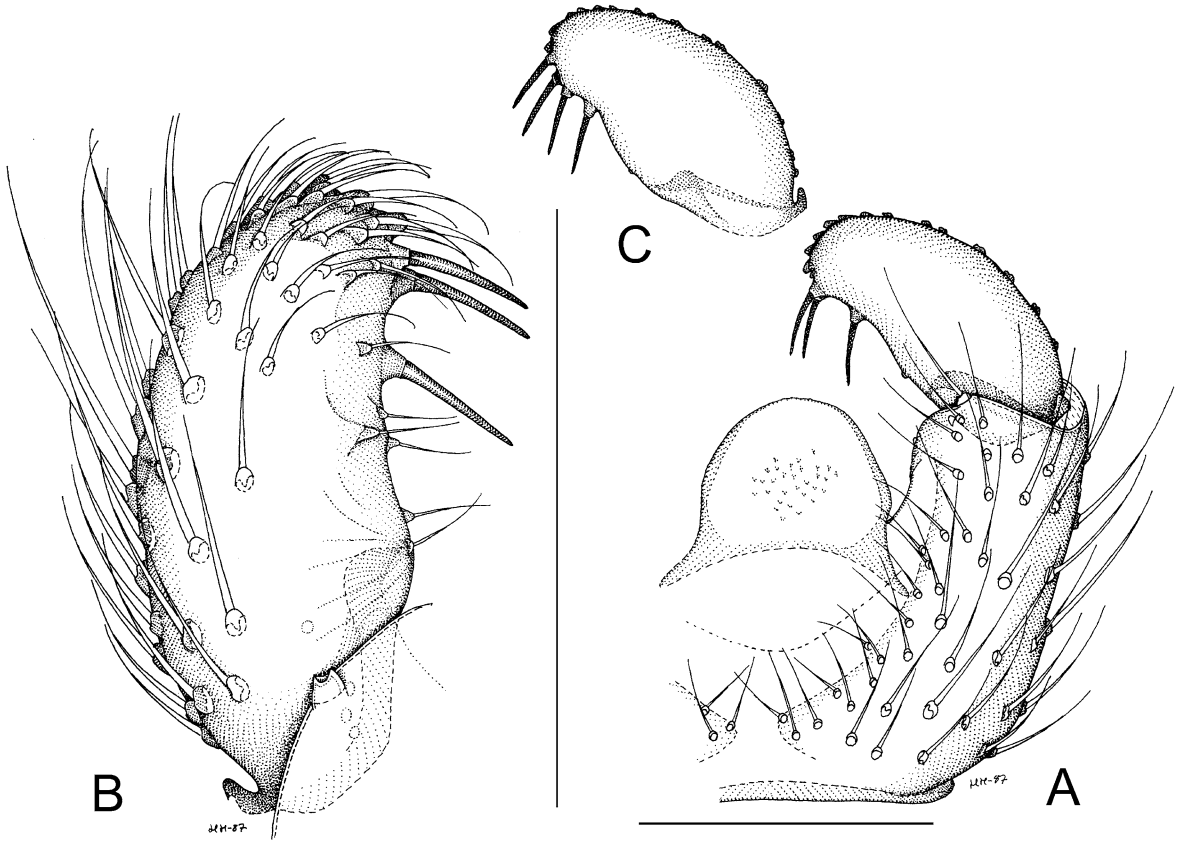

FIGURE 109. *Corynoptera subfurcifera* Mohrig & Hövemeyer (from Italy, Como). **A.** Part of hypopygium, ventral view (aedeagal apodeme omitted). **B, C.** Gonostylus, ventral view. Scale 0.1 mm.

Discussion. We have seen all of the type material of *Corynoptera subfurcifera* (Mohrig & Hövemeyer 1992), but not that of *C. differa* (Rudzinski 1994). We have no reason to doubt the synonymization by Menzel and Mohrig (2000).

The normal number of the gonostylar megasetae is three; the four-setose condition, stated in the original description (Mohrig & Hövemeyer 1992) and shown in Fig. 109 C, is actually rare and our drawing is from an asymmetrical specimen. *Corynoptera subfurcifera* one of the few species placed in *Corynoptera* which lack any sign of a transverse comb-like arrangement in the vestiture of the front tibial organ. By lacking an apical tooth gonostylus and by having three gonostylar megasetae it is similar to *C. furcifera, C. romana* and *C. badia* without being very similar to any of these. It is distinguished from *C. furcifera* and *C. romana* by having one of the gonostylar megasetae conspicuously shifted basally from the other two creating a distinct gap, and also from *C. romana*

by a three-segmented, not two-segmented, maxillary palpus. In *C. badia* the arrangement of the gonostylar megasetae is similar but its megasetae are shorter and more curved.

Distribution. **Austria** (this study), **Germany** (Hövemeyer 1997, Menzel & Heller 2006, Mohrig & Hövemeyer 1992, Rudzinski 1995, 2006), (Rudzinski 1994a: as *C. differa*), **Great Britain** (Menzel *et al.* 2006), **Ireland** (Menzel *et al.* 2006), **Italy** (this study), **Sweden** (Heller *et al.* 2009), **Switzerland** (Heller & Menzel 2004).

***Corynoptera romana* sp. n.**
Figs. 110 A–D

Material studied. *Holotype male*. **ITALY**, Rome, Villa Doria-Pamphili, sweep-net, 16.iii.1987, H. Hippa (in MZH). *Paratypes*. 1 male, same data as holotype (in MZH); 2 males, Rome, Forum Romanum, sweep-net, 29.iii.1988, H. Hippa (in MZH).

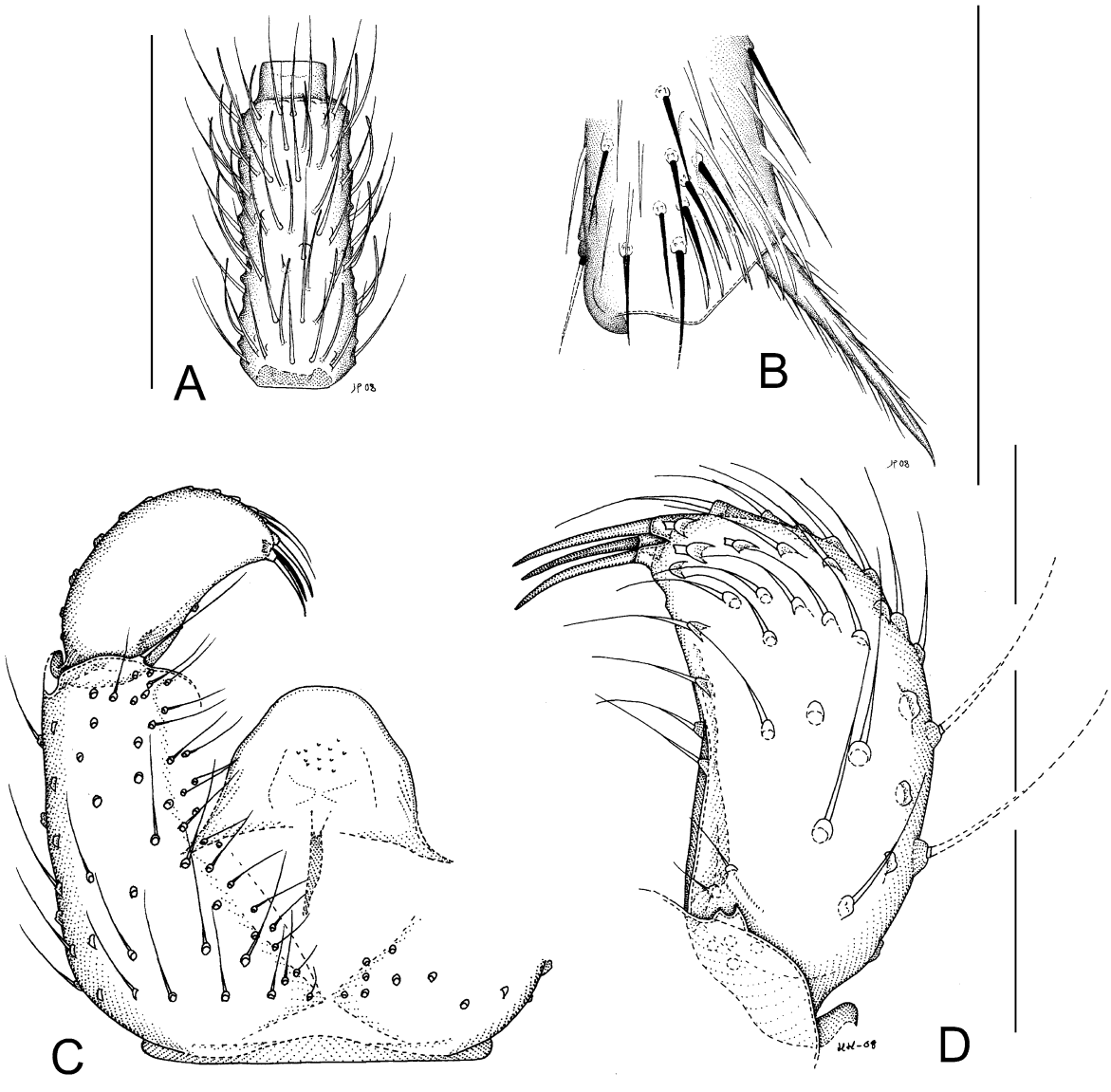

FIGURE 110. *Corynoptera romana* sp. n. (holotype). **A.** Antennal flagellomere 4. **B.** Apical part of front tibia, prolateral view. **C.** Part of hypopygium, ventral view. **D.** Gonostylus, ventral view. Scale 0.1 mm.

Description. Male. **Head**. Brown, maxillary palpus very pale brown, antenna concolorous with face. Eye bridge 2–3 facets wide. Face with 5–7 scattered dark longer and shorter setae. Clypeus with 1 dark seta. Maxillary palpus with 2 palpomeres; palpomere 1 longer than palpomere 2+3, palpomere 1 with one long sharp seta, with a

dorsal patch of sensilla; palpomere 2 non-setose or with 1 long sharp seta and 2–6 shorter truncate setae. Antennal flagellomere 4, Fig. 110 A, 2.3–2.7 times as long as wide, the neck shorter than the width of flagellomere, the longest setae about as long as the width of flagellomere. **Thorax**. Brown, pleura paler, setae dark. Anterior pronotum with 2–4 setae. Episternum 1 with 3–4 setae. **Wing**. Length 1.4–1.7 mm. Width/length 0.40–0.60. R1/R 0.60–0.75. c/w 0.70–0.75. r-m and bM subequal in length, or r-m shorter, r-m/bM 0.85–1.0, both r-m and bM non-setose. Haltere pale brown. **Legs**. Yellow. Apical part of front tibia, Fig. 110 B: tibial organ with dark vestiture, forming an indistinct group of setae. Front tibial spur about as long as the tibial width. **Abdomen**. Pale brown. Setae dark. **Hypopygium,** Figs. 110 C, D. Pale brown, paler than abdomen. Gonocoxa longer than gonostylus. The ventral setosity of gonocoxa sparse, the setae at the apical part of the mesial margin not elongated. Gonostylus elongated, the mesial side slightly impressed; the setosity sparse, apicomesially with a few elongated setae; without an apical tooth, with 3 megasetae, the megasetae subequal in size, slightly curved. Tegmen simple, without a dorsal finger-like process.

Discussion. Like *Corynoptera furcifera, C. romana* is closely similar to *C. arboris, C. bicuspidata, C. cincinnata, C. parcitata* and *C. saccata* but has the vestiture of the front tibial organ in a patch, not partly or wholly in a transverse comb-like row. It differs from all except from some specimens of *C. bicuspidata* by having a two-segmented, not three-segmented maxillary palpus. *Corynoptera romana* and specimens of *C. bicuspidata* with a two-segmented palpus can be distinguished e.g. by *C. romana* having the gonostylar megasetae being twice as long. *Corynoptera romana* differs from *C. furcifera* by a two-segmented, not three-segmented, maxillary palpus, a unicolorous dark antenna, not one with pale yellowish scapus and pedicellus, by having much longer gonostylar megasetae placed in a more tighter group. See also under *C. subfurcifera.*

Etymology. The name is Latin, *romana*, Roman, referring to the type locality in Rome.

Corynoptera semisaccata Mohrig & Mamaev, 1987

Figs. 111 A–F

Corynoptera semisaccata Mohrig & Mamaev, in Mohrig *et al.*, 1987: 100.

Material studied. 1 male, **GERMANY**, BW, Gaggenau-Oberweier, Mittelberg, meadow, Malaise trap, 15.v.1995, D. Doczkal (no. 5112 in PKHH); 1 male, BW, Malsch, Heckelbachklamm, Malaise trap, 3–17.v.2003, D. Doczkal (no. 4922 in PKHH); 2 males, BW, Sandweier, dry grassland, Malaise trap, 13.v–8.vi.2006, D. Doczkal (no. 5233, 5234 in PKHH); same data as previous but 2–29.ix.2006 (no. 5252 in PKHH); 1 male, HE, Neumorschen, Hallberg, dry grassland and oak-ash forest, sweep-net, 17.vi.2007, K. Heller (no. 5597 in PKHH); 1 male, NW, Cologne, district Poll, garden, Malaise trap, 18–25.iv.1989, J. Franzen (no. 1277 in PKHH); 1 male, same data as previous but 19–26.vi.1990 (no. 2975 in PKHH); 1 male, same data again but 23–30.iv.2002 (no. 4270 in PKHH); 2 males, same data again but 7–14.v.2002 (no. 4278 in PKHH); 1 male, same data again but 14–21.v.2002 (no. 4259 in PKHH); 1 male, same data again but 1–18.vi.2002 (no. 4245 in PKHH); 1 male, same data again but 11–16.vii.2002 (no. 4276 in PKHH); 1 male, same data again but 16–23.vii.2002 (no. 4281 in PKHH); 1 male, same data again but 6–13.viii.2002 (no. 4253 in PKHH); 1 male, same data again but 20–27.viii.2002 (no. 4234 in PKHH); 1 male, same data again but 9–16.vii.2002 (no. 4276 in PKHH); 1 male, same data again but 10–17.ix.2002 (no. 4228 in PKHH); 3 males, **GREECE**, Kerkini mountains, Procom, riverine forest along river Styrmon, Malaise trap, 19–25.ix.2007, G. Ramel (no. 6074, 6075 in PKHH, no. 15 in PGRK); 1 male, same data as previous but 14–20.iv.2008 (no. 76 in PGRK); 1 male, same data again but 30.iv–4.v.2008 (no. 6937 in PKHH); 1 male, same data again but 5–11.v.2008 (no. 6978 in PKHH); 3 males, Kerkini mountains, Vironia, Malaise trap, 25.iv–1.v.2005, G. Ramel (no. 6186, 6188 in PKHH, no. 49 in PGRK); 1 male, same data as previous but 11–15.v.2005 (no. 6177 in PKHH); 1 male, Kerkini marsh, Malaise trap, 14–20.iii.2007, G. Ramel (no. 5768 in PKHH); 1 male, same data as previous but 4–10.iv.2007 (no. 5739 in PKHH); 1 male, Kerkini mountains, Ramna site, Malaise trap, 14–20.iv.2008, G. Ramel (no. 6976 in PKHH); 1 male, Beles site, Malaise trap, 11–17.iv.2005, Ramel (in MZH); 1 male, **RUSSIA**, **Tuva**, Ishtii-Khem, bred from larva under bark of poplar, 11.vii.1974, Mamaev (holotype, in PWMP); 1 male, **Altay region**, Katun valley, forest steppe, pitfall trap, 22.vi–26.vii.1983, H. Hippa (in MZH).

Description. See Mohrig *et al.* (1987); for hypopygium, see Figs. 111 A–F.

Discussion. Corynoptera semisaccata was described from the holotype male only (Mohrig *et al.* 1987).

Corynoptera semisaccata is similar to *C. arboris* and *C. saccata* except for the front tibial organ which has the vestiture in an unarranged patch instead of being at least partly arranged in a transverse comb-like row. *Corynoptera semisaccata* differs from *C. saccata* and is similar to *C. arboris* by having an apical tooth on the gonostylus (not mentioned in the original description). The tooth is usually longer in *C. semisaccata*, about half the length of the gonostylar megasetae, but there are specimens which, at least in the slide-mounted material, seem to have a much shorter tooth, as in *C. arboris*. The apical tooth can be very difficult to see when the gonostylus is studied from the ventral side.

Distribution. **Germany** (Hövemeyer 1996a), **Great Britain** (Menzel *et al.* 2006), **Greece** (this study), **Russia, Tuva** (Mohrig *et al.* 1987), **Altay region** (this study), **Spain** (Heller & Menzel 2004).

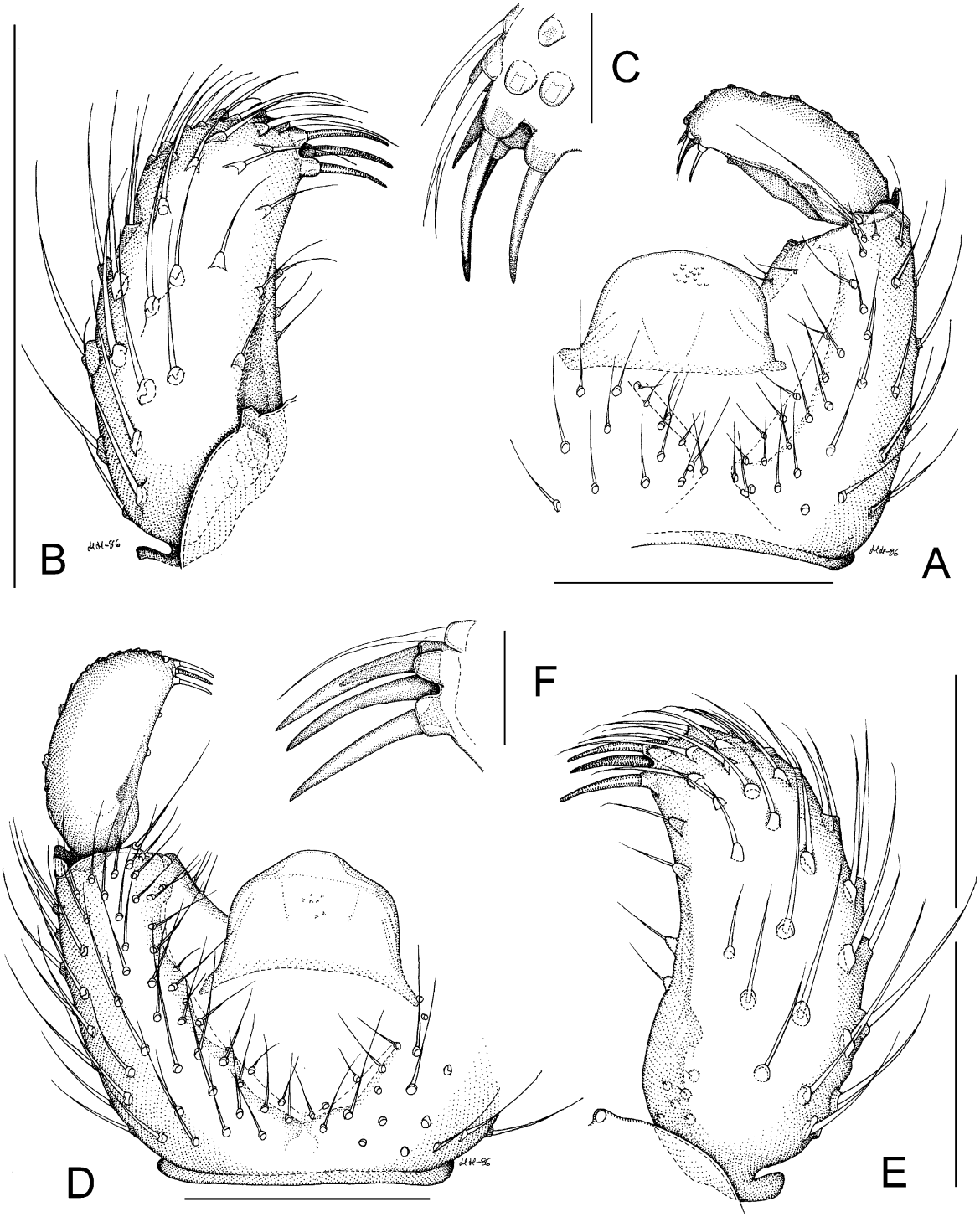

FIGURE 111. *Corynoptera semisaccata* Mohrig & Mamaev (A, B, C holotype, D, E, F from Altay region). **A, D.** Part of hypopygium, ventral view (aedeagal apodeme omitted). **B, E.** Gonostylus, ventral view. **C, F.** Apical part of gonostylus, ventral view. Scale 0.1 mm, for C and F 0.01 mm.

***Corynoptera praefurcifera* Mohrig, 1994**
Figs. 112 A–D

Corynoptera praefurcifera Mohrig, in Mohrig & Blasco-Zumeta, 1994: 97.

Material studied. *Holotype* male. **SPAIN**, Retuerta de Pina near Zaragoza, *Juniperus thurifera* forest, Malaise trap, 11.xi.1990, J. Blasco-Zumeta (no. 102 in PWMP). *Paratype*. 1 male, same data as holotype but 15.iii.1991 (no. 104 in PWMP).

Description. See Mohrig and Blasco-Zumeta (1994); for antennal flagellomere 4, see Fig. 112 A, for apical part of front tibia, see Fig. 112 B, for hypopygium, see Figs. 112 C and D.

Discussion. Corynoptera praefurcifera was described from the holotype male, 35 paratype males and one paratype female (Mohrig & Blasco-Zumeta 1994), but has not been recorded since.

Corynoptera praefurcifera is similar to *C. furcifera*, but differs e.g. by having four longer, instead of three shorter, gonostylar megasetae. It differs also in the colour of antenna which is unicolorous dark brown, instead of having the scapus and pedicellus pale yellowish as in *C. furcifera*. *Corynoptera praefurcifera* also slightly resembles *C. spiciceps* but the species differ in the front tibial organ, *C. spiciceps* having part of the vestiture arranged in a transverse comb-like row, *C. praefurcifera* having more patch-like vestiture.

Distribution. **Spain** (Mohrig & Blasco-Zumeta 1994).

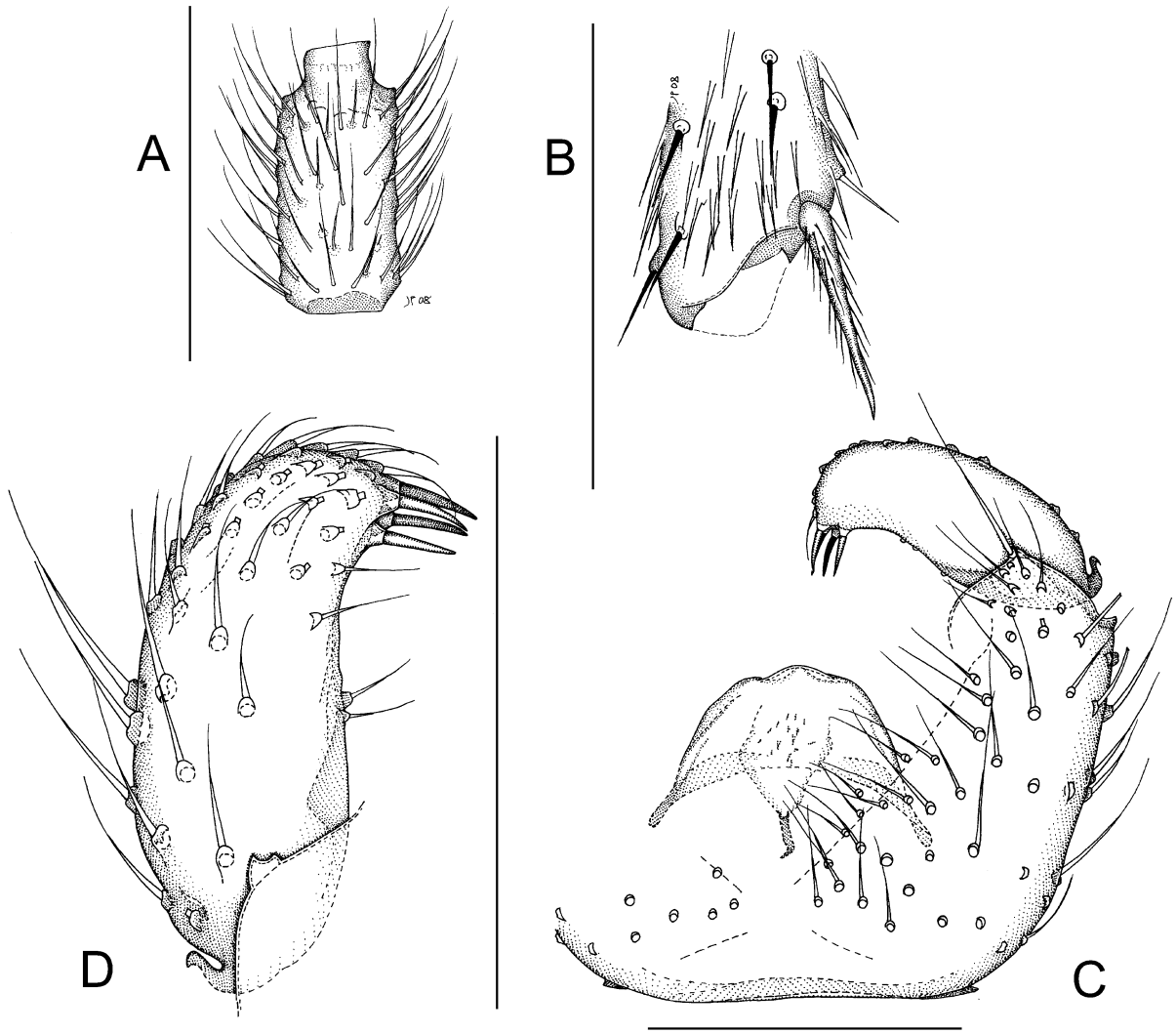

FIGURE 112. *Corynoptera praefurcifera* Mohrig (A holotype, B, C paratype). **A.** Antennal flagellomere 4. **B.** Apical part of front tibia, prolateral view. **C.** Part of hypopygium, ventral view. **D.** Gonostylus, ventral view. Scale 0.1 mm.

***Corynoptera bistrispina* (Bukowski & Lengersdorf, 1936)**
Figs. 113 C, D

Neosciara bistrispina Bukowski & Lengersdorf, 1936: 109.
nec *Plastosciara defecta* Frey, 1948: 71. Unjustified synonymy by Tuomikoski (1960: 60).
Corynoptera bistrispina, Tuomikoski, 1960: 60.

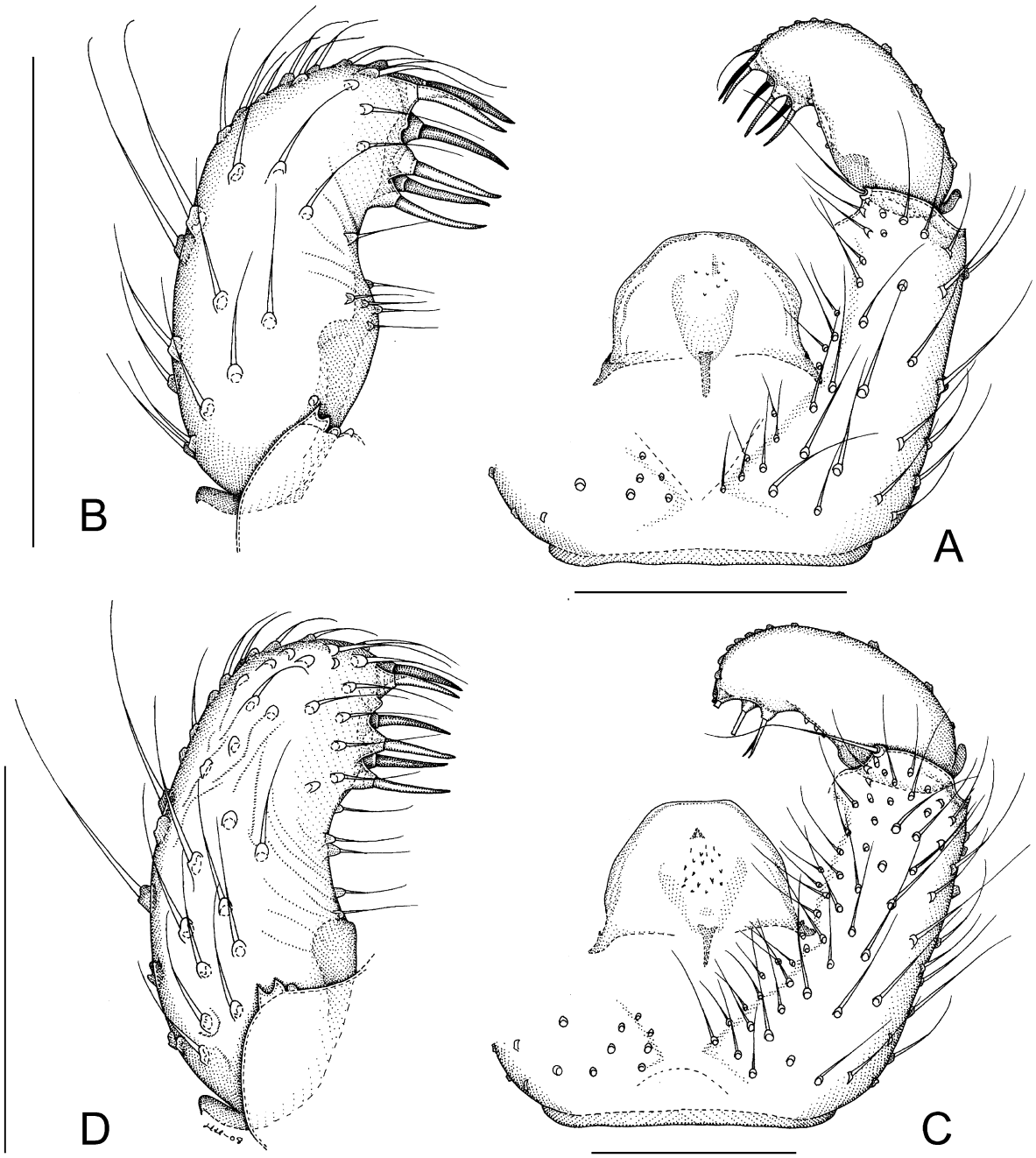

FIGURE 113. Part of hypopygium **(A, C)**, ventral view, and gonostylus **(B, D)**, ventral view. **A, B.** *Corynoptera defecta* (Frey) (from Finland). **C, D.** *C. bistrispina* (Bukowski & Lengersdorf) (from Greece). Scale 0.1 mm.

Material studied. 3 males, **GERMANY**, BW, Blaubeuren, Tiefental, gorge forest, Malaise trap, 4–11.ix.2008, R. Sipple (no. 117, 124, 128 in PRSE); 1 male, same data as previous but 11–18.ix.2008 (no. 140 in PRSE); 1 male, same data again but 9–16.x.2008 (no. 161 in PRSE); 1 male, RP, Gönnersdorf, managed grassland with fruit trees, Malaise trap, 10–17.ix.1994, K. Cölln (no. 1887 in PKHH); 2 males, RP, Mainz, citadel, Malaise trap, 10–17.vii.2006, D. Doczkal (no. 7070 in PKHH, no. 165 in PDDG); 1 male, **GREECE**, Kerkini mountains, Kerkini, pumping station, Malaise trap, 9–15.v.2005, G. Ramel (no. 5710 in PKHH); 1 male, Kerkini mountains, Kerkini,

midway site, 41°15'N 23º19'E, Malaise trap, 19–25.v.2008, G. Ramel (no. 6955 in PKHH); 1 male, Krousia mountains, northern slope near timber stack, 41°07'N 23º12'E, Malaise trap, 30.v–5.vi.2007, G. Ramel (no. 31 in PGRK); 1 male, Beles Site, 41°17'N 23º12'E, 595 m, meadow, Malaise trap, 11–17.iv.2005, G. Ramel (in MZH); 2 males, **HUNGARY**, Heves, Szilvasvarad, oak forest, sweep-net, 22.v.1998, B. Rulik (no. 2204, 2205 in PWMP); 1 male, **UKRAINE**, Crimea, beech-oak forest, W. Bukowski (lectotype, des. Menzel, in Menzel & Mohrig 2000**,** in ZMFK).

Description. See Bukowski and Lengersdorf (1936); for hypopygium, see Figs. 113 C and D.

Discussion. *Corynoptera bistrispina* was described from the Crimea, Ukraine, on the basis of two males. Menzel and Mohrig (2000: 250), designated one of the males as lectotype (in ZMFK), the other as paralectotype (in ZMAS). Tuomikoski (1960) synonymized *C. defecta* (Frey) with *C. bistrispina*, although with some doubt. We regard the species as distinct. For further discussion, see under *C. defecta*.

Distribution. **Czech Republic** (Menzel *et al.* 2000), **Germany** (Heller 1999), **Greece** (this study), **Hungary** (Rulik *et al.* 2001); **Ukraine** (Bukowski & Lengersdorf 1936).

Remark. The following records need to be verified: **Czech Republic** (Rudzinski 1998), **Germany** (Hövemeyer 1997, Rudzinski 2006, Hennicke *et al.* 1997), **Great Britain** (Menzel *et al.* 2006), **Slovakia** (Rudzinski 2009)

***Corynoptera defecta* (Frey, 1948) restit., comb. n.**
Figs. 113 A, B

Plastosciara defecta Frey, 1948: 71.

Material studied. 1 male, **BULGARIA**, Boyana, church, sweep-net, 13.vi.1991, B. Dimitrova (no. 2197 in PWMP); 1 male, **FINLAND**, Ta, Kangasala, Kejsaråsen, 6.vii.1944, R. Frey (holotype, in MZH); 2 males, Ab, Parainen, Åntala, 20.vi–9.xi.1968, P.T. Lehtinen (in MZH); 1 male, Ab, Houtskari, Björkö, Sandholm, 24.viii–24.x.1968, P.T. Lehtinen (in MZH); 1 male, Ab, Korppoo, Hevonkack, pitfall trap, 23.vi–24.viii.2005, P.T. Lehtinen (in MZH); 1 male, Ab, Vihti, Vihtijärvi, 20.vii.1960, R. Tuomikoski (in MZH); 1 male, N, Espoo, Nuuksio, pitfall trap, 24.vii–1.ix.1989, Biström & Vilkamaa (in MZH); 1 male, N, Espoo, Saukonnoro, pitfall trap, 8.vi–24.vii.1989, Biström & Vilkamaa (in MZH); 1 male, Ka, Virolahti, Siikasaari, 10.v–13.ix.1970, Kännö (in MZH); 1 male, Ks, Kuusamo, Jäkälävuoma, 9.vii.1965, R. Tuomikoski (in MZH); 8 males, 3 females, **GERMANY**, BB, Biesenbrow, dry grassland, photoeclector, 24.vi–24.vii.1995, R. Nötzold (no. 1186–1189 in PKHH); 1 male, MV, Abtshagen near Greifswald, sweep-net, 14.v.1993, M. Jaschhof (no. 2220 in PWMP); 1 male, TH, Siebleben pond near Gotha, deciduous forest, sweep-net, 28.v.1998, F. Menzel (no. 2199 in PWMP); 1 male, **NORWAY**, Finnmark, Skvalsund, Skaidi, 7.vii.1964, R. Tuomikoski (in MZH); 1 male, **RUSSIA**, **Karelia**, Kivach, *Populus* forest, window trap, 28–30.vii.1987, I. Yakovlev (in MZH); 1 male, **Krasnodar region**, Medvety Vorota, 2.ix.1966, B. Mamaev (no. 2196 in PWMP); 1 male, same data, but 1.vii.1967 (no. 2195 in PWMP); 1 male, **Tuva**, Ishtii-Khem, 4.vii.1974, B. Mamaev (no. 2198 in PWMP); 1 male, **SWEDEN**, Ög, Ödeshög, Omberg, Storpissan, old Norway spruce wood, Malaise trap, 28.v–5.vii.2005, Swedish Malaise Trap Project (no. 2142 in SMNH); 1 male, To, Kiruna, Nikkaluokta, young birch/willow forest along stream, Malaise trap, 14.vii–5.viii.2005, M. Jaschhof (no. 1087 in SMNH); 3 males, To, Abisko, birch forest northern slope, yellow dish, 13–17.vii.1991, M. v. Tschirnhaus (no. 1567–1582 in PWMP).

Description. See Frey (1948) and Tuomikoski (1960); for hypopygium, see Figs. 113 A and B.

Discussion. *Corynoptera defecta* is very similar to *C. bistrispina* and has been considered to be conspecific since Tuomikoski (1960). We regard the species as distinct. In *C. defecta* the megasetae are larger and more basally extended on the gonostylus than in *C. bistrispina*. Furthermore, the flagellomeral setae are longer in *C. defecta*. In preparations of both species, a small finger-like process on the tegmen is either visible or not. In the present material, *C. defecta* has a more northern distribution. See also under *C. turkmenica.*

Distribution. **Bulgaria** (Dimitrova & Mohrig 1993: as *C. bistrispina*), **Finland** (Frey 1948, Tuomikoski 1960, Vilkamaa *et al.* 2007: as *C. bistrispina*), **Germany** (Heller 2002b, Menzel et al. 2003, Hövemeyer 1996b: as *C. bistrispina*), **Norway** (this study), **Russia, Krasnodar region** and **Tuva** (this study), **Sweden** (Heller et al. 2009: as *C. bistrispina*).

***Corynoptera turkmenica* Antonova, 1975**
Figs. 114 A, B

Corynoptera turkmenica Antonova, 1975: 638.

Material studied. 1 male, **TURKMENISTAN**, Central Kopetdag, Ipai-Kala south of Bakharden, sweep-net, 23.v.1971, E. B. Antonova (holotype, no. 1565 in PWMP); 1 male, same data as previous but 2.vi.1971 (paratype, no. 1564 in PWMP); 1 male, same data again but 6.vi.1971 (paratype, in ZMUM).

Description: See Antonova (1975); for hypopygium, see Figs. 114 A and B.

Discussion. *Corynoptera turkmenica* is known only from Turkmenistan on the basis of the type material, which we have studied. The collection dates of the paratypes do not correspond with that of the original description but we have interpreted these specimens as the paratypes. Menzel and Mohrig (2000) placed *C. turkmenica* in their *C. boletiphaga* group. *Corynoptera turkmenica* is rather similar to *C. defecta*. It differs by having five gonostylar megasetae instead of six. *Corynoptera turkmenica* and *C. defecta* may turn out to be conspecific.

Distribution. **Turkmenistan** (Antonova 1975)

FIGURE 114. *Corynoptera turkmenica* Antonova (paratypes). **A.** Part of hypopygium, ventral view. **B.** Gonostylus, ventral view. Scale 0.1 mm.

***Corynoptera francescae* Mohrig & Kauschke, 1994**
Figs. 115 A, B, C

Corynoptera francescae Mohrig & Kauschke, 1994: 178.

Material studied. 2 males, **GERMANY**, MV, Abtshagen near Greifswald, sweep-net, 14.v.1993, M. Jaschhof (no. 1504, 1505 in PWMP); 4 males, 1 female, TH, Leutra, near Jena, dry grassland with *Brachypodium*, photoeclector, 21.vi–5.vii.1995, W. Adaschkiewitz (no. 1817, 1818 in PKHH); 1 male, **ITALY**, Lecce, University park, yellow pan trap, 28.x–20.xi.1992 (holotype, no. 1500 in PWMP); 1 male, 2 females, same data as previous (paratypes, no. 1502, 1503 in PWMP).

Description. See Mohrig and Kauschke (1994); for antennal flagellomere 4, see Fig. 115 A, for hypopygium, see Figs. 115 B and C.

Discussion. Corynoptera francescae was described from the holotype male, one paratype male and two paratype females (Mohrig & Kauschke 1994). We have studied all of the type material.

Corynoptera francescae is not very similar to any other described *Corynoptera*. The lack of a comb-like arrangement in the vestiture of the front tibial organ, the lack of an apical tooth of gonostylus and the arrangement of the four gonostylar megasetae in an apical group of three megasetae separated by a long gap from the fourth, more basal, megaseta distinguishes the species. *Corynoptera abducera* is somewhat similar but it has two megasetae in the more basal position in the gonostylus. The gonostylus of *C. flava* is also similar but that species has an apical tooth.

Distribution. **Germany** (this study), **Greece** (Röschmann & Mohrig 1996), **Italy** (Mohrig & Kauschke 1994).

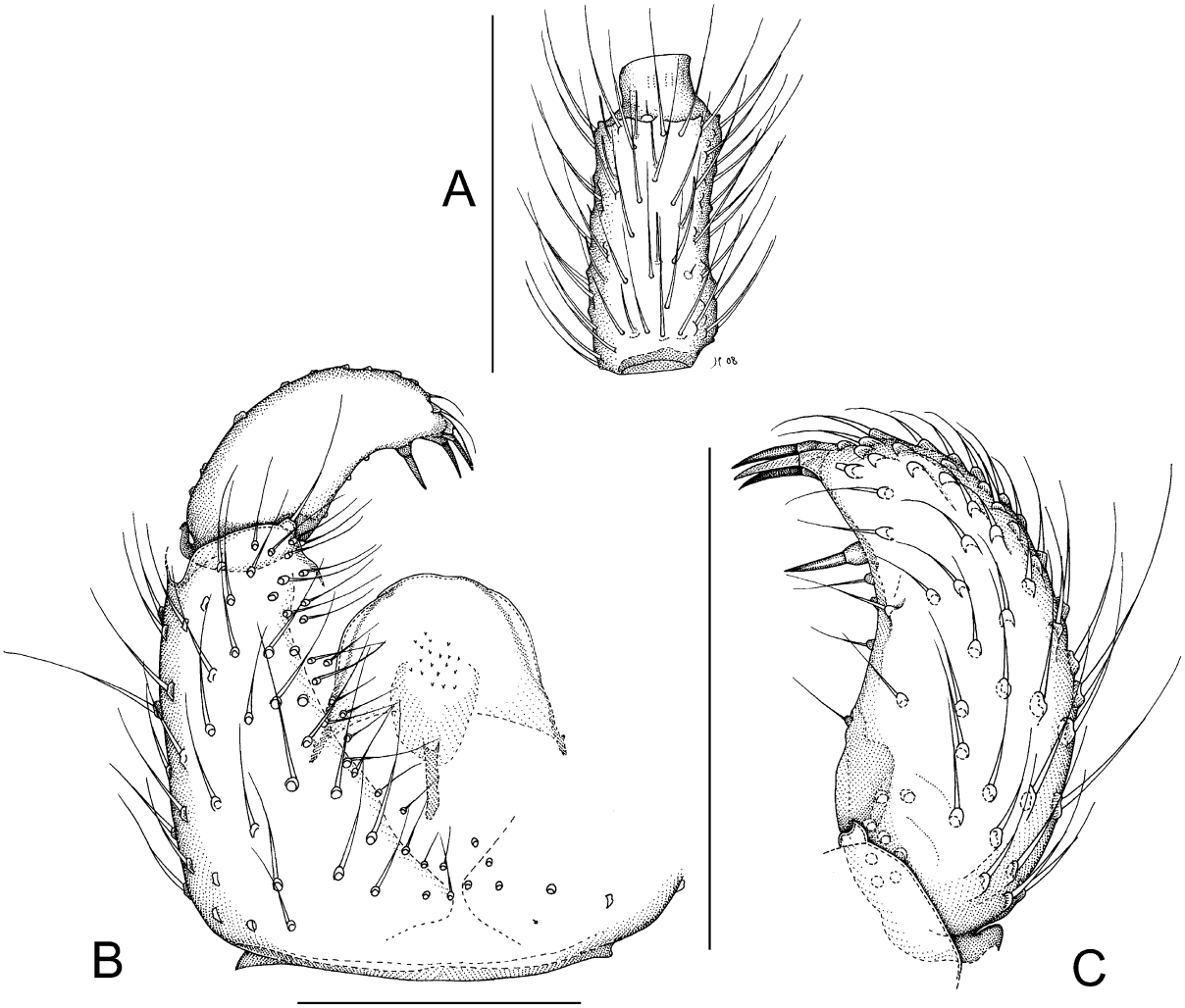

FIGURE 115. *Corynoptera francescae* Mohrig & Kauschke (holotype). **A.** Antennal flagellomere 4. **B.** Part of hypopygium, ventral view. **C.** Gonostylus, ventral view. Scale 0.1 mm.

Corynoptera boletiphaga **(Lengersdorf, 1940)**
Figs. 116 A–D

Neosciara boletiphaga Lengersdorf, 1940: 131.
Bradysia (*Chaetosciara*) *filiceti* Frey, 1948: 61. Synonymy by Tuomikoski (1960: 61).
Corynoptera geogenia Tuomikoski, 1960: 61. Synonymy by Mohrig (1978: 426).
Corynoptera scebulifera Komarova, 2000b: 141. Synonymy by Menzel and Komarova (in press).
Corynoptera boletiphaga, Tuomikoski, 1960: 61.

Material studied. 1 male, **AUSTRIA**, T, Innsbruck, Hall valley, sweep-net, 27.vii.1994, S. Erlacher (no. 4122 in PKHH); 2 males, **FINLAND** Vichtis, R. Frey (lectotype and paralectotype of *Bradysia* (*Chaetosciara*) *filiceti* Frey, des. Menzel, in Menzel & Mohrig 2000; in MZH); 1 female, Ab, Vihti, Vihtijärvi, 15.viii.1959, R. Tuomikoski

(syntype of *C. geogenia* Tuomikoski; in MZH); 1 male, same data as previous but 31.vii.1960 (in MZH); 1 male, same data again but 16.vii.1962 (in MZH); 1 male, N, Helsinki, Vestersundom, 5.x.1959, R. tuomikoski (in MZH); 1 male, N, Espoo, Nuuksio, Hakjärvi, forest, sweep-net, 20.vi.1989, P. Vilkamaa (in MZH), 16 males (on five slides), N, Bromarv, *Oxalis-Myrtillus* forest litter, 7.ix.1960, R. Tuomikoski (in MZH); 1 male, Ta, Kangasala, Ponsa, 10.viii.1986, J. Tuiskunen (in MZH); 1 male, Ok, Vuolijoki, Sopenmäki, pitfall trap, 23.vi–8.vi.1989, L. Kaila, S. Lommi & H. Tukia (in MZH); 1 male, Kb, Kitee, 12.vii–5.x.1968, S. Koponen (in MZH); 1 male, Ob, Lumijoki, (715:45), 3.x.1984, J. Tuiskunen (in MZH); 1 male, Ks, Kuusamo (736:60), Oulankajoki, 8.viii.1985, J. Tuiskunen (in MZH); 1 male, Ob, Tervola, *Scorpidium* fen, malaise trap, 28.viii–3.x.2004, J. Salmela (in MZH); 1 male, Li, Utsjoki, by a brook (777:51), 12.viii.1985, J. Tuiskunen (in MZH); 1 male, St, Yläne, Vaskijärvi Strict Nature Reserve, spruce/birch/pine forest, sweep-net, 27.viii.2004, M. Jaschhof (no. 9061 in MZH), 1 male, Li, Utsjoki, tundra, Malaise trap, 3–10.vii.2000, N. Fatouros (no. 3285 in PKHH); 1 male, **DENMARK**, Ho, dunes, yellow pan trap, 26–30.iv.1998, K. Heller (no. 2631 in PKHH); 1 male, **GERMANY**, BB, Waldsieversdorf, deciduous forest, sweep-net, 3.vi.2009, K. Heller (no. 7130 in PKHH); 1 male, BW, Bad Buchau, Federsee, Malaise trap, 5–24.v.2003, D. Doczkal (no. 2270, 2271 in ZSMC, no. 130 in PDDG, no. 105 in PASS); 1 male, BW, Belchen, Malaise trap, 28.v–3.vii.2003, D. Doczkal (no. 4857 in PKHH); 4 males, MV, Greifswald, Arboretum, Malaise trap, 1–23.vi.1997, W. Mohrig (no. 1126–1129 in PWMP); 1 male, MV, Karbow, spruce forest, sweep-net, 21.v.1994 (no. 5296 in PKHH); 1 male, NS, Schwanewede, heather, 11.ix.1988 (no. 393 in PKHH); 1 male, RP, Gönnersdorf, managed grassland with fruit trees, Malaise trap, 30.iv–7.v.1994, K. Cölln (no. 1904 in PKHH); 2 males, SH, Frörup mountains, forest, swamp, Malaise trap, 9–16.v.1997, W. Barkemeyer (no. 2891 in PKHH); 1 male, SH, Geesthacht, pine/oak forest, sweep-net, 1.vi.1996, K. Heller (no. 1491 in PKHH); 2 males, SH, Kiel, University, garden, Malaise trap, 5–12.v.1995, K. Heller (no. 948 in PKHH); 1 male, same data as previous but 16–23.vi.1995 (no. 1028 in PKHH); 1 male, SH, Langenhorn, heather, sweep-net, 17.vi.2000 (no. 3119 in PKHH); 1 male, ST, Thale, Roßtrappe, mixed forest, sweep-net, 26.v.2006, K. Heller (no. 4762 in PKHH); 1 male, **ITALY**, Altkaser region, St. Magdalena in Gsiesertal, spruce forest at Spielbühl, 1600 m, sweep-net, 31.vii.2002 (no. 3872 in PKHH); Provincia di Roma, Tivoli, Villa Adriana, 26.iii.1988, H. Hippa (in MZH); 1 male, **LATVIA**, Tervete, pine forest, 31.v.1981, W. Spungis (no. 2982 in PWMP); 1 male, **NORWAY**, Buskerud, Sigdal, gassing, 5.vi.1998, J. Skartveit (no. 3068 in PKHH); 1 male, same data as previous but 10.vi.1998 (no. 3075 in PKHH); 7 males, 5 females, Finnmark, Vardsø, birch forest with shrubs, sweep-net, 11.vii.1994, M. Jaschhof (no. 2388–2399 in PWMP); 1 male, nr. Neiden, 11.viii.1985, J. Tuiskunen (in MZH); 1 male, **RUSSIA**, **Karelia**, Kivach, bred from fungi, 4.vi–14.xii.1982, Yakovlev (no. 2358 in PWMP); 2 males, same data as previous but 22.xi.1982 (no. 2359, 2360 in PWMP); 3 males, 4 females, same data again but 13.vii.1983–14.i.1984 (no. 2361–2367 in PWMP); 1 male, same locality but pine-lichen forest, window trap, 17–19.vi.1987, Yakovlev (in MZH); 3 males, **SPAIN**, Segovia, Chañe, strawberry field, pitfall trap, 4.ix–9.x.2000, J.F. Gómez (no. 3636, 3651, 3653 in PKHH); 19 males, **SWEDEN**, Ån, Örnsköldvik, Skuleskogen National Park, Långrå, brook ravine in mixed forest, Malaise trap, Swedish Malaise Trap Project, 29.viii–1.x.2003, (no. 1234–1252 in SMNH); 1 male, same data as previous but 9–23.viii.2004 (no. 1226 in SMNH); 1 male, Dr, Orsa, forest at Orsa Grönklitt, sweep-net, 7.viii.2006, K. Heller (no. 4979 in PKHH); 1 male, Go, Gotland, Rembs, lichen-pine forest, Malaise trap, 11–20.vii.2004, Swedish Malaise Trap Project (no. 6838 in PKHH); 4 males, Jä, Strömdund, Norrsjön, spruce forest, Malaise trap, 26.v–15.vii.1994, A. Heinakroon (no. 285–287, 290 in SMNH); 1 male, Lu, Kåbdalis, Suorke DR, Malaise trap 31.v–23.ix.1993, B. Viklund (no. 265 in SMNH); 2 males, Pi, L. Sädvajaure (northern end), 500 m, subalpine birch forest, Malaise trap, 7.vii–12.viii.2005, M. & C. Jaschhof (no. 5876 in PKHH, no. 1003 in SMNH); 1 male, Pi, Arvidsjaur, Reivo Nature Reserve, NW L. Reivo, 450 m, swampy spruce/pine forest Malaise trap, 11.vii–10.viii.2005, M. & C. Jaschhof (no. 1190 in SMNH); 1 male, Sm, Nybro, Bäckebo, Grytsjöns Nature Reserve, old moist haymaking meadow, Malaise trap, 2–12.vii.2005, Swedish Malaise Trap Project (no. 1352 in SMNH); 41 males, To, Abisko, birch forest northern slope, yellow dish, 13–17.vii.1991, M. v. Tschirnhaus (no. 2401–2441 in PWMP); 1 male, Up, Stockholm, N. Djurgården, mixed forest, Malaise trap 16–31.v.1997, A. Heinakroon (no. 518, 519 in SMNH); 3 males, same data as previous but 31.v–13.vi.1994 (no. 355, 356, 874); 1 male, same data again but 13.vi–4.vii.1994 (no. 478 in SMNH); 38 males, Ög, Omberg, Bokskogsreservatet, beech forest, Malaise trap, 28.v–5.vii.2005, Swedish Malaise Trap Project (no. 1447–1464, 1524–1543 in SMNH); 2 males, Öl, Mörbylånga, Skogsby, Gamla Skogsby, meadow with bushes, Malaise trap, 20.v–28.vi.2006, Swedish Malaise Trap Project (no. 2460, 2650 in SMNH); 5 males, **SWITZERLAND**, GR, Ramosch, Clisot Charbunera, pitfall trap, 5.vi–19.viii.1980, K. Thaler (no. 2352–2355 in PWMP); 1 male, 1 female, same data as previous but 19.viii–15.x.1980 (no. 2338, 2356 in PWMP); 1 male, same data again but 5.vi–16.viii.1980 (no. 2356 in PWMP).

Description. See Lengersdorf, 1940; Menzel and Mohrig, 2000; Mohrig 1978; Tuomikoski, 1960; for hypopygium, see Figs. 116 A–D.

Discussion. The original type material of *Corynoptera boletiphaga* (Lengersdorf 1940) from Finland is lost (Menzel & Mohrig 2000). We have studied the type material of *Bradysia filiceti* (Frey 1948) and that of *Corynoptera geogenia* (Tuomikoski 1960). We follow the concept of Mohrig (1978) and Menzel and Mohrig (2000) and see no reason to doubt the synonymies.

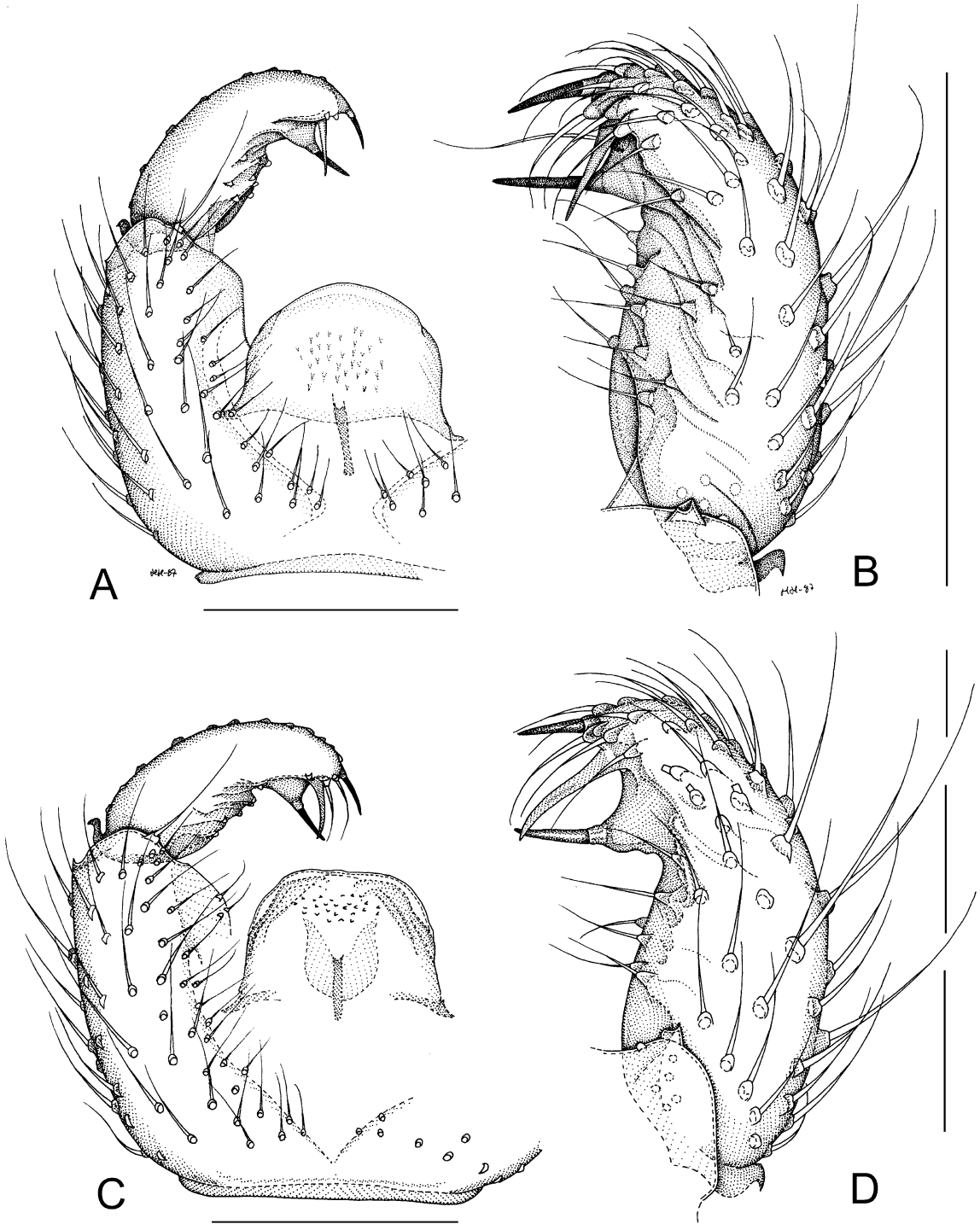

FIGURE 116. *Corynoptera boletiphaga* (Lengersdorf) (**A, B** from Finland, B, C from Sweden). **A, C.** Part of hypopygium, ventral view. **B, D.** Gonostylus, ventral view. Scale 0.1 mm.

Corynoptera boletiphaga is similar to *C. latibula* and *C. inclinata*, the distinguishing characters being discussed under the latter two. These three species are roughly rather different from all other species of *Corynoptera*. The front tibial organ with the vestiture in an unarranged patch, the lack of conspicuously elongated setae at the

ventral mesial margin of gonocoxa, the presence of an apical tooth on the gonostylus which is shifted basad from the actual apex of gonostylus, the presence of apical megaseta on the gonostylus beyond the apical tooth, and the presence of one to three long megasetae mesially on the apical half of the gonostylus distinguishes this group of three species. See also under *C. contusa*.

Distribution. **Austria** (Franz 1989, Mohrig *et al.* 1978, Menzel 2001, Röschmann & Mohrig 1993), **Czech Republic** (Menzel *et al.* 2000), **Denmark** (Heller & Menzel 2004), **Finland** (Frey 1948: as *Bradysia filiceti*), (Lengersdorf 1940, Salmela & Vilkamaa 2005, Tuomikoski 1960, Vilkamaa *et al.* 2007), **Germany** (Heller 1999, 2004, Hennicke *et al.* 1997, Holstein & Funke 1993, Menzel & Mohrig 2000, Menzel *et al.* 1990, 2003, Rudzinski 1993b), **France** (Rudzinski 1993a), **Italy** (Heller & Menzel 2004), **Latvia** (this study), **Norway** (Thunes *et al.* 2004), **Portugal** (Heller & Menzel 2004), **Russia**, **Altay region** (Komarova 2000b: as *C. scebulifera*), **Russia**, **Karelia** (this study), **Spain** (Heller & Menzel 2004), **Sweden** (Heller & Menzel 2004), **Switzerland** (this study).

***Corynoptera latibula* Hippa & Menzel sp. n.**
Figs. 117 A, B

Material studied. Holotype male. **SPAIN,** Andalusia, Jimena de la Frontera, macchia-like dry *Quercus suber* forest with shrubs, yellow dish, ii–iii.1995, W. Wilden (in SDEI). Paratypes. 26 males, same data as holotype (in SDEI); 36 males, same data again but ii–iv.1995 (in SDEI); 38 males, 7 females, same locality but Eucalyptus forest with shrubs of *Quercus canariensis* and *Rubus*, yellow pan trap, ii–iv.1995 W. Wilden (in SDEI); 54 males, Andalusia, Jimena de la Frontera, brook valley, humid *Quercus suber* forest with *Rubus*, *Olea* and grass, yellow pan trap, ii.1995, W. Wilden (44 in SDEI, 2 in MNCM, 4 in MZBS, 1 in PKHH); 66 males, same data but iii-iv.1995; 1 male, Andalusia, Jimena de la Frontera, *Quercus suber* forest, yellow pan trap, ii.1995, W. Wilden (in SDEI); 6 males, Andalusia, Malaga, 4 km NW Yunquera, N-slope, 725 m, *Quercus suber, Pinus, Erica arborea*, ca 36º40‘N 4º57‘W, 1.ii.1999, L. Zerche (in SDEI); 6 males, Andalusia, Province Jaén, Sima Canane II Cave by Siles, hand capture, 11.ii.2007, T.P. Fernández (in SDEI); 1 male, Andalusia, province Jaén, cave “Cueva Secreta del Sagreo“ near La Iruela, hand collecting, 26.iii.2006 T.P. Fernández (in SDEI); 1 male, Cadiz, Alcala de los Gazules, cork oak forest, sieving, 2.ii.1999, L. Zerche (in SDEI); 1 male, Andalusia, Malaga, Sierra Bermeja, SE side at peak of Los Reales, N of Estepona, *Abies pinsapo* forest, sieving, 6.ii.1999, L. Zerche (in SDEI); 1 female, Cantabria, Suano SE Reinosa, 900 m, sieving, 5.vi.1991, L. Zerche (in SDEI).

Description. Male. **Head**. Brown, maxillary palpus very pale brown, antenna paler than face. Eye bridge 2 facets wide. Face with 5–6 scattered dark longer and shorter setae. Clypeus with 1 dark seta or non-setose. Maxillary palpus with 2 palpomeres, palpomere 1 longer than fused palpomere 2 and 3, palpomere 1 with one long sharp seta, with a dorsal patch of sensilla; palpomere 2–3 with 4 shorter truncate setae. Antennal flagellomere 4 2.6–2.7 times as long as wide, the neck long, but shorter than the width of flagellomere, the longest setae much longer than the width of flagellomere. **Thorax**. Brown, pleura paler, the setae dark. Anterior pronotum with 2 setae. Episternum 1 with 2–3setae. **Wing**. Length 1.2–1.3 mm. Width/length 0.40. R1/R 0.70–0.90. c/w 0.70–0.75. r-m and bM of variable length, r-m/bM 0.70–1.20, both r-m and bM non-setose. Haltere pale brown. **Legs**. Yellow. Front tibial organ with pale vestiture, forming an uneven comb-like row with a few scattered elements. Front tibial spur as long as the tibial width. **Abdomen**. Pale brown. Setae dark. **Hypopygium,** Figs117 A, B. Brown, paler than abdomen. Gonocoxa longer than gonostylus. The ventral setosity of gonocoxa sparse, the setae at the apical part of the mesial margin not elongated. Gonostylus elongated, the mesial side slightly impressed on apical fourth; the setosity sparse, apicomesially with a few elongated setae; without a short sharp apical tooth, with 3 megasetae, the megasetae subequal in size, almost straight, one apical, two subapical, the latter divergent. Tegmen simple, without a dorsal finger-like process.

Discussion. Corynoptera latibula is similar to *C. boletiphaga*. It differs by having the maxillary palpus with two palpomeres; the apical tooth of gonostylus shorter; and instead of one strong subapical gonostylar megaseta on the basal side of the tooth, it has two slender, diverging megasetae. Both the species resemble *C. inclinata*. For further discussion see under that species.

Distribution. **Spain** (Heller & Menzel 2004: as *C. latibula* Menzel, 2004 in litt.).

Etymology. An arbitrary combination of letters to resemble a Latin adjective.

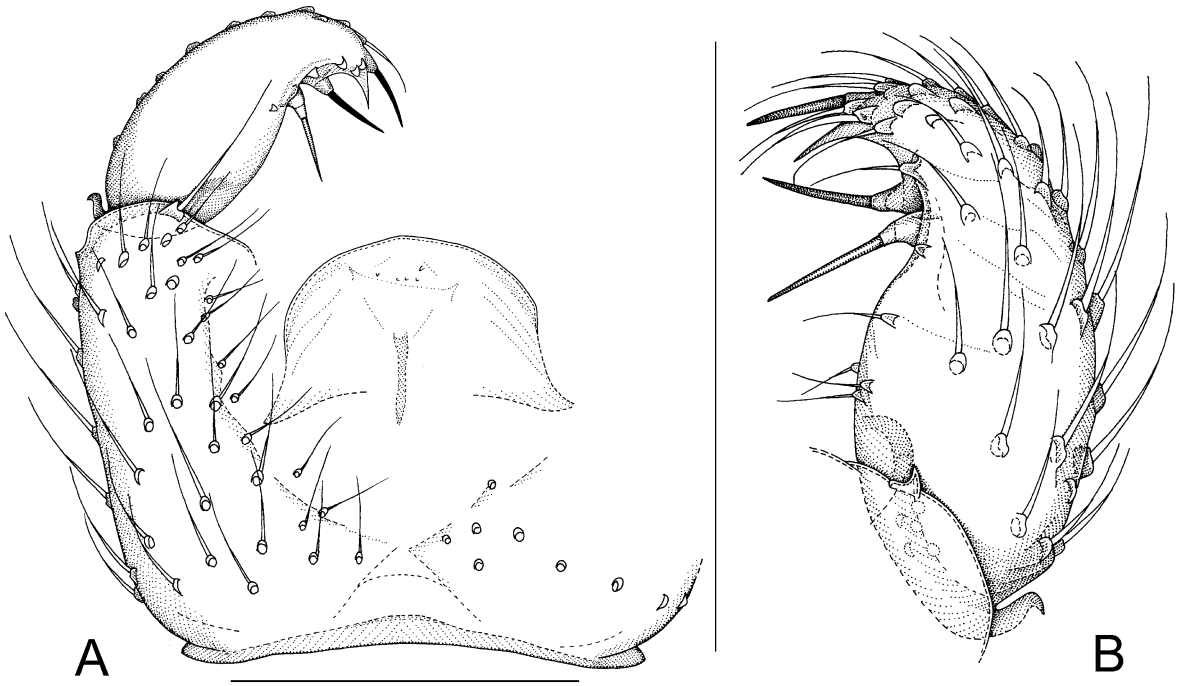

FIGURE 117. *Corynoptera latibula* Hippa & Menzel sp. n. (holotype). **A.** Part of hypopygium, ventral view. **B**. Gonostylus, ventral view. Scale 0.1 mm.

***Corynoptera inclinata* sp. n.**
Figs. 118 A, B, C

Material studied. Holotype male. **MOROCCO**, Quirgane, garden, 13.iv.1996, Kassebeer (no. 1934 in SDEI).

Description. Male. Specimen in poor condition and bleached, with many of the characters undeterminable. **Head**. Pale brown. Eye bridge 2 facets wide. Face with 6 scattered dark longer and shorter setae. Clypeus with ?1 dark seta. Maxillary palpus with 3 palpomeres; palpomere characters not seen. Antennal flagellomere 4, Fig. 118 A, 3.0 times as long as wide, the neck nearly as long as the width of flagellomere, the longest setae longer than the width of flagellomere. **Thorax**. Unicolorous pale brown, setae dark. Anterior pronotum with 2 setae. Episternum 1 with 2 setae. **Wing** Both wings in poor condition, characters not seen. Haltere pale brown. **Legs**. Missing or in poor condition in the specimen. **Abdomen**. Pale brown. Setae dark, short. **Hypopygium,** Figs. 118 B, C. Pale brown. Gonocoxa longer than gonostylus. The ventral setosity of gonocoxa sparse, none of the setae at the apical part of the mesial margin elongated. Gonostylus elongated, the mesial side slightly impressed on apical half; the setosity sparse, apicomesially with a few elongated setae; with a slender apical tooth, with 4 megasetae, one of which on lateral side of apical tooth, the megasetae subequal in size, slender, slightly curved. Tegmen simple, broad, apically roundish, without a dorsal finger-like process.

Discussion. Corynoptera inclinata is similar to *C. latibula* and *C. boletiphaga*. It differs from *C. latibula* e.g. by having three mesial megasetae instead of two, and a three rather than two-segmented maxillary palpus. It differs from *C. boletiphaga* by having three mesial gonostylar megasetae instead of only one. *Corynoptera inclinata* differs from both these species by having a less distinctly shifted basad apical tooth on the gonostylus and by having less conspicuous basal bodies of the mesial gonostylar megasetae. See also under *C. boletiphaga* and *C. contusa*.

Etymology. The name is Latin, *inclinata*, inclined, referring to the inclined gonostylar megasetae.

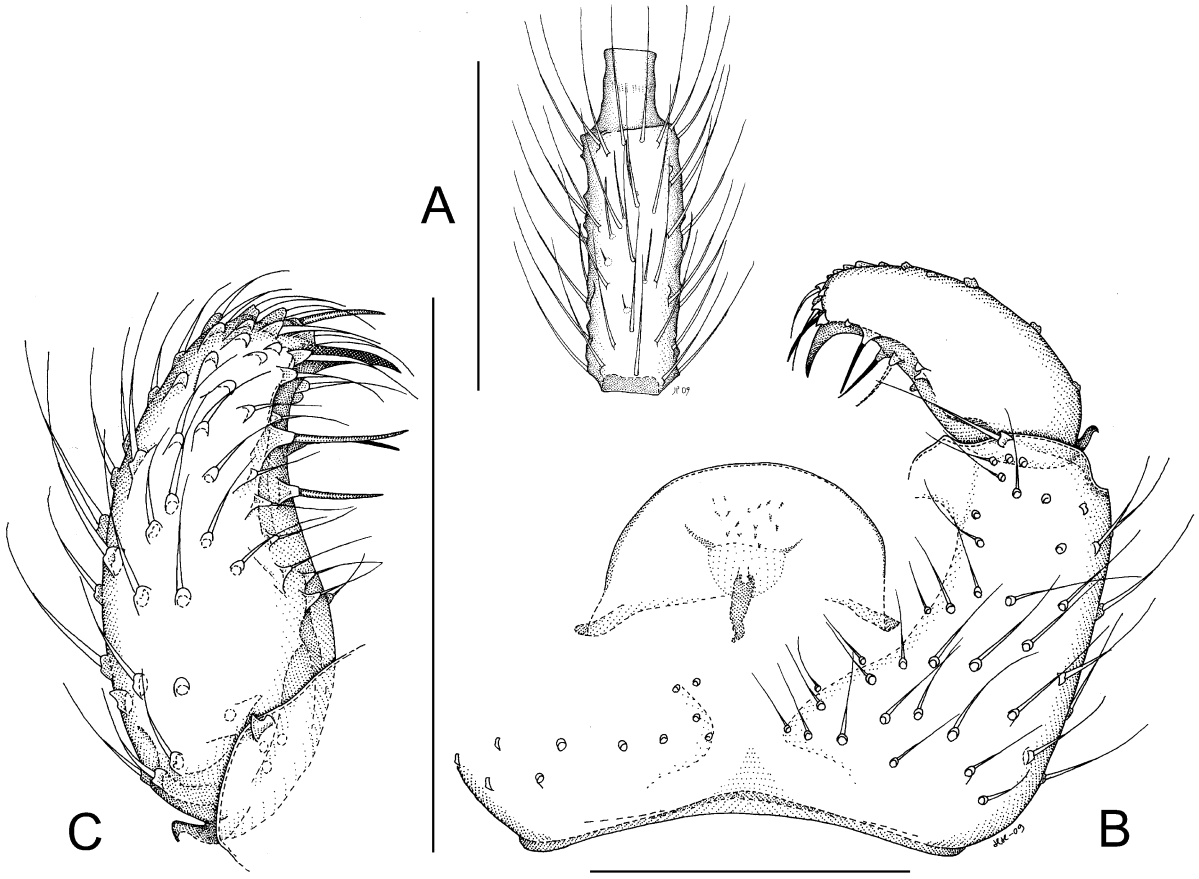

FIGURE 118. *Corynoptera inclinata* sp. n. (holotype). **A.** Antennal flagellomere 4. **B.** Part of hypopygium, ventral view. **C.** Gonostylus, ventral view. Scale 0.1 mm.

Corynoptera contusa **Mohrig, 1994**

Figs. 119 A, B, C

Corynoptera contusa Mohrig, in Mohrig & Blasco-Zumeta, 1994: 97.

Material studied. 1 male, **SPAIN**, Monegros region, Retuerta de Pina, colour dish 9.iv.1991, Blasco-Zumeta (paratype, no. 1482 in PWMP); 1 male, same data but 20.x.1991 (paratype, no. 71 in PWMP).

Description. See Mohrig and Blasco-Zumeta (1994); for hypopygium, see Figs. 119 A, B and C.

Discussion. Corynoptera contusa was described from seven males from Spain. We have studied two of the paratypes.

Corynoptera contusa resembles *C. boletiphaga*, *C. inclinata* and *C. latibula* (see under *C. boletiphaga*) except for lacking the apical megaseta on the gonostylus. It is also similar to *C. inclinata* but also differs by having stout and straight, not slender and curved mesial gonostylar megasetae, and by having more apically placed megasetae.

Distribution. **Spain** (Mohrig & Blasco-Zumeta 1994)

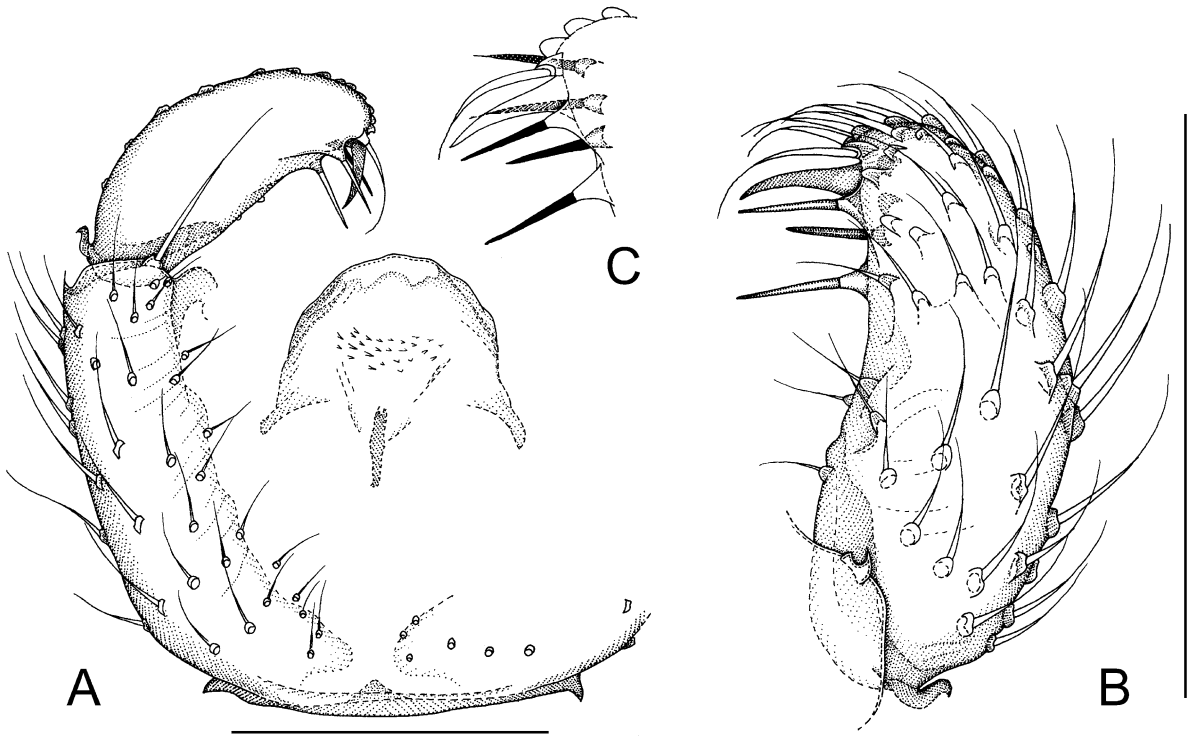

FIGURE 119. *Corynoptera contusa* Mohrig (paratype). **A.** Part of hypopygium, ventral view. **B.** Gonostylus, ventral view. **C.** Apical part of gonostylus, ventral view. Scale for A and B 0.1 mm, for C as B.

Corynoptera abducera **Mohrig & Rulik, 1999**

Figs. 120 A, B

Corynoptera abducera Mohrig & Rulik, in Rulik *et al.* 1999: 28.

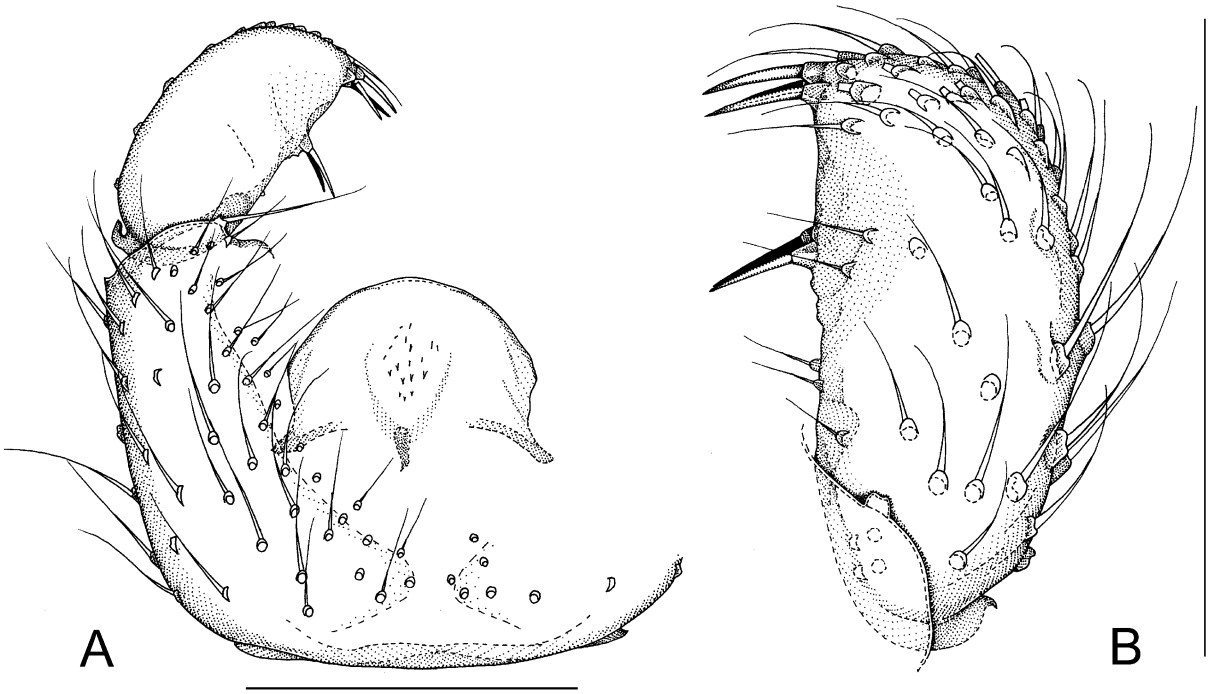

FIGURE 120. *Corynoptera abducera* Mohrig & Rulik (holotype). **A.** Part of hypopygium, ventral view. **B.** Gonostylus, ventral view. Scale 0.1 mm, for C as B.

Material studied. 1 male, **TURKEY**, Icel Province, Taurus Mountains, Camliyayla, 40 km N Tarsus, 1600 m, yellow dishes, 17–19.v.1997, Rulik (holotype, no. 248 in PWMP).

Description. See Rulik *et al.* (1999); for hypopygium, see Figs. 120 A and B.

Discussion. Corynoptera abducera is not especially similar to any other described *Corynoptera*. It has a general resemblance to *C. francescae* by having an apical group of three gonostylar megasetae separated by a long gap from the more basally placed one(s). The number of basally placed megasetae is one in *C. francescae*, two in *C. abducera*. Furthermore, the gonostylus of *C. abducera* is tumid and straight, whilst that of *C. francescae* is slender and curved. See also under *C. flava* and *C. francescae*.

Distribution. **Turkey** (Rulik *et al.* 1999).

***Corynoptera flava* sp. n.**
Figs. 121 A–D

Material studied. Holotype male. **GERMANY**, BB, Biesenbrow, Schorfheide, nettle-meadow, photoeclector, 24.vi–24.vii.1995, R. Nötzold (no. 1150 in SDEI). *Paratypes.* 1 male, same data as holotype (no. 1149 in PWMP); 1 male, **SWEDEN**, Vr, Munkfors, Ransäter, sandy railway embankment through pasture land, Malaise trap, 23.vii–12.viii.2005, Swedish Malaise Trap Project (no. 3023 in SMNH).

Description. Male. **Head**. Brown, maxillary palpus very pale brown, antenna concolorous with face. Eye bridge 3 facets wide. Face with 4 scattered dark longer and shorter setae. Clypeus with ?1 dark seta. Maxillary palpus with 3 palpomeres; palpomere 1 longer than palpomere 3, palpomere 2 shortest; palpomere 1 with one long sharp seta, with a dorsal patch of sensilla; palpomere 2 with 1 long sharp seta and 5 shorter truncate setae, palpomere 3 with 5 short truncate setae. Antennal flagellomere 4 2.9 times as long as wide, the neck shorter than the width of flagellomere, the longest setae slightly longer than the width of flagellomere. **Thorax**. Yellow, setae dark. Anterior pronotum with 5 setae. Episternum 1 with 9 setae. **Wing**. Length 1.5 mm. Wings distorted in the specimen studied, width not measurable. R1/R 0.75. c/w 0.80. r-m and bM not well seen in the specimen studied. Haltere pale brown. **Legs**. Yellow. Front tibial organ with dark and fine vestiture, forming a comb-like row with a few scattered elements. Front tibial spur slightly longer than the tibial width. **Abdomen**. Yellow. Setae dark. **Hypopygium,** Figs. 121 A–D. Yellow. Gonocoxa longer than gonostylus. The ventral setosity of gonocoxa sparse, many of the setae at the mesial margin greatly elongated. Gonostylus elongated, the mesial side slightly impressed on apical third; the setosity sparse, apicomesially with a few elongated setae; with an apical tooth, with 2 megasetae, one (smaller) on the ventral side of the apical tooth, the other subapically, both straight or very slightly curved. Tegmen simple, as high as broad, without a dorsal finger-like process.

Discussion. *Corynoptera flava* is not similar to any other described *Corynoptera*. It has some likeness to *C. francescae* and *C. abducera* by having two separate groups of gonostylar megasetae but differs distinctly by having an apical tooth on its gonostylus. *Corynoptera flava* is the only species in *Corynoptera* which have the setae at the ventral mesial margin of the gonocoxa greatly elongated in combination with a front tibial organ which lack a transverse comb-like arrangement of its vestiture.

Etymology. The name is Latin, *flava*, yellow, referring to the yellow colour of the fly.

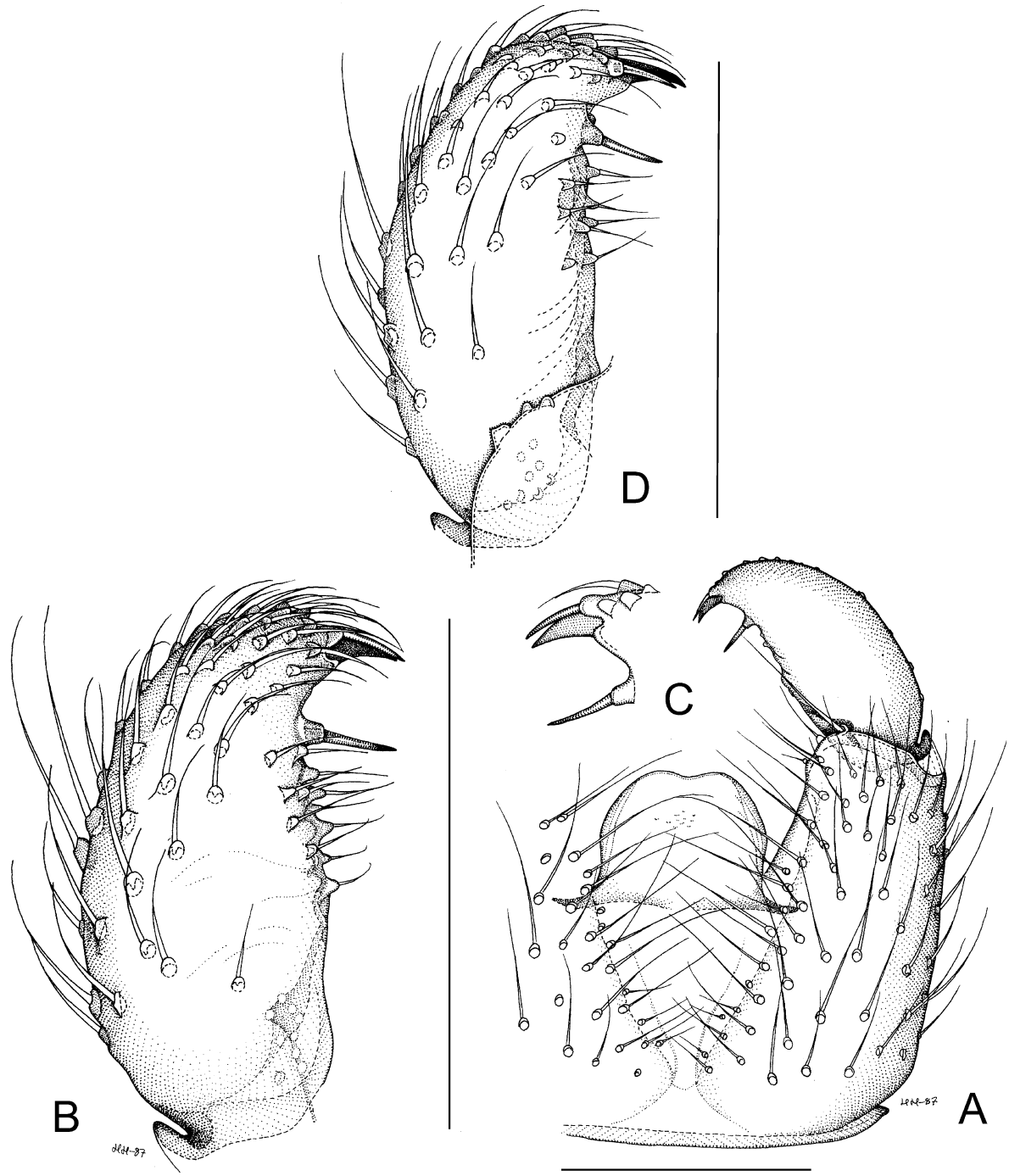

FIGURE 121. *Corynoptera flava* sp. n. (A, B, C paratype from Germany, D holotype). **A.** Part of hypopygium, ventral view. **B, D.** Gonostylus, ventral view (aedeagal apodeme omitted). **C.** Apical part of gonostylus, ventral view. Scale 0.1 mm, for C as B.

***Corynoptera badia* sp. n.**
Figs. 122 A, B

Material studied. Holotype male. **ITALY**, Badia, Corvara, light trap, 10.vii.1994, Baumer (no. 4134 in MZH). *Paratypes.* 12 males, 4 females, same data as holotype (no. 4135–1439, 4143, 4144 in PKHH).

Description. Male. **Head**. Brown, maxillary palpus very pale brown, antenna concolorous with face. Eye bridge 3 facets wide. Face with 5–11 scattered dark longer and shorter setae. Clypeus with 1–2 dark setae. Maxillary palpus with 3 palpomeres; palpomere 1 longer than palpomere 3, palpomere 2 shortest; palpomere 1 with one long sharp seta, with a dorsal patch of sensilla; palpomere 2 with 1 long sharp seta and 7–8 shorter truncate setae, palpomere 3 with 7–9 short truncate setae. Antennal flagellomere 4 2.5–2.9 times as long as wide, the neck shorter than the width of flagellomere, the longest setae slightly shorter than the width of flagellomere. **Thorax**. Unicolorous dark brown, setae dark. Anterior pronotum with 3–6 setae. Episternum 1 with 3–7 setae. **Wing**. Length 2.0–2.3 mm. Width/length 0.45. R1/R 0.60–0.65. c/w 0.70–0.85. r-m and bM of variable length, r-m/bM 0.95–1.8. Haltere pale brown. **Legs**. Pale yellowish brown. Front tibial organ with pale vestiture, forming a patch. Front tibial spur slightly longer than the tibial width. **Abdomen**. Brown, paler than thorax. Setae dark. **Hypopygium,** Figs. 122 A, B. Brown, as abdomen. Gonocoxa longer than gonostylus. The ventral setosity of gonocoxa sparse, setae at the apical part of the mesial margin not elongated. Gonostylus elongated, the mesial side slightly impressed; the setosity sparse, apicomesially with a few elongated setae; without an apical tooth, with 3 megasetae, the megasetae subequal in size, slightly curved. Tegmen with indistinct apicolateral lobes, without a dorsal finger-like process.

*Discussion***.** *Corynoptera badia* is similar to *C. bernardoensis* but is distinguished from it by lacking an apical tooth on the gonostylus (the tooth is not very visible in all specimens of *C. bernardoensis*) and by lacking a finger-like process dorsally on the tegmen. The two species are rather isolated and need may not even be close relatives. From the other species of *Corynoptera* lacking a transverse row-like arrangement of the vestiture of the front tibial organ, but which have three gonostylar megasetae but lack or have just a rudimentary apical tooth of gonostylus, the two species differ by their more tumid gonostylus. See also under *C. subfurcifera*.

Etymology. The name comes from the type locality in Italy.

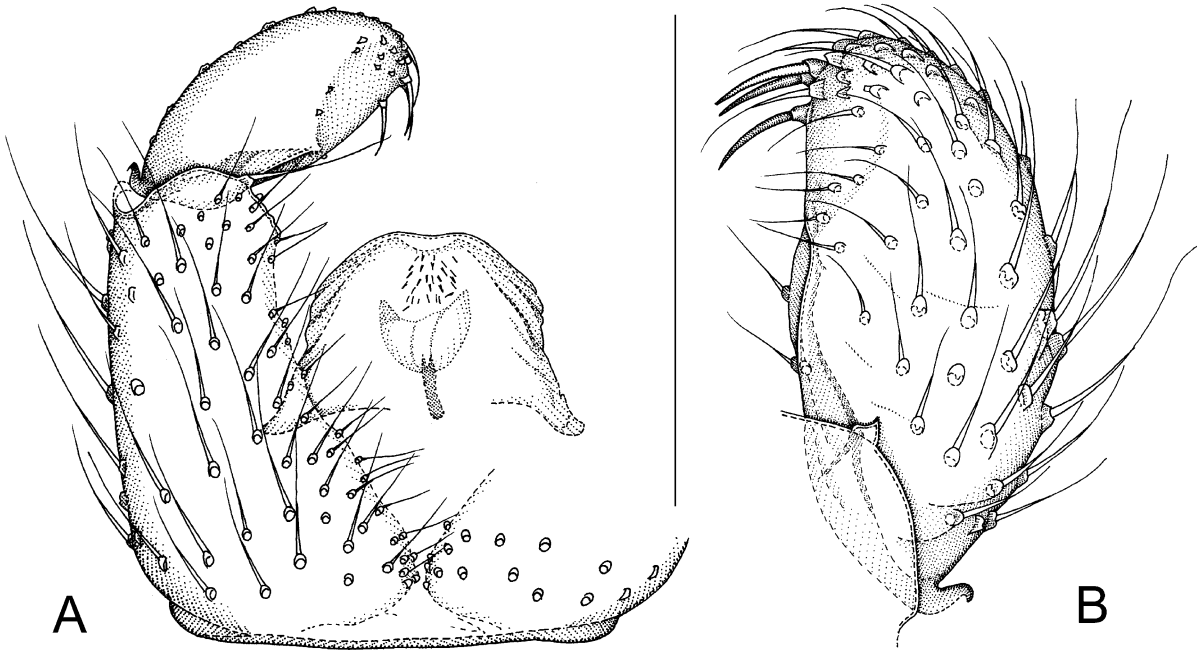

FIGURE 122. *Corynoptera badia* sp. n. (holotype). **A.** Part of hypopygium, ventral view. **B.** Gonostylus, ventral view. Scale 0.1 mm.

Corynoptera bernardoensis Mohrig & Röschmann, 1993

Figs. 123 A, B, C

Corynoptera bernardoensis Mohrig & Röschmann, in Röschmann & Mohrig 1993: 302.

Material studied. 1 male, **ITALY**, Italian Sea-Alps, Valle Gesso near San Bernardo, forest with oak/chestnut/hazel, sweep-net, 6.vi.1992, F. Röschmann (holotype, no. 1561 in PWMP); 1 male, Como, Brunate, 800–1000 m, H. Hippa (in MZH).

Description. See Röschmann and Mohrig (1993); for hypopygium, see Figs. 123 A, B and C.

Discussion. Corynoptera bernardoensis resembles *C. badia* but differs e.g. by having a small apical tooth on the gonostylus and by having a finger-like process dorsally on the tegmen. The process in unusually broad when compared with the other species of *Corynoptera* that have one present; only one other species, *C. curvispinosa*, is similar. *Corynoptera curvispinosa* lacks the apical tooth on the gonostylus and has four gonostylar megasetae. For additional discussion, see under *C. badia*.

Distribution. **Italy** (Röschmann & Mohrig 1993).

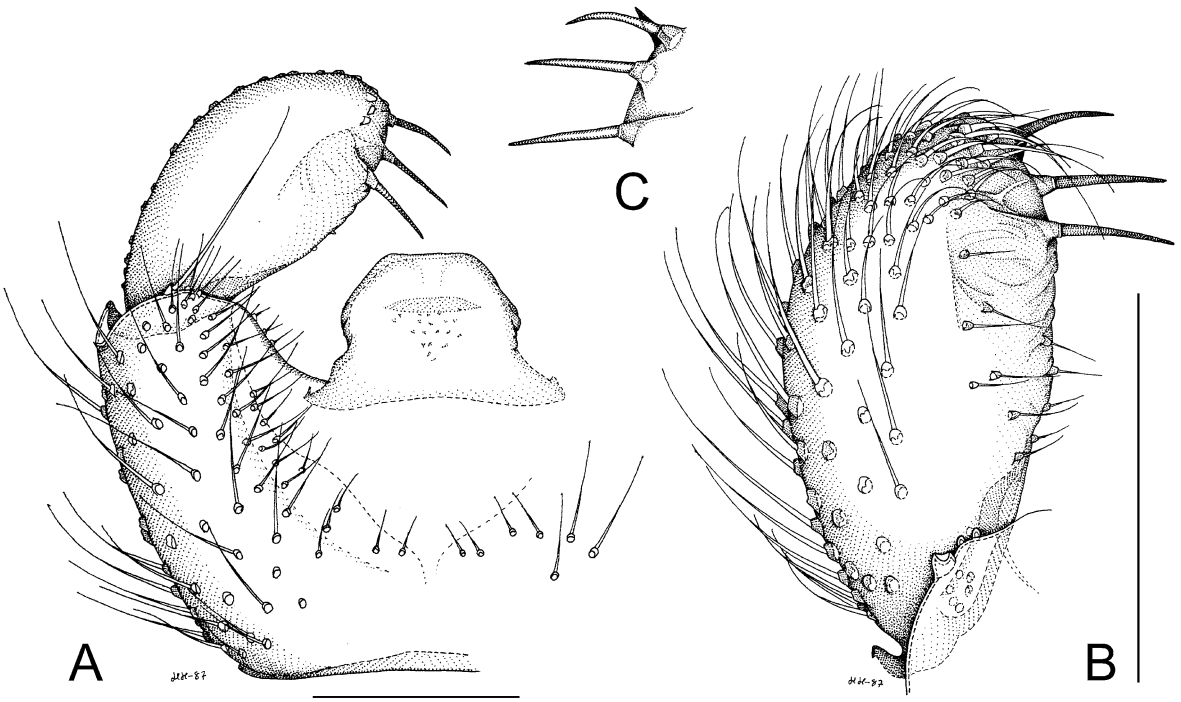

FIGURE 123. *Corynoptera bernardoensis* Mohrig & Röschmann (from Italy). **A.** Part of hypopygium, ventral view. **B.** Gonostylus, ventral view (aedeagal apodeme omitted). **C**. Apical part of gonostylus, ventral view. Scale 0.1 mm, for C as B.

Corynoptera curvispinosa **Freeman, 1983**

Figs. 124 A, B, C

Corynoptera curvispinosa Freeman, 1983b: 164

Material studied. 1 male, **GERMANY**, BW, Bad Rotenfels, Birkenkopf avalanche forest, Malaise trap, 3.iv–3.v.2003, D. Doczkal (no. 5082 in PKHH); 2 males, MV, Gützkow, beech forest with alder/ash, sweep-net, 27.v.1995, M. Jaschhof (no. 5400 in PKHH, no. 157 in PASS); 5 males, NS, Göttingen, lime beech forest, *Mercurialis* facies, photoeclector, 1981, K. Hövemeyer (no. 1492–1496 in PWMP); 1 male, SH, Flensburg, Marienhölzung forest, Malaise trap, 23–30.v.1997, W. Barkemeyer (no. 2911 in PKHH); 1 male, TH, Rabis near Jena, dry grassland, sweep-net, 26.vi.1993, M. Jaschhof (no. 1497 in PWMP); 1 male, **GREAT BRITAIN**, Oxon, Wychwood, v.1937, F.W. Edwards (holotype, in BMNH); 2 males, **LUXEMBOURG**, Waldbredimus, beech forest, sweep-net, 3.viii.2003, K. Heller (no. 4051, 4052).

Description. See Freeman (1983b); for apical part of front tibia, see Fig. 124 A, for hypopygium, see Figs. 124 B and C.

Discussion. Corynoptera curvispinosa was described by Freeman (1983b) from the holotype male and three paratype males from England. We have studied and illustrated the holotype.

Corynoptera curvispinosa is not similar to any other described *Corynoptera*. The lack of transverse comb-like arrangement of the vestiture of the front tibial organ, the lack of the apical tooth on the gonostylus, the presence of four long, curved, closely placed megasetae at the apex of gonostylus and an unusually broad finger-like process

dorsally on the tegmen identify the species. By the later character, only *C. bernardoensis* is similar even if it otherwise differs greatly (see under that species).

Distribution. **Germany** (Heller 2004, Hövemeyer 1992, Rudzinski 1995), **Great Britain** (Freeman 1983b, Menzel *et al*. 2006), **Ireland** (Withers 2002), **Luxembourg** (Heller & Menzel 2004)

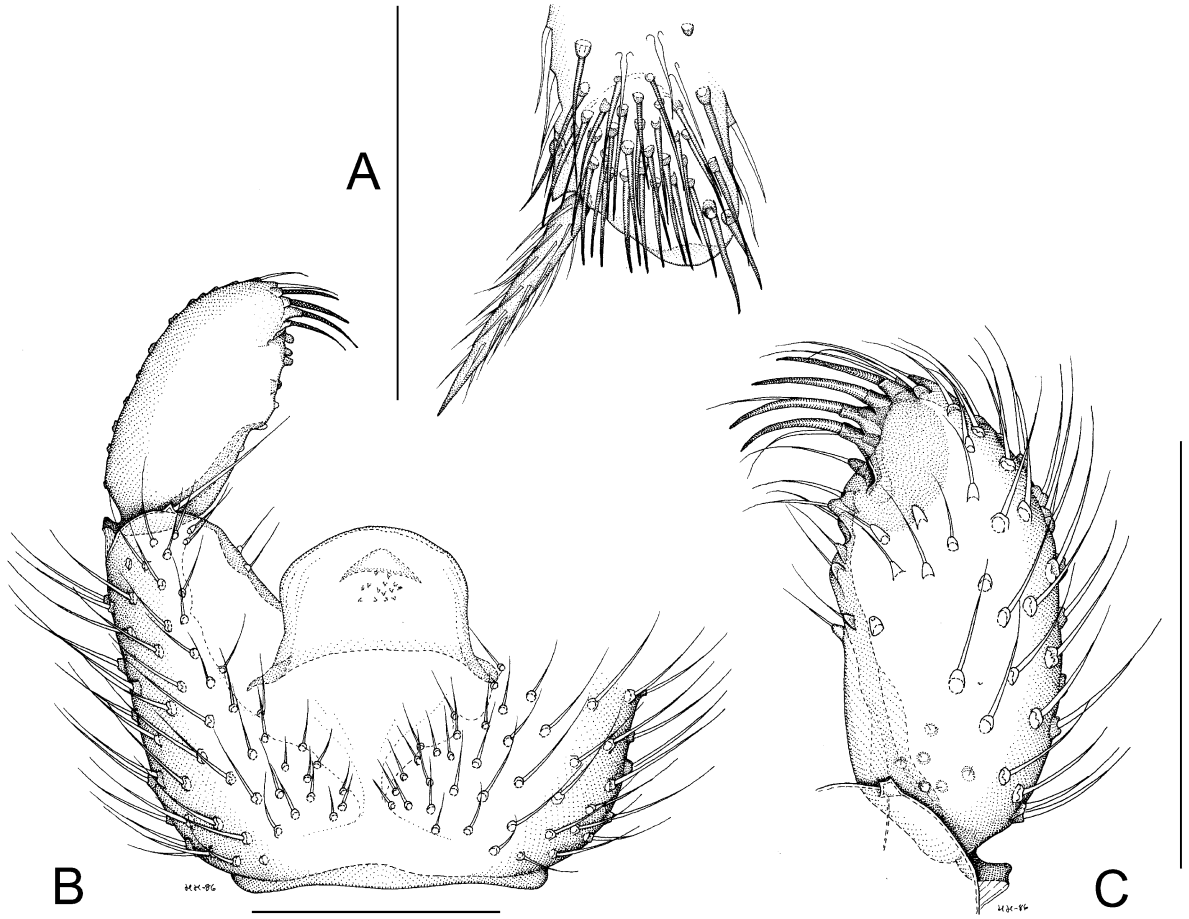

FIGURE 124. *Corynoptera curvispinosa* Freeman (holotype). **A.** Apical part of front tibia, prolateral view. **B.** Part of hypopygium, ventral view (aedeagal apodeme omitted). **C.** Gonostylus, ventral view. Scale 0.1 mm.

***Corynoptera setosa* Freeman, 1983**
Figs. 125 A, B, C

Corynoptera setosa Freeman, 1983b: 165.

Material studied. 1 male, **GERMANY**, BW, Bad Rotenfels, Birkenkopf avalanche forest, Malaise trap, 12.v–2.vi.2003, D. Doczkal (no. 281 in PRSE); 8 males, BW, Belchen, Malaise trap, 28.v–3.vii.2003, D. Doczkal (no. 4836, 4837, 4874 in PKHH, no. 105 in PDDG, no. 83 in PASS, no. 2253, 2254 in ZMSC); 1 male, BW, Malsch, Heckelbachklamm, Malaise trap, 3–17.v.2003, D. Doczkal (no. 4914 in PKHH); 8 males, 4 females, RP, Kautenbach, Waschbachstollen 1 (cave), pitfall trap, 21.vi.2003, D. Weber (no. 5493–5496 in PKHH, no. 2364, 2365 in ZMSC); 1 male, RP, Stipshausen, Raunelstollen 2 (cave), pitfall trap, 23.viii.2003, D. Weber (no. 5528 in PKHH); 2 males, SH, Lütjenholm, heather, sweep-net, 13.vi.1999, K. Heller (no. 2839, 2840 in PKHH); 1 male, SR, Lebach, Hoxberg, Festungswerk 6472 (cave), pitfall trap, 11.vi.2004, D. Weber (no. 5547 in PKHH); 1 male, **GREAT BRITAIN**, Devon, Clovelly, 8.v.1936, F.W. Edwards (holotype, in BMNH); 3 males, **SWEDEN**, Sk, Klippan, Skäralid, valley below northern Lierna, rich beech forest, Malaise trap, 14.vii–6.viii.2004, Swedish Malaise Trap Project (no. 6735, 6748 in PKHH, no. 2897 in SMNH).

Description. See Freeman 1983b; for apical part of front tibia, see Fig. 125 A, for hypopygium, see Figs. 125 B and C.

Discussion. Corynoptera setosa was described from the holotype male and one paratype male from England (Freeman 1983b). We have studied and illustrated the holotype.

Corynoptera setosa is an isolated species, without any other similar species in the present *Corynoptera*. It differs from all others by having definite signs of an intercoxal lobe. Also the three long needle-like megasetae far from the gonostylar apex are characteristic for *C. setosa*. The species may be misplaced here.

Distribution. **Czech Republic** (Menzel *et al.* 2000); **France** (Rudzinski 1992b); **Germany** (Heller 2004, Rudzinski 2003); **Great Britain** (Menzel *et al.* 2006), **Spain** (Heller & Menzel 2004), **Sweden** (Heller *et al.* 2009).

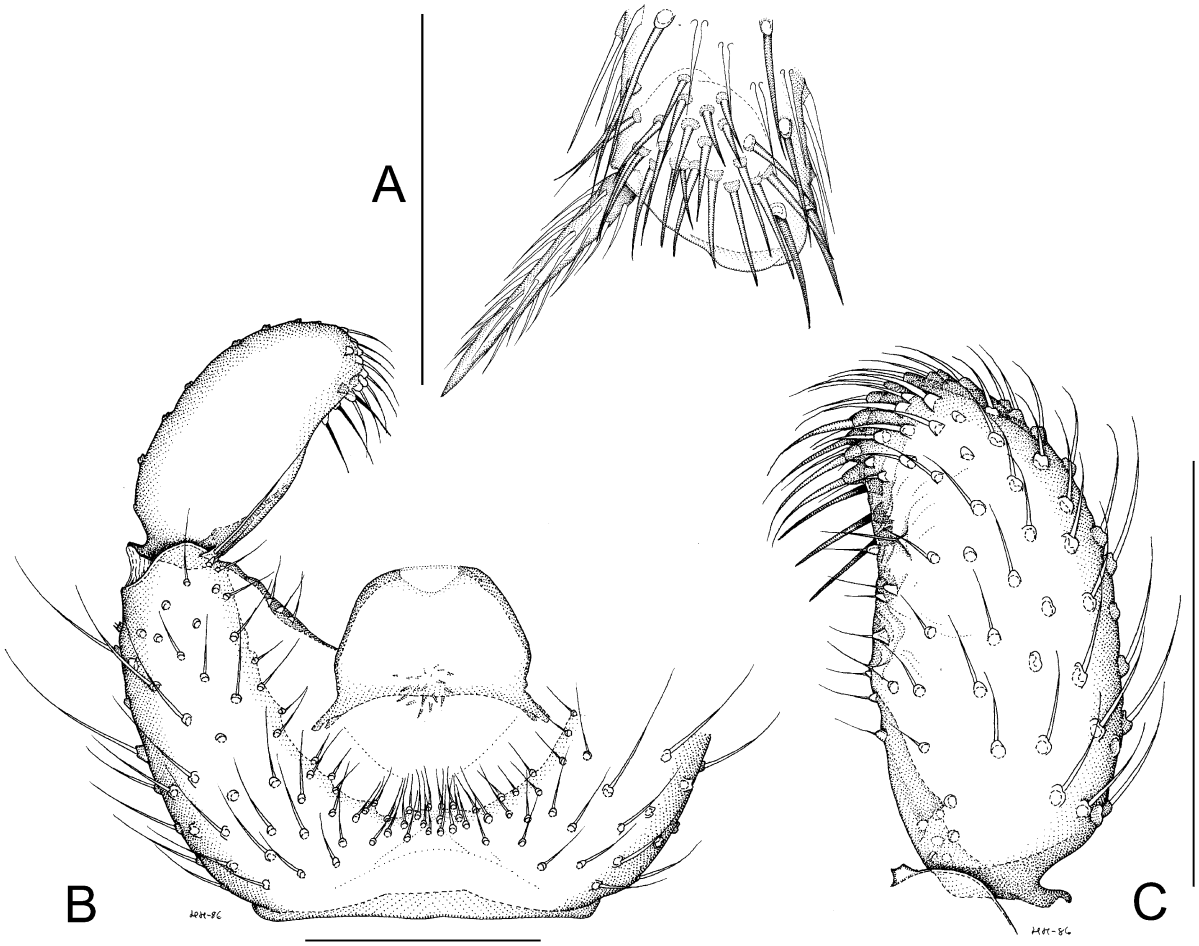

FIGURE 125. *Corynoptera setosa* Freeman (holotype). **A.** Apical part of front tibia, prolateral view. **B.** Part of hypopygium, ventral view (aedeagal apodeme omitted). **C.** Gonostylus, ventral view. Scale 0.1 mm.

***Corynoptera minima* (Meigen, 1818)**
Figs. 126 A–D

Sciara minima Meigen, 1818: 282.
Sciara brevipennis Walker, 1848: 110. Synonymy by Freeman (1983a: 28).
Orinosciara brachyptera Lengersdorf, 1941: 192. Synonymy by Menzel and Mohrig (2000: 253).
Corynoptera brachyptera, Tuomikoski, 1960: 62.

Material studied. 5 males, 4 females, **DENMARK**, Hestehaven, pitfall trap, 26.vii.1967, Overgaard-Nielsen (no. 2469–2477 in PWMP); 8 males, 8 females, **DENMARK, Faroe Islands**, Eysturoy near Aeudvik, dwarf shrub-grass tundra, sweep-net, 17.vi.1998, M. Jaschhof (no. 2448–2450, 2453–2457 in PWMP); 5 males, **GERMANY**, MV, Kamp near Anklam, beech forest with oak/alder/birch/pine, sweep-net, 4.vi.1995, M. Jaschhof (no. 5340 in PKHH, no. 151 in PASS, no. 2337, 2338 in ZMSC); 1 male, SH, Lütjenholm, heather, photoeclector, 15–

29.vi.1999, N. Voigt (no. 548 in PKHH); 3 males, 3 females, SH, Wankendorf, beech forest, photoeclector, 11.iv–9.v.1989, K. Heller (no. 126, 127 in PKHH); 1 male, **NORWAY**, Buskerud, Sigdal, gassing, 16.vi.1998, J. Skartveit (no. 3072 in PKHH); 1 male, 3 females, **SWITZERLAND**, ZH, Sihlwald near Zurich, photoeclector, 25.iv–23.v.1996, K. Schiegg (no. 2465 in PKHH).

Description. See Tuomikoski (1960) Mohrig (1978) and Freeman (1983a); for apical part of front tibia, see Fig. 126 A, for hypopygium, see Figs. 126 B, C and D.

Discussion. All known type material (see Menzel & Mohrig 2000) are females. We follow Tuomikoski (1960), Mohrig (1978), Edwards (1983b) and Menzel and Mohrig (2000) regarding the interpretation of the species.

The scattered vestiture of the front tibial organ, the lack of an apical tooth on the gonostylus, three gonostylar megasetae and small size associate *Corynoptera minima* with such species as *C. badia*, *C. furcifera*, *C. romana*, *C. setosa* and *C. subfurcifera*, but the similarity is rather superficial. It is distinguished from all by having its gonostylus abruptly subapically narrowing and by having unusually short and sparse setosity of the gonostylus. The female is brachypterous. The species has often been misidentified (Menzel & Mohrig 2000).

Distribution. **Austria** (Franz 1989, Lengersdorf 1941), **Czech Republic** (Menzel *et al.* 2000, Rudzinski 1994b), **Denmark, mainland** and **Faroe Islands** (this study), **France** (Rudzinski 1993b), **Germany** (Dorn 1982, Lengersdorf 1952, Meigen 1818, Menzel & Mohrig 1991, Menzel *et al.* 1990, 2003), **Great Britain** (Freeman 1983b, Menzel *et al.* 2006, Walker 1848), **Ireland** (Menzel 1998), **Norway** (Thunes *et al.* 2004), **Spain** (Lengersdorf 1957), **Switzerland** (Heller & Menzel 2004).

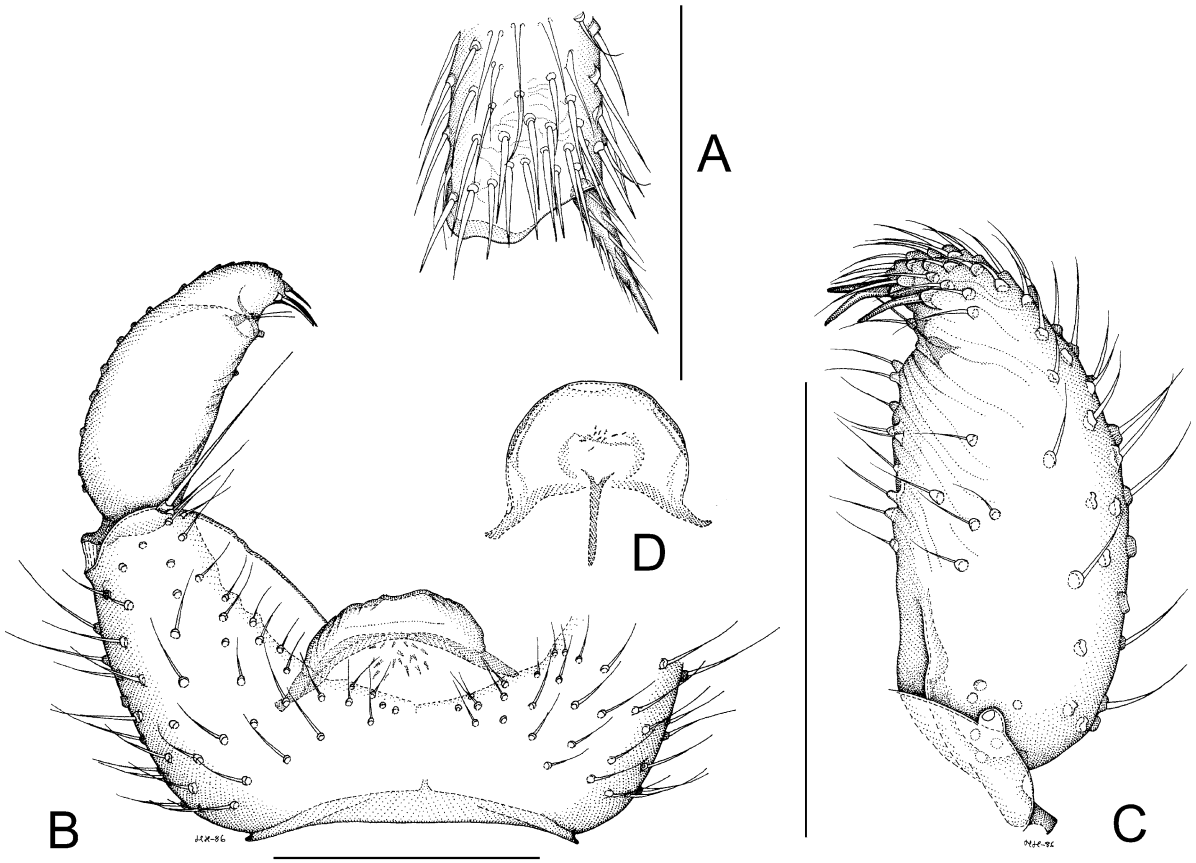

FIGURE 126. *Corynoptera minima* (Meigen) (A, B, C from England, D from Germany). **A.** Apical part of front tibia, prolateral view. **B.** Part of hypopygium, ventral view (aedeagal apodeme omitted). **C.** Gonostylus, ventral view. **D.** Tegmen, ventral view. Scale 0.1 mm.

***Corynoptera minax* sp. n.**
Figs. 127 A–F

Material studied. Holotype male. **JAPAN**, Shikoku, Kochi Pref., Kochi City, Asakura, mixed secondary coniferous and evergreen deciduous forest with *Cryptomeria japonica* and bamboo, 50 m, Malaise trap, 4–11.xi.1998, M. Jaschhof (in SDEI). *Paratypes*. 2 males, Shikoku, Kochi Pref., Yusuhara-cho, Takatori-yama Forest Reserve, mixed primary forest (*Abies firma*, *Chamaecyparis obtusa*, *Quercus* sp., *Cinnamomum* sp.), 300–500 m, sweep-net, 5.xi.1998, M. Jaschhof (in SDEI); 1 male, Kyushu, Fukuoka, Mt. Tachirana, 30.v.1967, Yukawa (in PWMP); 1 male, Kyushu, Kumamoto Pref., Aso, Mt. Aso National Park, coniferous forest (*Cryptomeria japonica*), 700 m, exhaustor or sweep-net, 12–14.x.1995, M. Jaschhof (in SDEI); 3 males, Honshu, Osaka Pref., Mino, mixed forest (sclerophyll plants and *Cryptomeria japonica*), sweep-net, 29.ix.1995, M. Jaschhof (in KUEC).

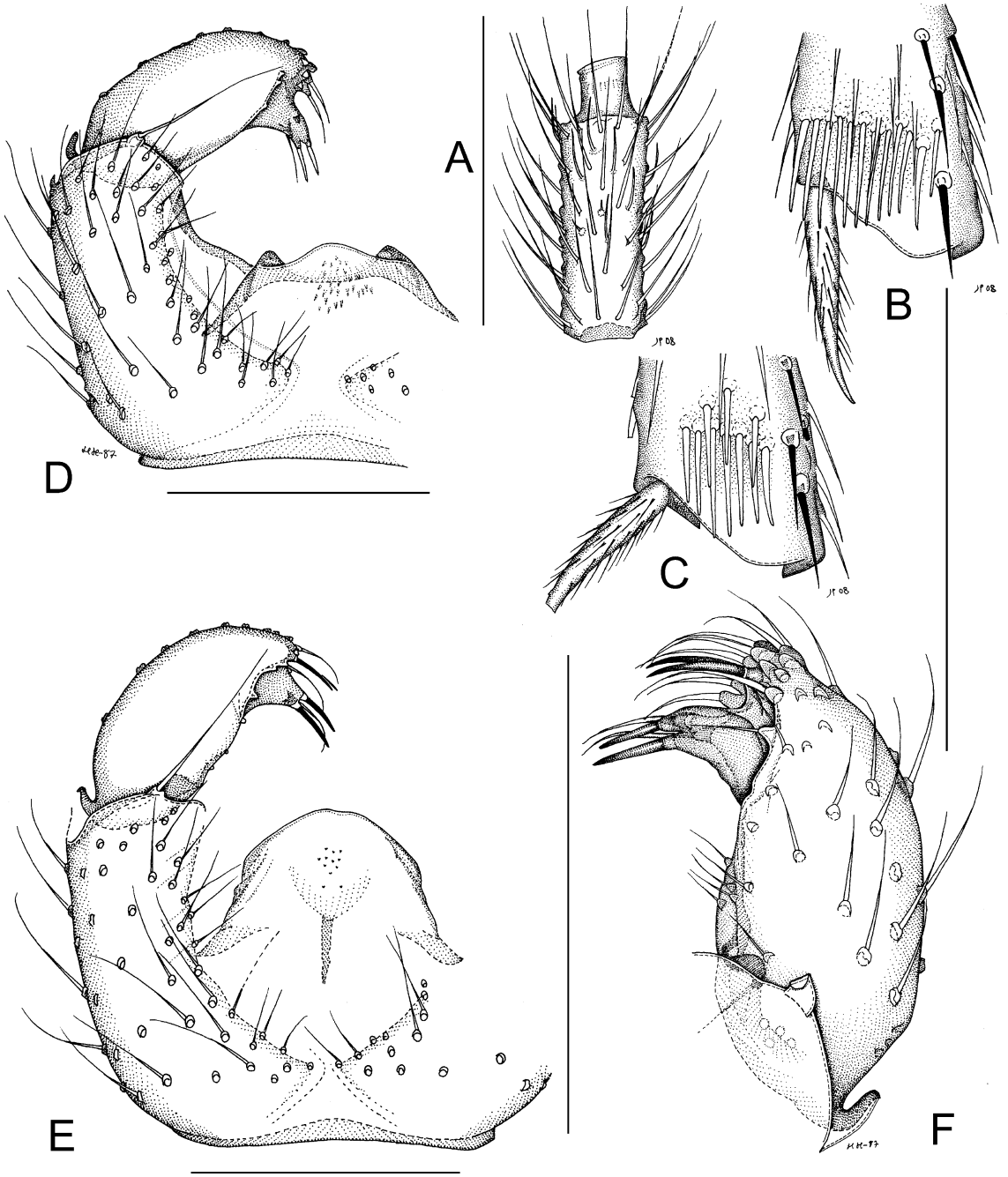

FIGURE 127. *Corynoptera minax* sp. n. (A, E holotype, B, C paratype from Honshu, D, F paratype from Kyushu,). **A.** Antennal flagellomere 4. **B, C.** Apical part of front tibia, prolateral view. **D, E.** Part of hypopygium, ventral view (aedeagal apodeme omitted). **F.** Gonostylus, ventral view. Scale 0.1 mm.

Description. Male. **Head**. Brown, maxillary palpus very pale brown, antennal flagellomeres concolorous with face, scape and pedicel darker. Eye bridge 3 facets wide. Face with 3–6 scattered dark longer and shorter setae. Clypeus with 1 dark seta. Maxillary palpus with 3 palpomeres; palpomere 1 longer than palpomere 3, palpomere 2 shortest; palpomere 1 with one long sharp seta, with a dorsal patch of sensilla; palpomere 2 with 1 long sharp seta and 3–7 shorter truncate setae, palpomere 3 with 4–9 short truncate setae. Antennal flagellomere 4, Fig. 127 A, 2.7–3.1 times as long as wide, the neck from half as long to as long as the width of flagellomere, the longest setae much longer than the width of flagellomere. **Thorax**. Yellowish brown, scutum darker, setae dark. Anterior pronotum with 1–2 setae. Episternum 1 with 3–4 setae. **Wing**. Length1.2 mm. Width/length 0.35–0.40. R1/R 0.60–070. c/w 0.70. r-m and bM subequal in length, r-m/bM 0.95–1.0, both r-m and bM non-setose. Haltere pale brown. **Legs**. Pale yellowish brown. Apical part of front tibia, Fig. 127 B, C: tibial organ with dark vestiture, forming a comb-like row with a few scattered elements. Front tibial spur as long as the tibial width. **Abdomen**. Brown, paler than thorax. Setae dark. **Hypopygium,** Figs. 127 D, E, F. Brown, as abdomen. Gonocoxa longer than gonostylus. The ventral setosity of gonocoxa sparse, the setae at the mesial margin not elongated. Gonostylus elongated, the mesial side impressed on apical fourth, apex divided into ventral and dorsal lobes, the ventral one longer; the setosity sparse, apicomesially with a few elongated setae; without an apical tooth, with 4 megasetae, two on each lobe, the megasetae subequal in size, straight or slightly curved. Tegmen subtriangular, simple, with indistinct lateral lobes, without a dorsal finger-like process.

Discussion. Corynoptera minax is unique among *Corynoptera* by having the apex of the gonostylus divided into two lobes, both bearing megasetae. In this respect it resembles *C. mediana*, which has a smaller mesial lobe, and also some species of the genus *Prosciara* and *Scatopsciara (Xenopygina)* Frey but differs from these e.g. by being smaller, by having the vestiture of the front tibial organ in a more obscure row, and by having a narrow wing with a small anal lobe (see Hippa & Vilkamaa 1991).

Etymology. The name is Latin, *minax*, overhanging, referring to the overhanging lobe dorsally on the gonostylus.

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