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A revision of the Western Palaearctic species of *Myrmecopora* SAULCY, 1864, sensu lato and *Eccoptoglossa* LUZE, 1904

(Coleoptera: Staphylinidae, Aleocharinae, Falagriini)

With 23 figure plates and 3 maps

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Summary

The systematic position and taxonomic history of the falagriine genera *Myrmecopora* SAULCY, 1864 sensu lato and *Eccoptoglossa* LUZE, 1904, including the subgenera and species described prior to the present study are outlined and discussed. Both genera are redescribed and redefined with special reference to phylogenetic relationships. Based on phylogenetic arguments, the following taxa are recognized as subgenera of *Myrmecopora*: *Myrmecopora* SAULCY s. str., *Iliusa* MULSANT & REY, 1874, *Xenusa* MULSANT & REY, 1874, *Paraxenusa* subg. n. and *Euphorbiusa* subg. n. A revision of the types and further Western Palaearctic material of both genera yielded 22 valid species of *Myrmecopora* and 2 species of *Eccoptoglossa*, among them six new taxa: *Myrmecopora* (s. str.) *wunderlei* sp. n. from Southern Anatolia, *M.* (s. str.) *convexula* sp. n. from Western Anatolia and Southeastern Bulgaria, *M.* (s. str.) *elisa* sp. n. from Crete, *M.* (s. str.) *plana* sp. n. from Crete, *M.* (s. str.) *fornicata* sp. n. from Crete and *M.* (*Xenusa*) *oweni* sp. n. from Southern England, Northern and Western France. *Myrmecopora turanica* EPPELSHEIM, 1888, is transferred to *Eccoptoglossa*. The following new synonymies are established: *M.* (*Iliusa*) *fugax* (ERICHSON, 1839) = *M. uludaghensis* FAGEL, 1971, syn. n., *M.* (*Xenusa*) *uvida* (ERICHSON, 1840) = *M. meridiogallica* SCHEERPELTZ, 1972, syn. n., *M.* (*Xenusa*) *boehmi* BERNHAUER, 1910 = *M. sydowi* BERNHAUER, 1927, syn. n., = *Xenusa mediterranea* FAGEL, 1970, syn. n., *M.* (*Xenusa*) *sulcata* (KIESENWETTER, 1850) = *Xenusa carica* FAGEL, 1970, syn. n., *M.* (*Xenusa*) *similima* (WOLLASTON, 1864) = *M. lohmanderi* BERNHAUER, 1927, syn. n., *M.* (*Xenusa*) *minima* BERNHAUER, 1900 = *M. buresi* RAMBOUSEK, 1910, syn. n., = *Xenusa pamphylica* FAGEL, 1969, syn. n., *Eccoptoglossa obscura* LUZE, 1904 = *Mymecopora afghanica* SCHEERPELTZ, 1972, syn. n. *Myrmecopora* (s. str.) *pygmaea* (SACHSE, 1852), previously treated as a synonym of *M.* (s. str.) *crassiuscula* (AUBÉ, 1850), is regarded as a valid species. Lectotypes are designated for *Myrmecopora publicana* SAULCY, *Myrmedonia pygmaea* SACHSE, *Tachyusa laesa* ERICHSON, *T. uvida* ERICHSON, *T. sulcata* KIESENWETTER, *T. similima* WOLLASTON, *T. maritima* WOLLASTON, *Myrmecopora sydowi* BERNHAUER, *M. boehmi* BERNHAUER, *M. minima* BERNHAUER, *M. lohmanderi* BERNHAUER, *M. bernhaueri* KOCH, *M. brevipes* BUTLER, *M. gravata* PEYERIMHOFF, *M. turanica* EPPELSHEIM and *Eccoptoglossa obscura* LUZE. A neotype is designated for *Tachyusa fugax* ERICHSON. In addition to the descriptions of the genera, subgenera and species dealt with in the study, drawings of relevant external characters and the genitalia, detailed diagnostic keys as well as data on distribution and bionomics are provided.

Key words: Coleoptera - Staphylinidae - Aleocharinae - Falagriini - *Myrmecopora* - *Xenusa* - *Iliusa* - *Eccoptoglossa* - Palaearctic - Europe - distribution - ecology - taxonomy - revision - new subgenera - new species - lectotype designation - neotype designation - new synonyms

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Zusammenfassung

Die systematische Stellung der Falagriinengattungen *Myrmecopora* SAULCY, 1864 sensu lato und *Eccoptoglossa* LUZE, 1904, einschließlich der schon beschriebenen Untergattungen und Arten, wird unter Berücksichtigung historischer Entwicklungen untersucht und erörtert. Beide Gattungen werden unter besonderer Berücksichtigung phylogenetischer Aspekte redeskribiert und redefiniert. Folgende Taxa werden phylogenetisch begründet als Untergattungen von *Myrmecopora* erkannt: *Myrmecopora* SAULCY s. str., *Iliusa* MULSANT & REY, 1874, *Xenusa* MULSANT & REY, 1874, *Paraxenusa* subg. n. und *Euphorbiusa* subg. n. Eine Revision der Typen und weiteren westpaläarktischen Materials aus beiden Gattungen ergab insgesamt 22 valide *Myrmecopora*- sowie 2 *Eccoptoglossa*-Arten, darunter 6 neue Taxa: *Myrmecopora* (s. str.) *wunderlei* sp. n. aus Südanatolien, *M.* (s. str.) *convexula* sp. n. aus Westanatolien und Südostbulgarien, *M.* (s. str.) *elisa* sp. n., *M.* (s. str.) *plana* sp. n., *M.* (s. str.) *fornicata* sp. n., die letzteren drei von Kreta, sowie *M.* (*Xenusa*) *oweni* sp. n. aus Südengland, Nord- und Westfrankreich. *Myrmecopora turanica* EPPELSHEIM, 1888, wird in die Gattung *Eccoptoglossa* gestellt. Folgende Synonymisierungen werden vorgenommen: *M.* (*Iliusa*) *fugax* (ERICHSON, 1839) = *M. uludaghensis* FAGEL, 1971, syn. n., *M.* (*Xenusa*) *uvida* (ERICHSON, 1840) = *M. meridiogallica* SCHEERPELTZ, 1972, syn. n., *M.* (*Xenusa*) *boehmi* BERNHAUER, 1910 = *M. sydowi* BERNHAUER, 1927, syn. n., = *Xenusa mediterranea* FAGEL, 1970, syn. n., *M.* (*Xenusa*) *sulcata* (KIESENWETTER, 1850) = *Xenusa carica* FAGEL, 1970, syn. n., *M.* (*Xenusa*) *simillima* (WOLLASTON, 1864) = *M. lohmanderi* BERNHAUER, 1927, syn. n., *M.* (*Xenusa*) *minima* BERNHAUER, 1900 = *M. buresi* RAMBOUSEK, 1910, syn. n., = *Xenusa pamphylica* FAGEL, 1969, syn. n., *Eccoptoglossa obscura* LUZE, 1904 = *Mymecopora afghanica* SCHEERPELTZ, 1972, syn. n. *Myrmecopora* (s. str.) *pygmaea* (SACHSE, 1852), von früheren Autoren als Synonym von *M.* (s. str.) *crassiuscula* (AUBÉ, 1850) betrachtet, wird revalidisiert. Für *Myrmecopora publicana* SAULCY, *Myrmedonia pygmaea* SACHSE, *Tachyusa laesa* ERICHSON, *T. uvida* ERICHSON, *T. sulcata* KIESENWETTER, *T. simillima* WOLLASTON, *T. maritima* WOLLASTON, *Myrmecopora sydowi* BERNHAUER, *M. boehmi* BERNHAUER, *M. minima* BERNHAUER, *M. lohmanderi* BERNHAUER, *M. bernhaueri* KOCH, *M. brevipes* BUTLER, *M. gravata* PEYERIMHOFF, *M. turanica* EPPELSHEIM und *Eccoptoglossa obscura* LUZE werden Lectotypen, für *Tachyusa fugax* ERICHSON ein Neotypus designiert. Die Beschreibungen der behandelten Gattungen, Untergattungen und Arten werden durch Abbildungen relevanter ektoskelettaler Merkmale und der Genitalien, durch ausführliche Bestimmungsschlüssel sowie durch Angaben zur Verbreitung und Bionomie ergänzt.

1. Introduction and taxonomic history

1.1. The species of *Myrmecopora* SAULCY

The genus *Myrmecopora* was described by SAULCY (1864) to include only the new and type species *Myrmecopora publicana* SAULCY. MULSANT & REY (1874, 1875a,b) established the genera *Xenusa* and *Iliusa*, of which the former was to contain *X. uvida* (ERICHSON, 1840) and *X. sulcata* (KIESENWETTER, 1850), both originally described as *Tachyusa* ERICHSON. *Tachyusa laesa* ERICHSON, 1839, and *T. fugax* ERICHSON, 1839, were both transferred to the genus *Iliusa*. This name was corrected into *Ilyusa* shortly afterwards (MULSANT & REY 1875b), an emendation which was adopted by practically all later authors (e.g. GANGLBAUER 1895; FENYES 1918, 1920; SCHEERPELTZ 1972), which, however, was neither acceptable nor valid (BLACKWELDER 1952). In 1918, *Xenusa uvida* (ERICHSON) and *Iliusa fugax* (ERICHSON) were designated as the type species of their respective genus by FENYES (BLACKWELDER 1952).

GANGLBAUER (1895) treated both *Iliusa* and *Xenusa* as subgenera of *Myrmecopora* with *Myrmecopora* s.str. characterized by slender antennae and the lack of microsculpture and

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containing *M. publicana* SAULCY, *M. crassiuscula* (AUBÉ, 1850), originally described as *Falagria*, and *M. pygmaea* (SACHSE, 1852) as a synonym of the latter. He included only one species (*M. fugax*) in *Iliusa* and three species (*M. uvida*, *M. sulcata*, *M. laesa*) in *Xenusa*, the former subgenus being characterized by apically incrassated antennae and lack of microsculpture, and the latter by a distinctly microsculptured integument. In principle, this taxonomic concept was adopted by SCHEERPELTZ (1972) in his synopsis of Palaearctic *Myrmecopora*, who assigned four species to *Myrmecopora* s. str. (*M. publicana*, *M. crassiuscula*, the new species *M. hilfi*, and *M. pygmaea* (SACHSE) as a valid species), three species to *Iliusa* (*M. fugax*, *M. turanica* EPPELSHEIM, 1888, and the new species *M. afghanica*) and 14 species to *Xenusa*: the Western Palaearctic *M. laesa*, *M. uvida*, *M. sulcata*, *M. sydowi* BERNHAUER, 1927, *M. boehmi* BERNHAUER, 1910, *M. lohmanderi* BERNHAUER, 1927, *M. minima* BERNHAUER, 1900, *M. brevipes* BUTLER, 1909, *M. bernhaueri* KOCH, 1936, *M. buresi* RAMBOUSEK, 1910, *M. maritima* (WOLLASTON, 1860), the new species *M. meridiogallica*, and the Eastern Palaearctic *M. rufescens* (SHARP, 1874) and *M. algarum* (SHARP, 1874). *Myrmecopora simillima* (WOLLASTON, 1864) was then considered a synonym of *M. maritima* (WOLLASTON, 1860) (FAUVEL 1902; BERNHAUER & SCHEERPELTZ 1926). Remarkably, SCHEERPELTZ (1972) neither accounted for *M. gravata* PEYERIMHOFF, 1945, nor any of the species described by FAGEL (1969, 1970, 1971).

FAGEL, who in 1969 and later articles (FAGEL 1970, 1971) described five further species (*Xenusa anatolica*, *X. pamphylica*, *X. carica*, *X. mediterranea* and *Myrmecopora uludaghensis*), elevated *Xenusa* to generic rank again - a view later shared by LOHSE (1989) - mainly on ecological grounds. He argued that in contrast to the species of *Xenusa*, true *Myrmecopora* were not inhabitants of the seashore, but were found in inland habitats of the Eastern Mediterranean, under stones and in litter. He furthermore stated that species of *Myrmeocopora* s. str. were not myrmecophilous, as opposed to previous claims e. g. by SAULCY (1864), GANGLBAUER (1895) and WASMANN (1894). This conclusion, however, was apparently based on his erroneous concept of *Myrmecopora* s. str., since he assigned his *M. uludaghensis* to this taxon (see sections 2.4.1 and 2.4.2).

Numerous species of *Myrmecopora* and *Xenusa*, respectively, have been described from localities outside the Palaearctic region, but there is some evidence that they may in fact belong to different genera (see below).

There are only few references in the taxonomic literature to the genus *Eccoptoglossa*, which was described by LUZE in 1904, then including only the type species *E. obscura* LUZE, and which was considered closely related to *Myrmecopora* by later authors (FENYES 1920; SCHEERPELTZ 1929, 1940).

1.2. Systematics

The first species of *Myrmecopora* sensu lato were described either as *Tachyusa* ERICHSON (e. g. *T. laesa* ERICHSON, *T. uvida* ERICHSON, *T. sulcata* KIESENWETTER) or *Falagria* MANNERHEIM (e. g. *F. crassiuscula* AUBÉ), both genera assigned to the tribe Aleocharini by ERICHSON (1839). In his description of *Myrmecopora* SAULCY (1864), who also considered the mouthparts, placed the genus near *Tachyusa* and *Falagria*, from which he distinguished it by the shape and construction, respectively, of the paraglossae, the legs, the labrum and the labial palpi. MULSANT & REY (1874, 1875a,b) attributed their newly described genera *Xenusa* and *Iliusa* to the Myrmedoniaires (near *Tachyusa*). GANGLBAUER (1895) later erected the tribus Myrme-

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doniini, among numerous other genera also containing *Myrmecopora* (including the subgenera *Iliusa* and *Xenusa*), which he grouped in the Tachyusates together with *Tachyusa* and allied genera, separated from the Falagriates (with *Falagria*, *Borboropora* KRAATZ and *Cordalia* JACOBS) by the shape of the pronotum and the construction of the prosternum. GANGLBAUER´s wide concept of the Myrmedoniini was generally maintained by FENYES (1920) and BERNHAUER & SCHEERPELTZ (1926).

In contrast to previous and later authors YOSII & SAWADA (1976) placed *Xenusa*, *Falagria* and *Cordalia* in what they considered the *Coprothassa* Series of the Athetae (together with *Amischa* THOMPSON, *Coprothassa* THOMPSON, *Pycnota* MULSANT & REY, *Taxicera* MULSANT & REY and *Halobrecta* THOMPSON [sic!]). This concept, however, which was primarily based on a study of chaetotaxy and of the mouthparts, but rather neglected phylogenetic principles, has remained largely unaccepted. (It should be noted that - judging from the drawings (Fig. 52, p. 121) - it is highly unlikely that what YOSII & SAWADA (1976) considered to be *Xenusa algarum* (SHARP) is in fact a *Myrmecopora* or *Xenusa*, respectively, particularly because the paramerite and the condylite are confluent.)

LOHSE (1974) assigned those aleocharine genera with the tarsal formula 4-5-5, a distinct neck and anteriorly constricted abdominal sterna to the tribe Falagriini, containing among others *Tachyusa*, *Falagria* and *Myrmecopora*. SEEVERS (1978) suggested a more restricted concept of Falagriini leaving only ten genera, among them *Myrmecopora*, in the tribe and transferring the subtribe Tachyusae to the Oxypodini (later listed there as Tachyusina by NEWTON & THAYER (1992)). He found that in Falagriini the paramere was of a very distinctive construction with the velum of the condylite clearly separated from that of the paramerite, a character absent in other Aleocharinae except for the small tribe Sceptobiini, which was regarded as the sister group of the Falagriini also by later authors (HOEBEKE 1985; DANOFF-BURG 1994; AHN & ASHE 1995).

In his revision of North American Falagriini HOEBEKE (1985) redefined the tribe and indicated five main synapomorphies rendering it a monophyletic group: neck slender (at most 2/5 the width of the head), pronotum with a median sulcus and narrowed posteriorly, enlarged mesospiracular peritremes and the construction of the paramere (see above). He excluded *Myrmecopora* from the Falagriini on the grounds that the neck was broad and "the pronotum not narrowed behind the middle", that the pronotum lacked the median sulcus, the mesospiracular peritremes were small and "the velum of the paramerite confluent with that of the condylite" (pp. 924f.; see remarks below). AHN & ASHE (1995), however, argued that the enlarged mesospiracular peritremes were not a synapomorphy shared by all falagriine genera and that the remaining four synapomorphies were present in *Myrmecopora*. In addition they observed that all falagriine genera treated by HOEBEKE (1985) as well as *Myrmecopora*, *Bryobiota* CASEY and the Sceptobiini possessed a further synapomorphy, a unique gland opening at the anterior margin of sternum IV. As a result of these findings they reinstated *Myrmecopora* in the Falagriini, where, according to their phylogenetic analysis, the genus formed one monophyletic lineage with *Bryobiota* (the latter with the tarsal formula 4-4-5!) based on "two shared derived characters (13-1, integument with transverse or reticulate microsculpture; 19-1, transverse tergal impressions on abdominal segments III-VI)" (p. 153; see remarks below).

In the genus and species descriptions below the characters listed and computed by AHN & ASHE (1995) will be accounted for, not only to ensure standardization, but also to allow them to be considered in future analyses on the tribal level, which is not the object of this paper.

Remarkably, before describing five further species of *Xenusa*, apparently without having seen any of the types of the species known at that time, FAGEL (1969) states, "The *Xenusa* de la

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Région paléarctique occidentale méritent une revision ... . beaucoup de celles-ci [les citations de capture] sont basées sur des déterminations anciennes ou douteuses. " (p. 117). The present revision was initiated not only by the resulting taxonomic chaos, which SCHEERPELTZ (1972) shortly afterwards even contributed to through his largely erroneous and incomplete synopsis and descriptions of further new species, thereby rendering a safe identification of the species of *Myrmecopora* virtually impossible, but also by the continuous (and urging) encouragement I received from the late renowned coleopterologist Dr. G. A. LOHSE, who in addition provided me with material of various species.

1.3. Material examined and acknowledgements

Material from the following museum and private collections was studied:

BMNH	The Natural History Museum London (M. J. B. BRENDELL, P.M. HAMMOND)
DEI	Deutsches Entomologisches Institut, Eberswalde (L. ZERCHE)
ECM	Exeter City Museums & Art Gallery, Exeter (D. E. BOLTON)
FMNH	Field Museum of Natural History, Chicago (A.F. NEWTON JR., P.P. PARRILLO)
IRSNB	Institut Royal des Sciences Naturelles de Belgique, Bruxelles (D. DRUGMAND)
MCSNM	Museo Civico di Storia Naturale di Milano (C. LEONARDI)
MNHUB	Museum für Naturkunde der Humboldt-Universität, Berlin (M. UHLIG)
MHNG	Muséum d´Histoire naturelle, Genève (I. LÖBL)
MNHNP	Muséum National d´Histoire Naturelle, Paris (N. BERTI)
NHMW	Naturhistorisches Museum Wien (H. SCHILLHAMMER)
NMP	Národní Muzeum v Praze (J. JELÍNEK)
WMNM	Westfälisches Museum für Naturkunde, Münster
ZSM	Zoologische Staatssammlung München (G. SCHERER)
cAng	Private collection, F. ANGELINI, Francavilla Fontana
cAss	author´s private collection
cBoh	Private collection J. BOHÁC, České Budejovice
cGil	Private collection, G. GILLERFORS, Varberg
cOwe	Private collection, J. A. OWEN, Epsom
cWun	Private collection P. WUNDERLE, Mönchengladbach
cZan	Private collection A. ZANETTI, Verona

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2. The genus *Myrmecopora* SAULCY, 1864

2.1. Systematics and phylogenetics

In order to assess the systematic position of *Myrmecopora* s. str., *Xenusa* and *Iliusa* the external morphology, the mouthparts and the terminalia including the genitalia of typical representatives of each of the taxa were examined: *M.* (s. str.) *publicana* SAULCY, *M.* (s. str.) *wunderlei* sp.n.,

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M. (*Iliusa*) *fugax* (ERICHSON), *M.* (*Xenusa*) *laesa* (ERICHSON), *M.* (*Xenusa*) *uvida* (ERICHSON) and *M.* (*Xenusa*) *sulcata* (KIESENWETTER). As far as the characters considered by AHN & ASHE (1995) for their phylogenetic analysis are concerned, no differences were observed between the species except for the microsculpture of the integument. Furthermore, apart from the synapomorphies shared by all falagriine genera (HOEBEKE 1985; AHN & ASHE 1995; see also section 1.2.), the apomorphic state is realized in only one of the characters, the absence of a posterior margin of the mesocoxal acetabula. It appears that the data indicated for *Myrmecopora* in AHN & ASHE (1995), which are based on an examination of *M. vaga* (LECONTE) refer to a taxon other than *Myrmecopora*. Neither do the species studied in the present paper, among them the type species, carry spines on tergum VIII, nor is there a basal impression on tergum VI, both apomorphic characters apparently present in "*Myrmecopora*" *vaga*. Furthermore, the microsculpture of the integument may be of less significance than presumed, not only because it is absent in the type species and there are transitional conditions (see below), but also because this character may be linked to the habitat. Many Aleocharinae inhabiting shores, particularly seashores, are strongly microsculptured and mat, often in contrast to their relatives inhabiting terrestrial inland habitats, which is the case e.g. for certain Aleocharini (ASSING 1995). Therefore, since AHN & ASHE (1995) based the monophyletic lineage including *Bryobiota* CASEY and *Myrmecopora* primarily on the presence of an impression on tergum IV and on the microsculptured integument of a species whose systematic position is at least doubtful, the sister group of *Myrmecopora* is very unlikely to be *Bryobiota*.

Apart from the falagriine synapomorphies mentioned above and numerous plesiomorphies, all the species of *Myrmecopora* examined here share one striking and apparently derived character, the external sexual dimorphism of the head and pronotum, which is absent at least in Nearctic (HOEBEKE 1985) and in the known Western Palaearctic Falagriinae and which provides further evidence that what is here considered *Myrmecopora* represents a monophyletic group. (Note, however, that no ♀♀ of *M. gravata* were available for this study.) In addition, a sexual dimorphism was observed not only in the shape, but particularly in the micropubescence of the hind margin of sternum VIII (see section 2.2.). While the former is often indistinct and possibly plesiomorphic, since it is found in many Aleocharinae, the latter may be a synapomorphy, which is also shared by the species of *Eccoptoglossa* LUZE (see section 3.2.). Whether or not *Myrmecopora* and *Eccoptoglossa* are in fact sister groups cannot be decided with certainty before a generic revision all Palaearctic Falagriini has been carried out, but there is some evidence suggesting that this may be the case.

The following additional characters were considered for the species indicated above. Note that, in the absence of a generic revision of Palaearctic Falagriini, the decision of whether a character is primitive (0) or derived (1,2) can only be considered tentative at present. This particularly applies to characters 5 and 6:

1. Head: dorsal surface (weakly) convex, at least in ♀♀ (0); distinctly flattened in both sexes (1).
2. Dorsal impression on head (♂): absent (0); size variable, in posterior region of vertex (1); large and in central region of vertex (2).
3. Dorsal impression on head (♀): absent (0); present (1).
4. Antenna: apically clearly incrassate (0); weakly incrassate (1).
5. Labrum: anterior membranous appendage trilobed (0); anterior membranous appendage bilobed (1).

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6. Right mandible: molar tooth obtuse, without faint teeth in dorsal molar region (0); molar tooth acute, with faint teeth in dorsal molar region (1).
7. Integument of forebody: microsculpture absent or very indistinct (0); microsculpture distinct and isodiametric (1).
8. Integument of abdomen: microsculpture absent (0); microsculpture very shallow, indistinct, partially transverse (1); microsculpture distinct and isodiametric (2).
9. Pronotum: shape subquadrate to transverse, weakly to distinctly convex (0); oblong and strongly convex (1).
10. Pronotum: ♂ dorsal impression ± narrowly sulcate throughout (0); ♂ impression not clearly sulcate and narrow throughout (1).
11. Scutellum: punctation distinct (0); punctation indistinct (1).
12. Abdominal tergum VI: anterior ridge distinct (0); anterior ridge indistinct or absent (1).
13. Median lobe: lateral base of ventral process unmodified (0); at base of ventral process with modified lateral structures.
14. Median lobe: apex of ventral process in ventral view not incised, rounded (0); apex incised or acutely pointed (1).
15. Spermatheca: capsule with small and indistinct cuticular protrusion (0); cuticular protrusion large and distinct (1).
16. Spermatheca: capsule rounded apically (0); capsule weakly to distinctly truncate apically (1).
17. Spermatheca: capsule apically without process (0); capsule apically with acute process (1).
18. Spermatheca: duct short and ± bent (0); duct long and ± straight (1).
19. Ecology: moist inland habitats (0); inhabitants of seashore (1); myrmecophilous (2); in *Euphorbia* (3).

Character	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Myrmecopora s. str.	0	1	0	1	0	0	0	0	0	1	0	1	0	1	0	0	0	0	2
M. fugax	0	2	0	0	0	0	0	1	0	1	0	0	0	1	0	0	0	0	0
M. gravata	0	0	?	0	0	0	1	1	0	0	1	0	0	0	?	?	?	?	3
M. laesa	0	1	0	1	0	1	1	1	1	1	1	0	0	0	1	1	0	1	1
Xenusa	1	2	1	0	1	1	1	2	0	1	1	0	1	1	1	1	1	1	1

While the species of *Xenusa* (*M. uvida*, *M. sulcata* and related species) and, though less conclusively, *Myrmecopora* s. str. constitute well-defined monophyla, with particularly the former characterized by several apomorphies, the situation is more difficult with *M. fugax*, *M. gravata* and *M. laesa*, whose phylogenetic relationships remain doubtful at least to some extent. *M. fugax* and *M. gravata* are both characterized by a unique combination of character states, but are mainly distinguished from the other taxa by what are here considered plesiomorphic character states. *M. laesa*, which was included in *Xenusa* by previous authors, is linked to the *uvida-sulcata* lineage by several probably derived characters, particularly those related to the integument, the construction of the spermatheca and the habitat, but also shows considerable character overlap with the other taxa, especially *Myrmecopora* s. str. (see section 2.4.3.). In order to account for these results new subgenera had to be established for *M. gravata* and *M. laesa* (see sections 2.4.3. and 2.4.5.), and *M. fugax* is left in *Iliusa*. Future research into *Myrmecopora*

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and related taxa in other zoogeographical regions, particularly in the Eastern Palearctic region will hopefully result in further evidence clarifying the intrageneric phylogenetic relationships of *Myrmecopora*.

In this study, *Myrmecopora* s. str., *Xenusa*, *Iliusa* and the newly described supraspecific taxa will be treated as subgenera of *Myrmecopora* SAULCY rather than genera. Not only is this procedure believed to be in better agreement with the standards of classification applied in other recent revisions of Falagriinae (AHN & ASHE 1995; HOEBEKE 1985). The most conspicuous character distinguishing the taxa is the habitat. There may be striking differences in general morphology especially between members of *Myrmecopora* s. str. and *Xenusa*, but they may not be wholly independent characters, but to some extent linked to the ecology of the species. The microsculpture has been referred to above, and the slender appearance as well as the long antennae and legs of the species of *Myrmecopora* s. str. are likely to represent an adaptation to myrmecophily. The final reason for the decision stated above is a primarily practical one. A preliminary inspection of some Eastern palaearctic species suggested that the present concept of *Myrmecopora* as constituted on the basis of the taxa dealt with here may in some respects be restricted. Therefore, if *Xenusa* and *Iliusa* were to be considered genera, this could necessitate the erection of a presently unknown number of further genera for rather closely related taxa.

2.2. Description

Small or intermediate sized species, 1.8-4.0 mm; colour variable, in *Myrmecopora* s. str. ± brown, in *Xenusa*, *Iliusa*, *Paraxenusa* and *Euphorbiusa* dark brown to black; microsculpture of integument absent, partially present, weak or very distinct; punctation variable.

Head subquadrate to transverse, posterior corners smoothly to abruptly rounded; dorsally with small to very large circular or ovoid, but in most species weakly delimited impression in ♂♂, impression either smaller, shallower or absent in ♀♀ (sexual dimorphism); neck slender, ca. 1/3 of head width; eyes developed, their diameter measuring at least half the length of temples in lateral view; antennae with antennomeres 1 - 3 elongate and 4 - 11 variable (cf. Figs 2h, 9h, 10h, 11h, 14h, 21e).

Labrum transverse with bi- or trilobed membranous appendage anteriorly and rather stout spine-like setae in characteristic arrangement (Figs 2k, 9i, 10j, 11j, 21g); mandibles asymmetrical, apically acute and curved, right mandible with molar tooth and with or without a row of faint teeth in dorsal molar region, both absent in left mandible (Figs 2l, 10i, 11i, 21f); maxillary and labial palpi 4- and 3-jointed, respectively (Figs 2i, j); ligula deeply bifid (Fig. 2j).

Pronotum with maximal width in first half, narrowed posteriorly; dorsally with shallow to deep and ovoid to longitudinal, often weakly delimited impression, which is more distinct in ♂♂ than in ♀♀ (sexual dimorphism); hypomera visible in lateral view and separated from disk by carina; middle of prosternum obtusely pointed.

Elytra ± uniformly punctate, wider than and, in most species, slightly shorter, subequal in length to or longer than pronotum, rarely distinctly shorter; often with a shallow longitudinal depression at suture behind scutellum; scutellum distinctly or indistinctly punctate, without carinae; alae in most species present, macropterous; one Western Palaearctic species with wing dimorphism.

Mesospiracular peritremes reduced; mesosternal process acute to obtusely pointed, reaching between mesocoxae; mesocoxal acetabula not margined posteriorly; mesosternum on same level as metasternum.

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Legs ± elongate, proportions variable; tarsal formula 4-5-5; first tarsomere of hind tarsi longer than second, in some species as long as tarsomeres 2 - 4 together.
Abdomen narrower than or subequal in width to elytra, maximal width at terga V-VI; terga III-V with transverse impression anteriorly; sternum IV with gland opening anteriorly; apical margin of tergum VIII not fimbriate, without spines or denticles, but with row of minute microscopic hairs in both sexes; posterior margin of sternum VIII with sexual dimorphism: in ♂♂ ± convex and without microscopic hairs, in ♀♀ less convex, ± straight or slightly concave, and with fringe of microscopic hairs, which are denser and usually longer than those of tergum VIII (see Figs in section 2.4.).
Aedeagus without distinct flagellum and with weakly defined internal structures; parameres with velum of condylite and paramerite distinctly separated, the former of variable length; velum of condylite brush-like apically; capsule of spermatheca somewhat enlarged, sometimes modified and sclerotized to various degrees (see Figs in section 2.4.).

2.3. Distribution

The distribution of the genus must at present be regarded as very uncertain. Apart from the Palaearctic, a number of species of *Myrmecopora* (including *Iliusa* and *Xenusa*) have been reported from the Ethiopian, the Oriental, the Australian and the Nearctic region. However, several of them have subsequently been transferred to other genera, e. g. *M. funesta* BROUN and *M. granulata* BROUN from New Zealand to *Ecomorypora* CAMERON and *Pyromecroma* CAMERON, respectively (CAMERON 1945), and *M. basalis* CAMERON to *Amanota* CASEY (CAMERON 1950). According to SCHEERPELTZ (1972), who still lists *M. basalis* CAMERON, *M. funesta* BROUN and *M. granulata* BROUN as *Myrmecopora*, the placement of a further two species from the Australian region is doubtful, but he does not state whether or not he has seen the types. *M. (Xenusa) californica* SCHEERPELTZ, one of the two species of *Myrmecopora* reported from North America, was recognized as a synonym and transferred to *Bryobiota* CASEY by AHN & ASHE (1995). As explained above, the current systematic position the second Nearctic species, *M. vaga* (LECONTE), appears to be doubtful, too. In conclusion, the question whether *Myrmecopora*, as defined here, is restricted to the Palaearctic or has a wider distribution can only be answered after a revision of the species of other zoogeographical regions, which is not the object of the present study.

2.4. The West Palaearctic subgenera and species of *Myrmecopora* SAULCY

In the following, the descriptions of the subgenera are based on the diagnosis of the genus and focus on differential characters in order to avoid redundance. Similarly, only the first species of a subgenus or a species group is described in detail, thus representing a reference for the following (shorter) diagnoses.
The measurements indicate the range; only when larger series of specimens were available the arithmetic means are given in parentheses. The following abreviations are used:

TL: total length from front of labrum to tip of abdomen (in mm);
AL: length of antennae (in μm);
HL: head length from front of clypeus to neck (in μm);
HW: maximal head width (in μm);
PL: length of pronotum along midline (in μm);
PW: maximal width of prontum (in μm);

DOI: 10.21248/contrib.entomol.47.1.69-151

EL: length of elytra along suture from apex of scutellum to posterior margin (in μm);
HTiL: length of hind tibiae (in μm);
HTaL: length of hind tarsi (in μm);
HT1L: length of first tarsomere of hind tarsi (in μm);
HT24L: combined length of second to fourth tarsomere of hind tarsi (in μm).

The terminology of the genitalia follows GACK & PESCHKE (1994), KLIMASZEWSKI (1984) and SEEVERS (1978). Geographical names are primarily based on the Times Atlas (1994).

2.4.1. The subgenus *Myrmecopora* SAULCY s. str.

Type species: *Myrmecopora publicana* SAULCY

Description:

Species of intermediate size, 2.5 - 4 mm; body colour light to dark brown, head often and terga VI-VII of abdomen usually darker, legs yellowish to light brown; integument with decumbent pale pubescence and, sometimes except for scutellum, without microsculpture.

Head with evenly to obtusely rounded posterior corners, sometimes widened behind eyes; dorsal surface ± convex, in ♂♂ posteriorly with impression of variable depth and shape, but mostly shallow, weakly defined and round or ovoid, rarely effaced; impression missing in ♀♀; punctation very fine.

Antenna very slender, only weakly incrassate apically; antennomeres 1 - 3 clearly elongate and subequal in length, distinctly longer than 4 - 10; antennomere 4 faintly to clearly oblong, 5 - 9 oblong, 10 faintly transverse to clearly elongate; antennomere 11 1.5 - 2x longer than penultimate joint (cf. Figs 2h, 4f).

Right mandible with obtuse molar tooth, without a row of faint teeth in dorsal molar region (Fig. 2l); labrum with anterior membranous appendage trilobed (Fig. 2k); third joint of maxillary palpus densely pubescent (Fig. 2i).

Pronotum finely punctate; dorsally in ♂♂ with oval or longitudinal impression of variable width and depth; impression in ♀♀ shallower, often reduced to small impression in posterior half or faint sulcus along midline, rarely almost effaced.

Elytra and scutellum finely punctate; the latter sometimes with indistinct or distinct microsculpture.

Abdomen with tergal punctation more pronounced than on forebody; tergum III more, tergum VII less densely punctate than terga IV-VI; hind margin of tergum VIII weakly convex to very obtusely pointed.

♂: aedeagus unmodified.

♀: spermatheca with capsule simply rounded and slightly or distinctly more sclerotized than the short duct; cuticular protrusion small.

Ecology and distribution:

In contrast to FAGEL (1969) (see comments in section 1.1.), literature data, though they are scarce (see species sections), my own observations (see *M. wunderlei* sp. n.) and morphological evidence (long and slender legs and antennae) suggest that the species of *Myrmecopora* s. str. are myrmecophilous. The species attributed to this subgenus and examined here are distributed in the south of the Western Palaearctic region, in the Eastern Mediterranean from the Balkan countries to Israel, Lebanon, the Caucasus and Anatolia (Fig. 22, p. 150).

DOI: 10.21248/contrib.entomol.47.1.69-151

2.4.1.1. *Myrmecopora* (s. str.) *publicana* SAULCY, 1864

Figs 1a-h, 22

Myrmecopora publicana SAULCY, 1864, 430f. [type species of *Myrmecopora* by monotypy]

Type examined:

Lectotype ♂, present designation: *Myrmecopora publicana* SAULCY, Jerusalem, Saulcy, Syntypus, coll. L. v. Heyden (DEI).

Apart from the specimen here designated as lectotype, no further syntypes were available. The SAULCY collection (MNHNP) contained the corresponding labels, but no specimens could be found (BERTI, in litt.).

Further material examined:

ISRAEL: 1♂, Jerusalem, leg. Simon (MNHUB); 1♂, Jerusalem, 1.III.1885, leg. Leuthner (DEI); 2♂♂, Jerusalem (IRSNB); 1♂, Jerusalem, Hilton-Hotelpark, 22.I.1987, leg. Borisch (cWun); 1♂, 'Palästina' [without locality], nest of *Spalax*, 3.III.54, leg. Thedor, coll. Scheerpeltz (NHMW).
LEBANON: 1♂, Beyrouth, coll. Stierlin (DEI); 1♀, Lebanon, leg. Fauvel, coll. Scheerpeltz (NHMW); 1♀, Beyrouth, leg. Appel (NHMW); 1♀, Lebanon, leg. Fauvel (NHMW); 1♂, 3♀♀, Beyrouth, 1878, leg. Appel (NHMW); 1♂, Nahr el Kelb, V.1964, leg. Fagel (IRSNB); 1♀, Kartaba, 1200-1400m, V.1964, G. Fagel (IRSNB); 2♂♂, 1♀, Brumana, leg. Simon (NHMW, cAss).
SYRIA: 1♂, Dimasho (Damascus), leg. Fauvel (NHMW); 1♂, [without locality] coll. Kraatz (DEI).
TURKEY: 2♂♂, 1♀, Iskenderun, coll. Scheerpeltz (NHMW, cAss).
No locality indicated: 2♂♂, Hampe (NHMW).

Description:

Measurements (n=22): TL: 2.8 - 4.2 (3.4); AL: 1120 - 1370 (1270); HL: 405 - 500 (447); HW: 465 - 550 (509); PL: 450 - 545 (502); PW: 500 - 575 (538); EL: 380 - 485 (436); HTiL: 575 - 800 (697); HTaL: 560 - 725 (654); HT1L: 210 - 290 (250); HT24L: 240 - 320 (285).
Body colour brown to dark brown with the appendages, the elytra, the abdominal terga III-V and VIII, and the hind margins of terga VI-VII usually somewhat lighter.
Head slightly to distinctly wider than long (HW/HL: 1.01 - 1.24), shape somewhat variable, sides ± rounded, sometimes slightly widened behind eyes, posterior corners variable, smoothly to sharply rounded; dorsal surface shining, with rather sparse fine punctation and with inconspicous pale pubscence ± directed mediad; ♂♂ with mostly shallow and often faintly sulcate impression in posterior region of dorsal surface; ♀♀ without such impression.
Antennae slender, weakly incrassate apically; antennomeres 1 - 3 distinctly elongate, 4 subquadrate to weakly elongate, 5 - 9 ± oblong, 10 subquadrate to weakly elongate and 11 nearly as long as 9 - 10 together (Fig. 1h).
Pronotum with maximal width near anterior angles, slightly wider than head (PW/HW: 1.01 - 1.09) and wider than long (PW/PL: 1.02 - 1.12); lateral margins posteriorly straight or weakly concave, hind angles variable, distinct and obtuse to effaced and rounded; dorsal surface shining, punctation usually similar to head, pubescence directed ± caudad in central area; sexual dimorphism pronounced: ♂♂ with variable, but distinct and mostly rather deep and extensive longitudinal impression in the middle, often extending almost from the front to the hind margin and exceeding 1/3 of pronotal width; ♀♀ only with very shallow, usually faintly sulcate impression, which increases in depth posteriorly and is often restricted to posterior half of pronotum.
Elytra clearly wider than pronotum, their length somewhat variable, but at suture always shorter than pronotum (EL/PL: 0.78 - 0.93); dorsal surface shining and with fine and rather sparse punctation; pubescence pale, decumbent and inconspicuous; scutellum punctate, often with distinct microsculpture and therefore ± mat; hind wings present.

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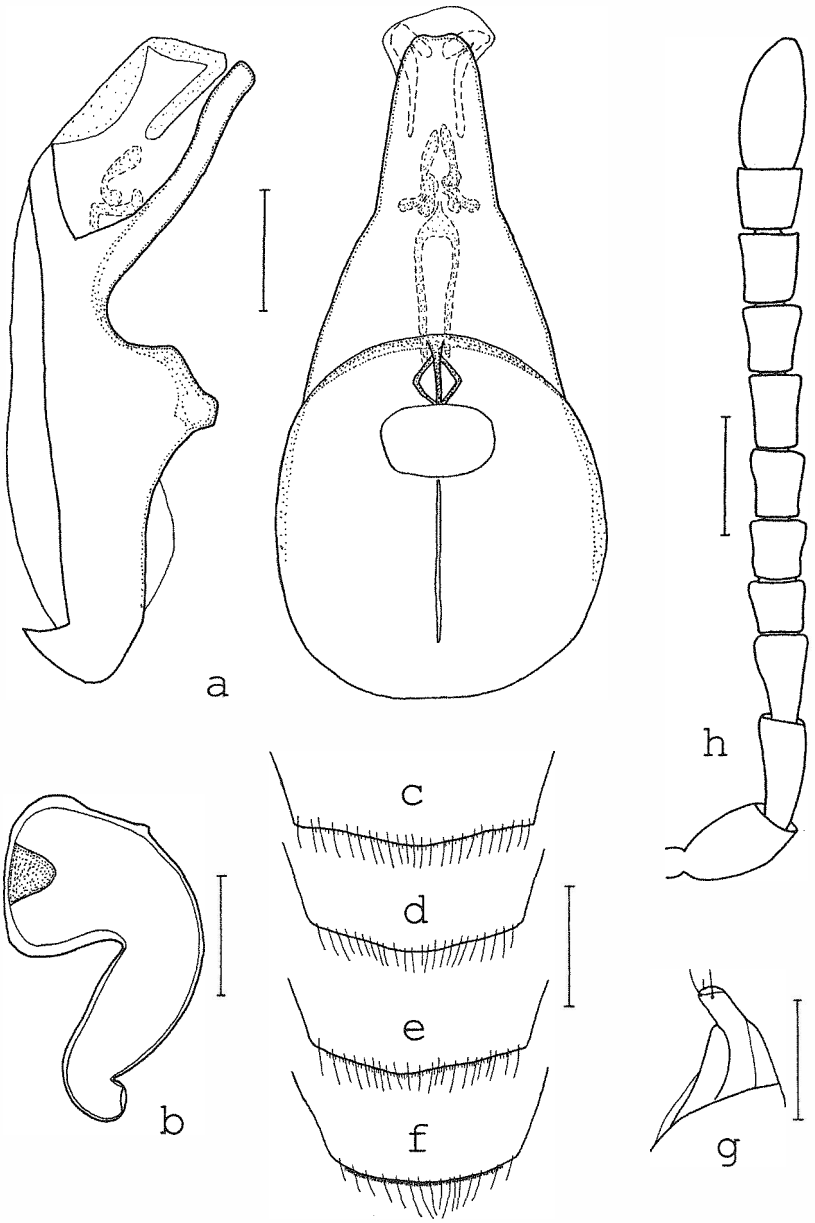

Figs 1 a - h: *Myrmecopora publicana* SAULCY. Median lobe in lateral and in ventral view (**a**); spermatheca (**b**); hind margins of ♂ tergum and sternum VIII (**c, d**); hind margins of ♀ tergum and sternum VIII (**e, f**); apical lobe of paramere (**g**); ♂ antenna (**h**). Scales: **a, b, g**: 0.1 mm; **c - f**, h: 0.2 mm.

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Legs slender (see measurements); hind tarsi elongate and very slender, almost as long as hind tibiae (HTaL/HTiL: 0.84 - 0.94; first tarsomere of hind tarsi very long, nearly as long as the following 3 tarsomeres together (HT1L/HT24L: 0.83-0.90).
Abdomen with fine, but distinct punctation, which is denser on terga III-IV than on VI-VII; surface usually shining, rarely with traces of microsculpture on terga VI-VII, particularly on anterior half.
♂: sternum VIII distinctly convex posteriorly (Fig. 1d); aedeagus and paramere as in Figs 1a, g.
♀: hind margin of sternum VIII ± straight or weakly rounded (Fig. 1f); spermatheca with distinctly enlarged and strongly sclerotized capsule (Fig. 1b).

Bionomics and distribution:
According to the literature *M. publicana* is associated with ants of the genus *Messor* FOREL (SAULCY 1864: "*Myrmica barbara*"; WASMANN 1894: "*Aphaenogaster barbara*"; SCHEERPELTZ 1972: "*Messor* und *Aphenogaster*"). However, one of the specimens examined here had an ant of the genus *Lepisiota* SANTSCHI (= *Acantholepis* MAYR) attached to the same pin, and another specimen was apparently collected in a nest of mole rats ("*Spalax*"), so that the affinity of *M. publicana* to *Messor* spp. may not be as strict as was previously believed.
So far the species has been recorded from various localities in Israel and Lebanon, from Syria and is here for the first time reported for the southeast of Anatolia. The record for Greece in WASMANN (1894) refers to *M. pygmaea* (SACHSE); the corresponding specimens were examined (see section 2.4.1.3).

2.4.1.2. *Myrmecopora* (s. str.) *wunderlei* spec. nov.
Figs 2a-l, 22

Holotype ♂, TR. S Anatolia, Antalya, Umgebung Manavgat, 0-50m, 3.I.1991, leg. & coll. Assing.
Paratypes: 1♂, 6♀♀, same data as holotype (coll. Assing); 1♂, 2♀♀, same locality as holotype, 4.I.1991 leg. & coll. Assing; 1♂, TR. Antalya, Umgebung Manavgat, 1000m, 1.I.1991, leg. & coll. Assing; 1♀, TR. Antalya, Umgebung Akseki, 1000-1200m, 1.I.-7.I.1991, leg. & coll. Wunderle; 2♂♂, Antalya, Umgebung Manavgat, Kiselot, 1.I.-7.I.1991, leg. & coll. Wunderle.

Description:
Measurements (n=14): TL: 3.4 - 4.0 (3.8); AL: 1400 - 1590 (1520); HL: 420 - 500 (469); HW: 480 - 565 (536); PL: 450 - 590 (533); PW: 500 - 605 (561); EL: 405 - 505 (469); HTiL: 680 - 831 (773); HTaL: 665 - 785 (739); HT1L: 285 - 330 (311); HT24L: 265 - 330 (310).
In colour, general appearance and size very similar to *M. publicana*, from which *M. wunderlei* is, however, distinguished by the following characters.
Eyes on average smaller, temples almost or approximately twice as long as eyes in dorsal view (in *M. publicana* clearly less than twice as long as eyes), posterior corners of head always ± smoothly rounded.
Antennae considerably longer (see measurements) and slenderer than in *M. publicana*; antennomeres 2 - 3 very elongate, 2.5 - 3x as long as wide at apex; antennomeres 4 - 10 all distinctly elongate, only very weakly increasing in width (Fig. 2h).

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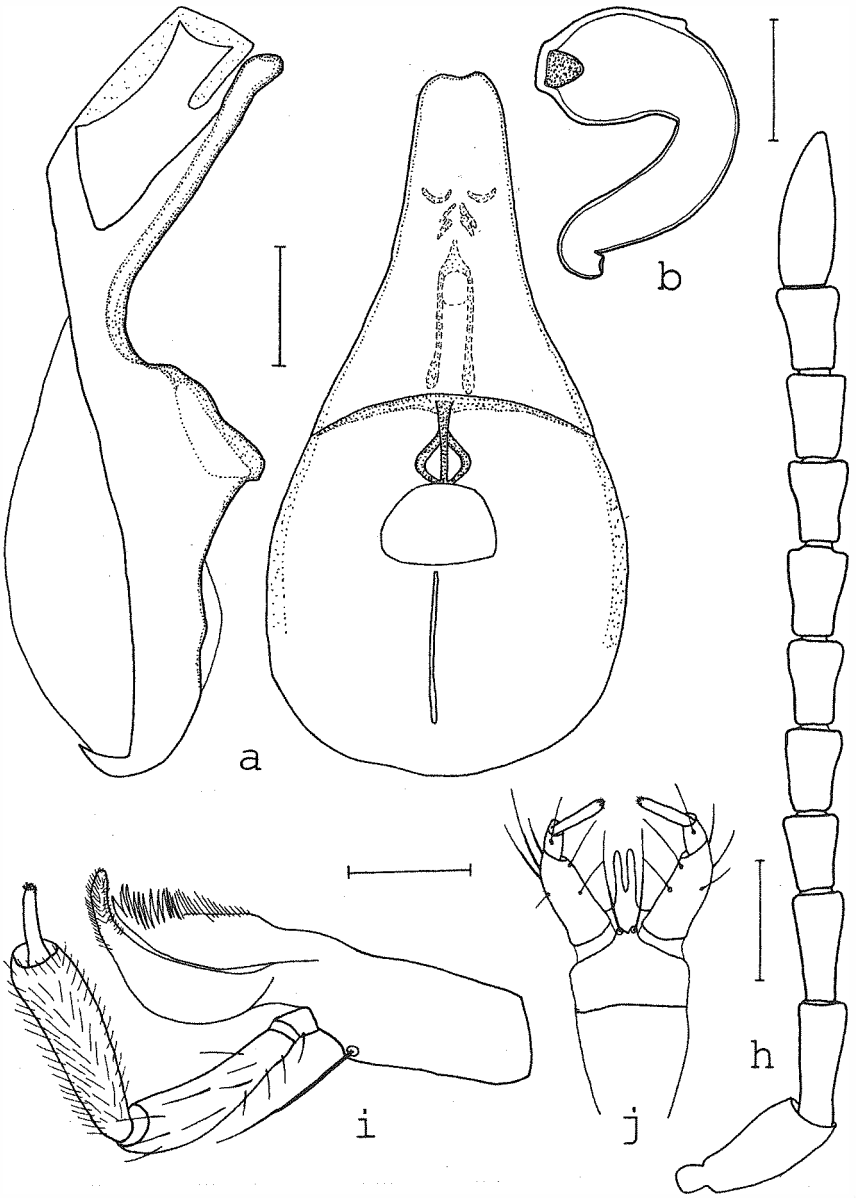

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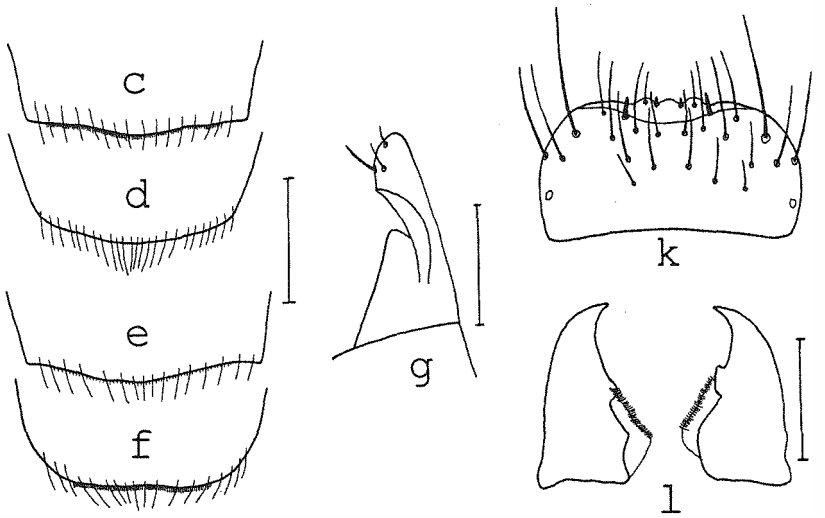

Figs 2 a - l: *Myrmecopora wunderlei* sp. n. Median lobe in lateral and in ventral view (**a**); spermatheca (**b**); hind margins of ♂ (**c, d**) and ♀ (**e, f**) tergum and sternum VIII; apical lobe of paramere (**g**); ♂ antenna (**h**); maxilla (**i**); labium (**j**); labrum (**k**); mandibles (**l**). Scales: **a, b, g, i - k**: 0.1 mm; **c - f, h, l**: 0.2 mm.

Pronotum in shape and relative size similar to *M. publicana* (PW/HW: 1.02 - 1.08; PW/PL: 1.0 - 1.13), but with less pronounced sexual dimorphism; ♂♂ with shallow and, compared with *M. publicana*, also less broad dorsal impression, which is usually faintly sulcate along the middle; ♀♀ with very shallow and faintly sulcate impression along midline. Elytra similar to *M. publicana*.

Legs slenderer and longer than in *M. publicana* (see measurements); hind tarsi nearly or approximately as long as hind tibiae (HTaL/HTiL: 0.94 - 1.0); first tarsomere roughly as long as the following 3 tarsomeres together (HT1L/HT24L: 0.90 - 1.08).

Abdomen with punctation similar to *M. publicana*; microsculpture absent.

♂: sternum VIII convex posteriorly (Fig. 2d); ventral process of median lobe longer and slenderer in ventral view than in *M. publicana* (Fig. 2a); apical lobe of paramerite enlarged apically (Fig. 2g).

♀: hind margin of sternum VIII ± truncate (Fig. 2f); spermatheca with slender and less strongly sclerotized capsule (Fig. 2b).

Derivatio nominis: The species is dedicated to my dear friend PAUL WUNDERLE, who collected part of the type series during our joint excursion to southern Turkey.

Bionomics and distribution:

The species is currently known only from the localities indicated above in the province of Antalya, southern Anatolia. It was collected on grassland and fallow land always in association

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with *Messor* cf. *semirufus* ANDRÉ; two specimens of the type series were found under a stone together with ant workers, the remainder was sieved from excavated nest material of this ant species.

2.4.1.3. *Myrmecopora* (s. str.) *pygmaea* (SACHSE, 1852)

Figs 3a-h, 22

Myrmedonia pygmaea SACHSE, 1852, 115f.
Tachyusa pygmaea (SACHSE): KRAATZ 1857: 28
Myrmecopora (s. str.) *crassiuscula* (AUBÉ) partim: GANGLBAUER 1895, 250
Myrmecopora (s. str.) *crassiuscula* (AUBÉ) partim: BERNHAUER & SCHEERPELTZ 1926, 581
Myrmecopora (s. str.) *crassiuscula* (AUBÉ): SCHEERPELTZ 1972, 95f.

Types examined:
Lectotype ♂ (3 legs and 1 antenna missing), here designated and labelled accordingly: Dalm., coll. Kraatz, Syntypus (DEI).
Paralectotypes, present designation: 1♀, Dalmat., *pygmaea* Sachse (Myrm.), Kahr., coll. Kraatz, Syntypus (DEI); 1♂, 1♀ (remounted, aedeagus and spermatheca examined, ♀ without labels), Dalm., Typen, Kiesenwetter, Samml. Cl. Müller (ZSM).

Comments:
In the original description SACHSE (1852) apparently forgot to state the type locality for *M. pygmaea*, which he described together with several further species of Staphylinidae, mostly from North America, but also one from Dalmatia. Although SACHSE´s contemporary KRAATZ (1857) indicated Dalmatia as the type locality of *M. pygmaea*, SCHEERPELTZ (1972) regarded it as a species without patria. Later, ZERCHE (1984), who studied SACHSE´s types in the DEI, showed that the two specimens indicated above are in fact syntypes. The specimens from the ZSM are also considered syntypes for the following reasons: (a) the similar mode of preparation, (b) the label 'Dalm.´ resembling those attached to the two syntypes in the DEI, (c) the handwritten label 'Typen´, (d) the fact that SACHSE and KIESENWETTER were in close contact (ZERCHE 1984) and that there is reason to believe that they also exchanged specimens. No labels had been attached to the ♀; however, its being pinned immediately next to the ♂ - KIESENWETTER appears to have been in the habit of labelling only the first specimen of a series - and, furthermore, the plural 'Typen´ are here considered sufficient evidence that the ♀ specimen, too, is a syntype.

Further material examined:
CROATIA: 2♂♂, Split, 'bei Ameisen', coll. Eppelsheim (NHMW); 2♂♂, Split, Karaman, coll. Rambousek (NMP, cAss); 1♂, Dalmatia [without locality], leg. Kahr, coll. Rambousek (NMP).
ALBANIA: 3♂♂, [without locality] (IRSNB).
GREECE (Continental): 1♂, Thessaloniki, coll. Scheerpeltz (NHMW); 1♂, 1♀, Olymp, leg. Plasop, coll. Eppelsheim (NHMW); 1♂, 1♀, Olymp, 9.IV.1870, colls Skalitzky, Scheerpeltz (NHMW); 2♀♀, Athen, coll. Lokay (NMP); 1♂, Hymetos Alp., leg. Strupi, coll. Scheerpeltz (cAss); 1♂, Attiki, colls Scheerpeltz, Skalitzky (NHMW); 1♂, Attiki, coll. Eppelsheim (NHMW); 1♂, 1♀, Attiki (ZSM); 2♂♂, Attiki, coll. Scheerpeltz (NHMW); 2♂♂ [without locality], coll. Scheerpeltz (NHMW); 1♂, [without locality] leg. Eppelsheim, '*Myrmecopora publicana*' (ZSM); 1♀, [without locality] coll. Kraatz (DEI); 1♂, 2♀♀, [without locality] leg. v. Oertzen, '*publicana*', coll. Eppelsheim (NHMW, cAss); 1♀, [without locality] coll. Scheerpeltz (NHMW).

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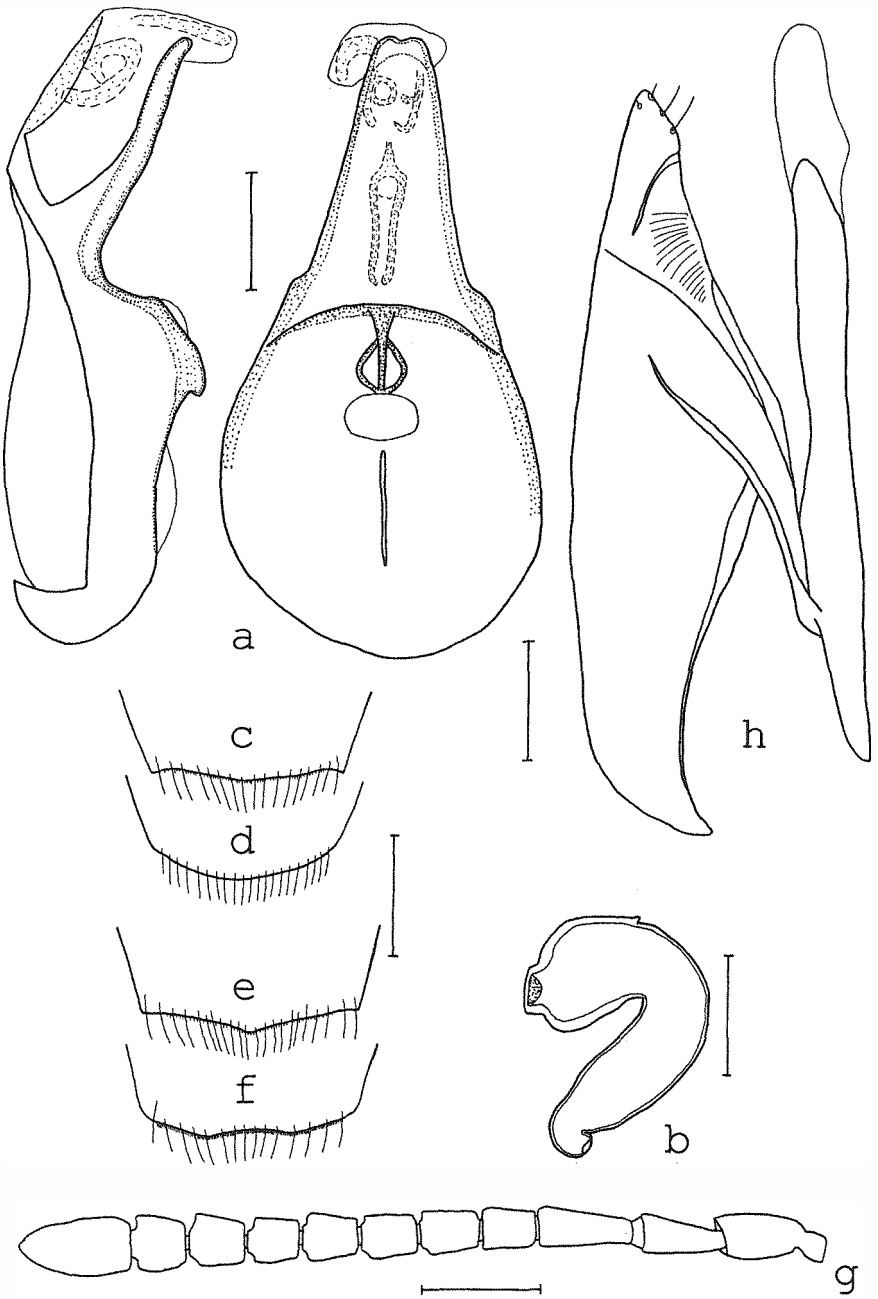

Figs 3 a - h: *Myrmecopora pygmaea* (SACHSE). Median lobe in lateral and in ventral view (**a**); spermatheca (**b**); hind margins of ♂ tergum and sternum VIII (**c, d**); hind margins of ♀ tergum and sternum VIII (**e, f**); ♀ antenna (**g**); paramere (**h**). Scales: **a, b, h**: 0.1 mm; **c - g**: 0.2 mm.

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PELOPONNISOS: 4♂♂, Návplion [Nauplia], coll. Cl. Müller (ZSM, cAss); 1♂, Návplion, leg. Eppelsheim (DEI); 1♂, 1♀, Cumani, leg. Brenske, coll. Rambousek (NMP, cAss).
GREEK ISLANDS: 1♂, Náxos, leg. v. Oertzen (DEI); 5♂♂, 3♀♀, NE Kérkira [Corfu], Archaravi, 20.-25.X.1991, leg. Katschak (cWun, cAss); 1♂, Kérkira (IRSNB); 1♀, Kefallinia [Cephalonia], Argostolion, '*publicana*' [sic!], coll. Scheerpeltz (NHMW).

Description:

Measurements (n=36): TL: 2.4 - 3.5 (2.9); AL: 1130 - 1430 (1270); HL: 370 - 455 (428); HW: 450 - 550 (507); PL: 390 - 515 (472); PW: 480 - 620 (563); EL: 310 - 470 (419); HTiL: 560 - 725 (663); HTaL: 535 - 680 (614); HT1L: 205 - 270 (241); HT24L: 195 - 270 (249).
Body colour brown to dark brown, often with the elytra and the tip of the abdomen somewhat lighter; tergum VI usually, sometimes also the neighbouring terga, darkened; appendages yellowish brown to reddish.
Head slightly to distinctly wider than long (HW/HL: 1.06 - 1.25), shape somewhat variable, sides sometimes distinctly widened behind eyes, posterior corners variable, smoothly to sharply rounded; dorsal surface shining, with rather sparse, very fine punctation, which is usually more distinct in ♂♂ than in ♀♀, and with inconspicous pale pubscence ± directed mediad; ♂♂ with mostly very shallow, occasionally almost effaced and only rarely faintly sulcate impression in posterior region of dorsal surface; ♀♀ without such impression.
Antennae slender, weakly incrassate apically; antennomeres 1 - 3 distinctly elongate, 4 - 9 slightly to distinctly oblong, 10 subquadrate to weakly elongate and 11 nearly as long as 9 - 10 together (Fig. 3g).
Pronotum with maximal width in anterior half, usually clearly wider than head (PW/HW: 1.05 - 1.26) and wider than long (PW/PL: 1.11 - 1.26); lateral margins posteriorly straight or weakly concave, hind angles obtuse; dorsal surface shining, punctation usually similar to or sometimes slightly more distinct than on head, pubescence directed ± caudad in central area; sexual dimorphism often rather weak: ♂♂ with longitudinal impression of variable depth and width in the middle, cephalad usually extending well into anterior half of pronotum; ♀♀ only with very shallow impression, which is usually confined to posterior half, anteriorly sometimes continued as a fine narrow sulcus; dorsal surface generally somewhat more convex than in ♂♂.
Elytra wider than pronotum, their length rather variable, but at suture always shorter than pronotum (EL/PL: 0.64 - 0.96); dorsal surface shining and with fine punctation similar to that of pronotum; pubescence pale, decumbent and inconspicuous; scutellum punctate, with distinct microsculpture and therefore ± mat; hind wings present.
Legs slender (see measurements); hind tarsi elongate, almost as long as hind tibiae (HTaL/HTiL: 0.88 - 0.95; first tarsomere of hind tarsi as long as or slightly shorter than the following 3 tarsomeres together (HT1L/HT24L: 0.90 - 1.0).
Abdomen with fine, but distinct punctation of variable density; punctures on tergum VI often slightly granulose; surface shining.
♂: sternum VIII convex posteriorly (Fig. 3d); ventral process of median lobe in ventral view long and slender, its sides sometimes almost parallel (Fig. 3a); paramere as in Fig 3h.
♀: hind margin of sternum VIII ± straight or concave in the middle (Fig. 3f); spermatheca with slightly enlarged and rather weakly sclerotized capsule (Fig. 3b).

Bionomics and distribution:

Data on the ecology of this species are very scarce both in the literature and on the labels attached to the examined material. The observations regarding *M. crassiuscula* (AUBÉ) in

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SCHEERPELTZ (1972), which in fact refer to *M. pygmaea* (SACHSE), indicate an association with ants of the genera *Messor* and *Aphaenogaster*. The conclusion that *M. pygmaea* is myrmecophilous is supported by the fact that one of the specimens examined had an ant of the genus *Messor* attached to the same pin. In addition, the series of specimens from Corfu were all collected on fallow land near the seashore (0 - 50m) together with *Lamprinus erythropterus* (PANZER) in one ant nest of an unidentified species (KATSCHAK, pers. comm.).
M. pygmaea has so far been recorded only from the south of the Balkans, from Croatia to Greece including the Peloponnisos and some of the Greek islands. "*M. crassiuscula*" is also reported from an unspecified locality in southern Italy (CICERONI et al. 1995; PORTA 1926), but this record is highly doubtful and likely to be based on a confusion with *M. fugax* (ERICHSON).

Comments:
After being considered a synonym of *M. crassiuscula* for a long time (e.g. BERNHAUER & SCHEERPELTZ 1926) *M. pygmaea* was treated as a distinct species by SCHEERPELTZ (1972), who, however, misinterpreted both species believing two specimens from Izmir in his collection to represent *M. pygmaea*.
M. crassiuscula was described from the surroundings of Batumi, south of the Caucasus; unfortunately, the types seem to be lost, and no material from this region was available for the present study. However, since all the species of *Myrmecopora* s. str. appear to have a much more restricted distribution than was formerly believed and, particularly, since none of the specimens from Turkey was conspecific with what is here treated as *M. pygmaea*, there is little doubt that *M. crassiuscula* and *M. pygmaea* represent different species.

2.4.1.4. *Myrmecopora* (s. str.) *convexula* spec. nov.
Figs 4a-f, 22

Myrmecopora (s. str.) *pygmaea* (SACHSE): SCHEERPELTZ 1972, 96f.

Holotype ♂ (remounted, genitalia dissected): Smyrna, Dr. Plasop, *pygmaea*, coll. Eppelsheim (NHMW).
Paratypes: 1♀, same data as holotype (NHMW); 1♂, Smyrna, Skalitzky 1891, *crassiuscula* Aubé (cAss); 1♀, Smyrna, *pygmaea* Sachse, colls Skalitzky, Scheerpeltz (NHMW); 1♀, Smyrna, *crassiuscula* Aubé, Fauvel det., *pygmaea* Sachse, colls Skalitzky, Scheerpeltz (cAss); 1♀, Smyrna, *crassiuscula* Aubé, G. Fagel det. (IRSNB); 3♂♂, SE Bulgaria, Kavacite, 4.V.1987, leg. Behne & Heinig, coll. Zerche (DEI, cAss).

Description:
Measurements (n=9): TL: 2.5 - 3.2; AL: 950 - 1160; HL: 375 - 425; HW: 450 - 530; PL: 410 - 485; PW: 530 - 604; EL: 360 - 540; HTiL: 560 - 665; HTaL: 500 - 605; HT1L: 195 - 240; HT24L: 180 - 240.
In colour, general appearance and size very similar to *M. pygmaea*, from which *M. convexula* is distinguished by the following characters.
Head with more convex dorsal surface; dorsal impression in ♂♂ very faint, almost effaced.
Antennae shorter (see measurements) than in *M. pygmaea*, particularly so in Anatolian specimens; antennomeres 4 - 5 or 4 - 6 oblong, 6 - 9 or 7 - 9 subquadrate or slightly oblong, and 10 subquadrate or slightly transverse (Fig. 4f).
Pronotum relatively wider (PW/PL:1.22 - 1.35) and more convex than in *M. pygmaea*; sexual dimorphism rather indistinct; ♂♂ with shallow, mostly roughly triangular impression near poste-

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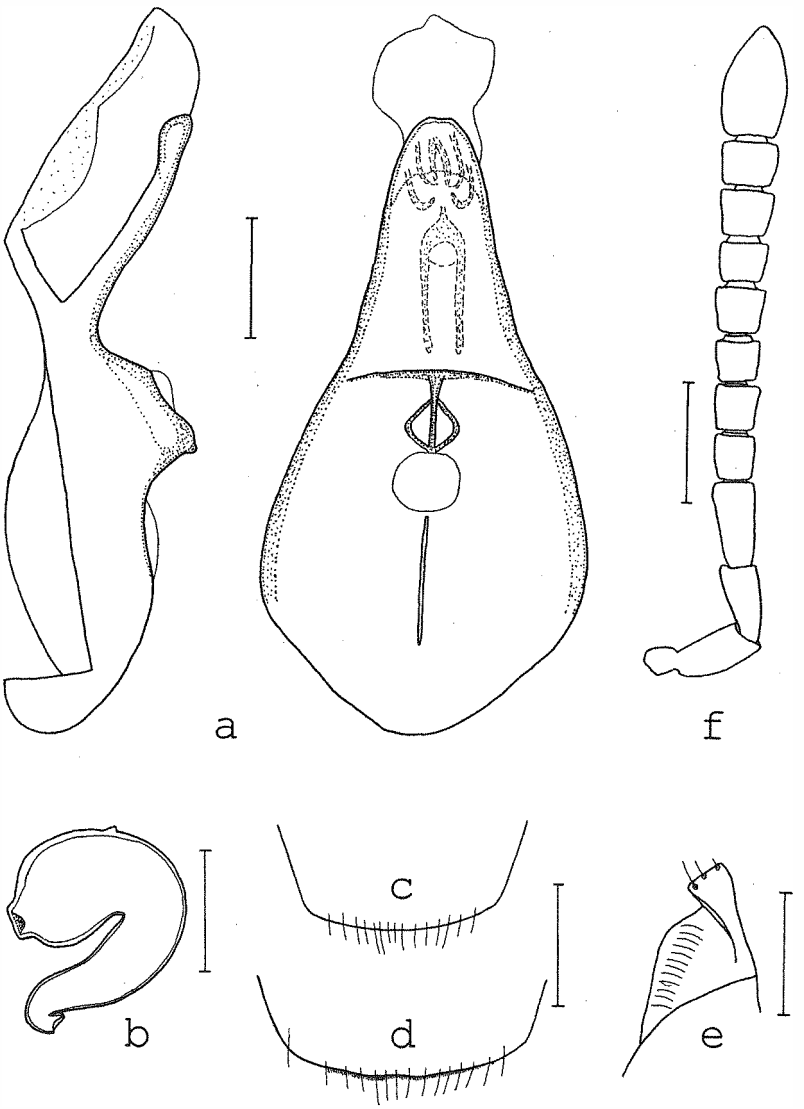
rior margin and very fine and narrow, indistinct and anteriorly sometimes effaced sulcus along median line; ♀♀ with shallow triangular impression, occasionally with short and sulcate anterior extension.

Legs, especially hind tarsi, shorter than in *M. pygmaea* (see measurements).



Figs 4 a - f: *Myrmecopora convexula* sp. n. (**a, c, e**: HT). Median lobe in lateral and in ventral view (**a**); spermatheca (**b**); hind margin of ♂ sternum VIII (**c**); hind margin of ♀ sternum VIII (**d**); apical lobe of paramere (**e**); ♂ antenna (**f**). Scales: **a, b, e**: 0.1 mm; **c, d, f**: 0.2 mm.

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Abdomen with punctation similar to *M. publicana*; microsculpture absent.
♂: sternum VIII faintly convex posteriorly (Fig. 4c); ventral process of median lobe relatively wider and shorter in ventral view than in *M. pygmaea* (Fig. 4a); apical lobe of paramerite as in Fig. 4e.
♀: hind margin of sternum VIII faintly convex to slightly concave (Fig. 4d); spermatheca similar to that in *M. pygmaea* (Fig. 4b).

Derivatio nominis: The name (lat. (adj.): diminutive form of convexa: convex) refers to the small size and the most prominent external character of the species: its convex head and pronotum.

Bionomics and distribution:
M. convexula sp. n. is presently known only from the type locality in the surroundings of Izmir in the northwest of Anatolia (Turkey) and from the southeast of Bulgaria. The labels attached to the type specimens did not provide any information whatsoever regarding its ecology.

2.4.1.5. *Myrmecopora* (s. str.) *hilfi* SCHEERPELTZ, 1972

Figs 5a-e, 22

Myrmecopora (s. str.) *hilfi* SCHEERPELTZ, 1972, 96f.

Types examined:
Holotype ♂ (teneral, aedeagus examined), Kleinasien, Golf von Makri, 1905, leg. Hilf, ex coll. Leonhard, Typus *Myrmecopora hilfi* O. Scheerpeltz, coll. Scheerpeltz (NHMW).
Paratype ♀ (spermatheca examined), same data as holotype (NHMW).

Description:
Measurements (HT, PT): TL: 3.3, 3.4; AL: 1430, 1360; HL: 425, 470; HW: 575, 590; PL: 515, 535; PW: 630, 680; EL: 450, 500; HTiL: 725, 755; HTaL: ?, 650; HT1L: 270, 260; HT24L: ?, 270.
Apart from its slightly larger size, *M. hilfi* is distinguished from *M. pygmaea*, which it resembles in colour and general appearance, by the following characters:
Head larger (see measurements) and slightly more transverse (HW/HL: 1.36, 1.26); like *M. pygmaea* more distinctly punctate in the ♂ than in the ♀; dorsal impression in the ♂ large, rather well-defined and distinctly deeper than in *M. pygmaea*, impression absent in ♀. (Note that the denser and more distinct punctation indicated by SCHEERPELTZ (1972) as the diagnostic character distinguishing *M. hilfi* from *M. pygmaea* ("*crassiuscula*") only refers to the ♂ and not to the ♀.)
Antennae longer than in *M. pygmaea* (see measurements), similar to the following species (cf. Fig. 6c); antennomeres 2 - 3 very elongate, 3 slightly longer than 2 and distinctly widened apically, 4 - 9 clearly elongate, and 10 slightly elongate.
Pronotum larger than in *M. pygmaea* (see measurements), lateral margins ± straight in posterior half; sexual dimorphism distinct: ♂♂ with broad longitudinal impression along median line, narrowed anteriorly and posteriorly and almost reaching the front and the hind margin; ♀♀ near hind margin with rather shallow, roughly triangular median impression with very faint and short sulcate anterior extension.
Legs with hind tibiae longer than in *M. pygmaea* (see measurements).
Punctation of abdomen denser than in most *M. pygmaea*.

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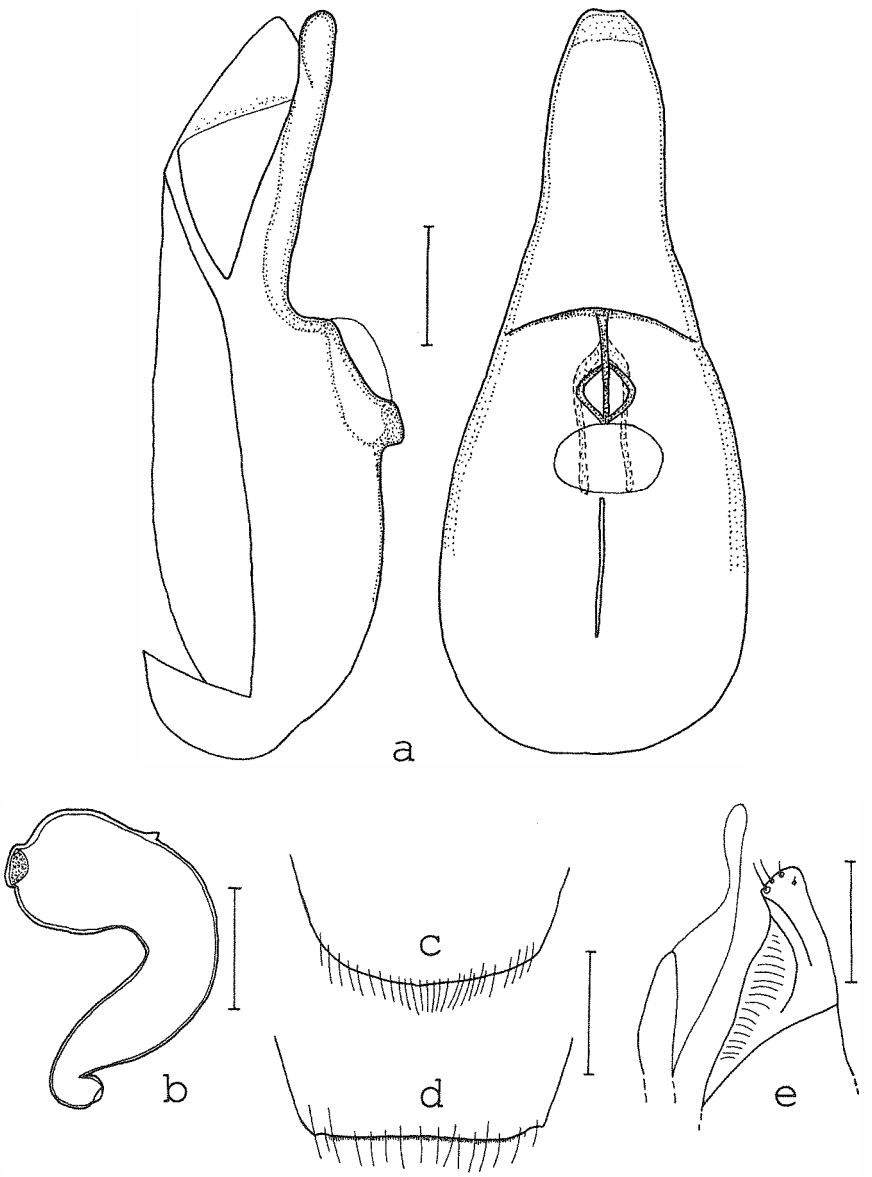

Figs 5 a - e: *Myrmecopora hilfi* SCHEERPELTZ (**a, c, e**: HT). Median lobe (teneral, not fully sclerotized!) in lateral and in ventral view (**a**); spermatheca (**b**); hind margin of ♂ sternum VIII (**c**); hind margin of ♀ sternum VIII (**d**); apical lobe of paramere (**e**). Scales: **a, b, e**: 0.1 mm; **c, d**: 0.2 mm.

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♂: sternum VIII convex posteriorly (Fig. 5c); median lobe larger, lateral margins of ventral process in ventral view not ± straight as in *M. pygmaea*, but apically more strongly converging (Fig. 5a); apical lobe of paramerite as in Fig. 5e.
♀: hind margin of sternum VIII truncate (Fig. 5d); spermatheca similar to that in *M. pygmaea* (Fig. 5b).

Bionomics and distribution:
Neither have any further records of *M. hilfi* become known apart from the type locality in the southwest of Anatolia (Turkey), nor does the original description provide any ecological information.

2.4.1.6. *Myrmecopora* (s. str.) *elisa* spec. nov.
Figs 6a-c, 22

Holotype ♂, Creta, Lasithi-Geb., v. Oertzen, 83820, *Myrmecopora crassiuscula* Aubé (MNHUB).
Paratype ♂, same data as holotype (cAss).

Description:
Measurements (HT, PT): TL: 3.4, 3.3; AL: 1360, 1300; HL: 470, 425; HW: 590, 580; PL: 530, 500; PW: 660, 650; EL: 480, 470; HTiL: 755, 710; HTaL: 710, 665; HT1L: 285, 265; HT24L: 290, 280.
In colour and general appearance resembling *M. pygmaea* and *M. hilfi*, in size similar to the latter.
Head similar in size to *M. hilfi*, but cuneiform and distinctly dilated behind eyes; dorsal impression in ♂♂ well-defined and very deep.
Antennae as in *M. hilfi* comparatively long (see measurements); antennomeres 2 - 3 very elongate, 3 slightly longer than 2 and distinctly widened apically, 4 - 10 clearly elongate (Fig. 6c).
Pronotum larger than in *M. pygmaea*, of similar size and shape as in *M. hilfi*, but lateral margins slightly concave in posterior half; in ♂♂ along median line with rather wide longitudinal impression almost reaching the anterior and posterior margin.
Legs comparatively long, hind tarsi almost (0.93 - 0.95x) as long as hind tibiae; first tarsomere of hind tarsi as long as the combined length of tarsomeres 2-4 or nearly so.
Abdomen with punctation similar to the preceding species.
♂: sternum VIII weakly convex posteriorly; ventral process of median lobe of unique shape in ventral view (Fig. 6a); velum of condylite extremely long (Fig. 6b).
♀: unknown.

Derivatio nominis: The name, a participle of elidere (lat.), which in collocation with head (caput) means "cave in" or "impress", refers to the conspicuous impression on the dorsal surface of the ♂ head, which is more pronounced than in any other known species of *Myrmecopora* s.str.

Bionomics and distribution:
M. elisa sp. n. is only known from the type locality, the Lasithion mountain range in the west of Crete (Greece). Information regarding its ecology is not available.

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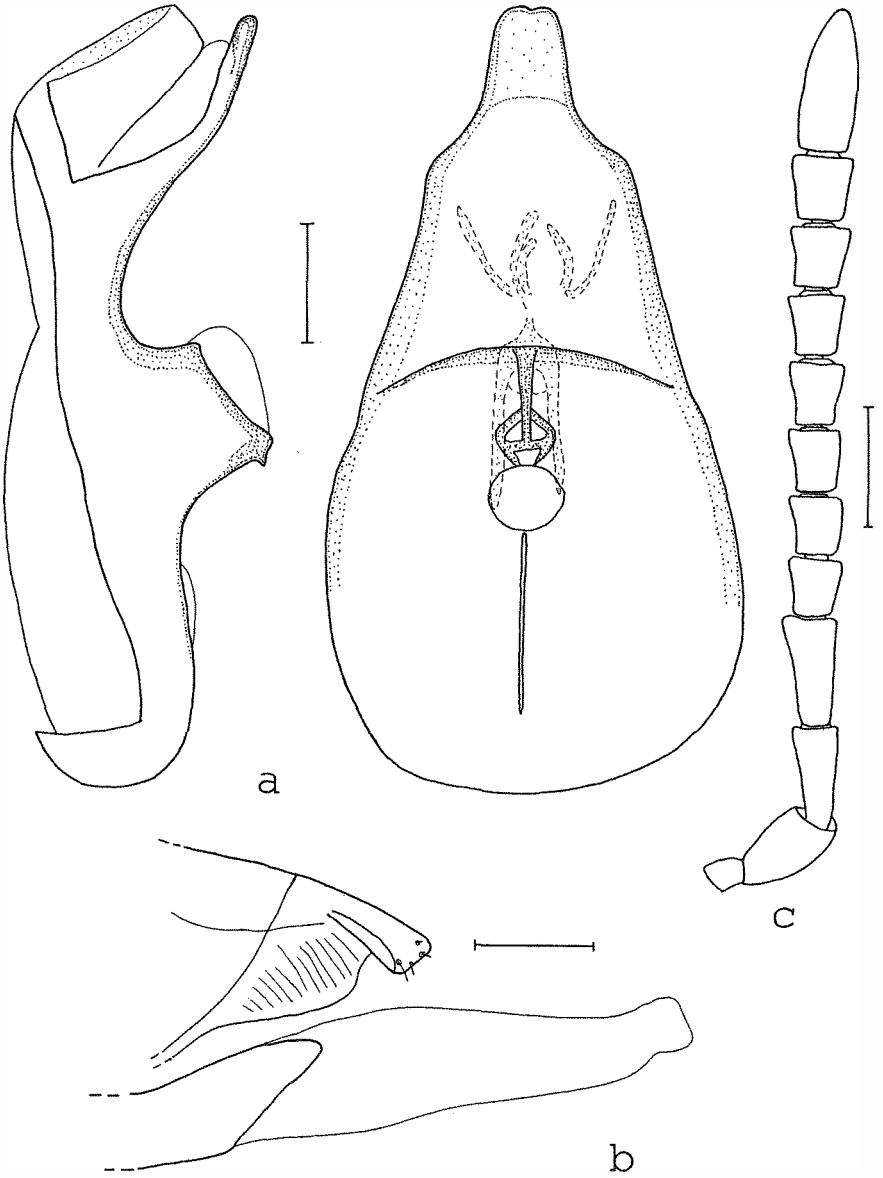

Figs 6 a - c: *Myrmecopora elisa* sp. n. (**a**: HT). Median lobe in lateral and in ventral view (**a**); apical part of paramere (**b**); ♂ antenna (**c**). Scales: **a, b**: 0.1 mm; **c**: 0.2 mm.
Figs 7 a - c: (p. 93) *Myrmecopora plana* sp. n. (HT). Median lobe in lateral and in ventral view (**a**); hind margin of ♂ sternum VIII (**b**); apical lobe of paramere (**c**). Scales: **a, c**: 0.1 mm; **b**: 0.2 mm.

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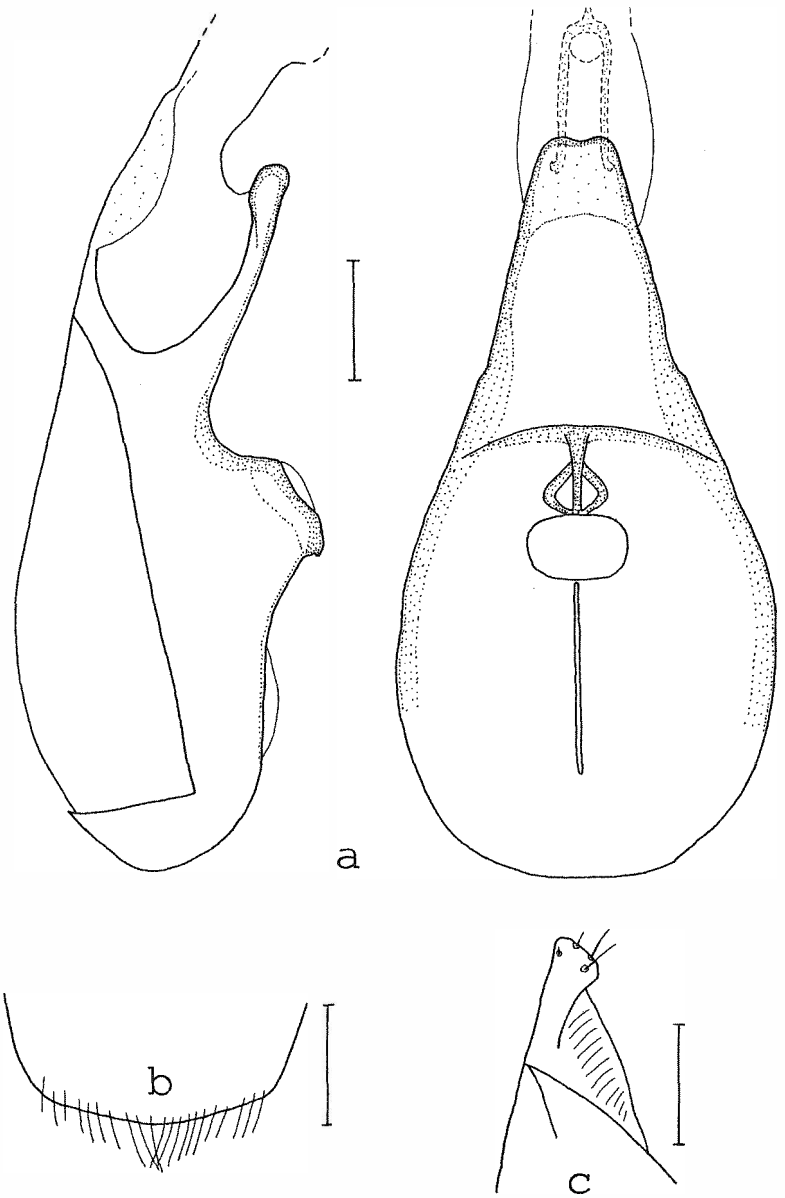

2.4.1.7. *Myrmecopora* (s. str.) *plana* spec. nov.
Figs 7a-c, 22

Holotype ♂, GR. Crete, Omalos, 1000m, 8.-12.V.1993, leg. I. Rydh (cAss).
Paratype ♂, same data as holotype (cWun).

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Description:
Measurements (HT, PT): TL: 3.4, 3.2; AL: 1450, 1435; HL: 440, 425; HW: 575, 560; PL: 510, 490; PW: 650, 635; EL: 500, 440; HTiL: 770, 710; HTaL: 695, 665; HT1L: 280, 265; HT24L: 280, 280.
In general appearance resembling *M. pygmaea* and the two preceding species, in size similar to *M. hilfi* and *M. elisa*.
Body colour of the type specimens dark brown.
Head similar in size and shape to *M. elisa*, cuneiform and distinctly widened behind eyes; punctation finer and less dense than in *M. hilfi* and *M. elisa*; dorsal surface somewhat flattened, dorsal impression in ♂♂ shallow and ill-defined.
Antennae comparatively elongate as in the two preceding species (see measurements, cf. Fig. 6c).
Pronotum of approximately the same size and shape as in the two preceding species, but lateral margins distinctly concave in posterior half and hind angles pronounced, more so than in *M. elisa*; punctation finer and less dense than in the two preceding species; in ♂♂ along median line with rather broad longitudinal impression, which is, however, shallower than in *M. hilfi* and *M. elisa*.
Legs with length and proportions as in *M. elisa* (see measurements).
Abdomen with punctation slightly less dense than in *M. hilfi*.
♂: sternum VIII convex posteriorly (Fig. 7b); ventral process of median lobe in ventral view with straight and distinctly converging lateral margins, broader and relatively shorter than in *M. pygmaea* (Fig. 7a); velum of condylite of normal length, apical lobe of paramerite as in Fig. 7c.
♀: unknown.

Derivatio nominis: The name (lat. (adj.): flat) refers to the flat appearance of head and pronotum, an external diagnostic character which distinguishes *M. plana* from the related species.

Bionomics and distribution:
M. plana sp. n. is only known from the type locality, where according to the collector the type specimens may have been found under stones together with ants, but concrete details are unfortunately not available (RYDH, in litt.).

2.4.1.8. *Myrmecopora* (s. str.) *fornicata* spec. nov.
Figs 8a, 22

Holotype ♂, Kreta, Paganetti, *publicana* Saulcy [sic!], coll. Scheerpeltz (NHMW).

Description:
Measurements (HT): TL: 3.5; AL: 1360; HL: 430; HW: 545; PL: 500; PW: 605; EL: 450; HTiL: 740; HTaL: 665; HT1L: 270; HT24L: 285.
In general appearance resembling *M. pygmaea* and the three preceding species, in size intermediate between the former and the latter.
Head similar in shape to *M. hilfi* and *M. pygmaea*, less distinctly widened behind eyes than in the two preceding species; dorsal surface with fine and sparse punctation similar to *M. plana*, dorsal impression in ♂♂ shallow and ill-defined.
Antennae in size and shape similar to the three preceding species (see measurements, cf. Fig. 6c).

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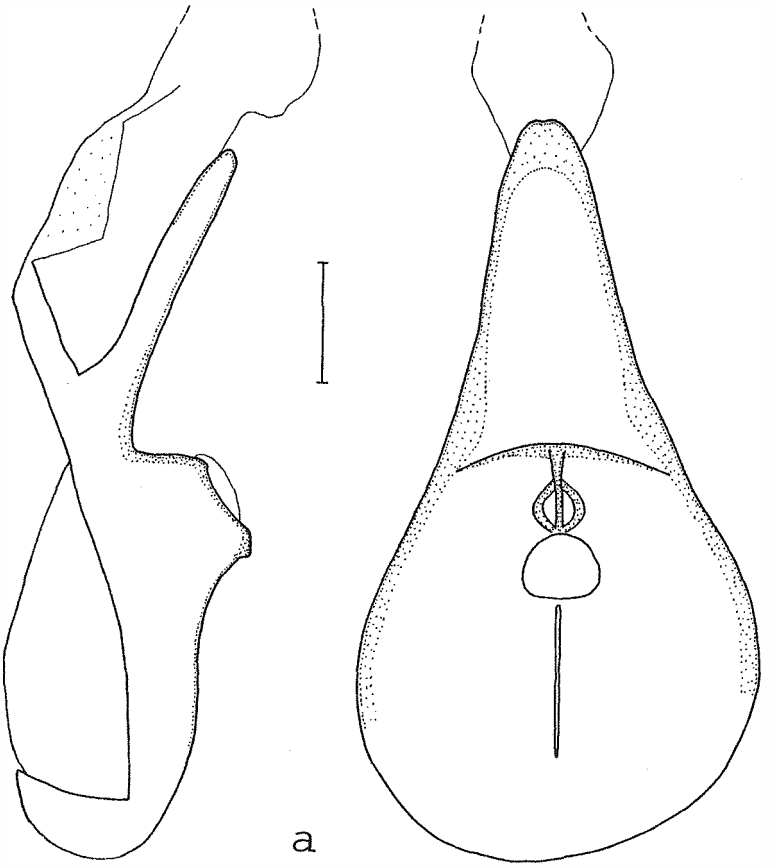

Fig. 8 a: *Myrmecopora fornicata* sp. n. (HT). Median lobe in lateral and in ventral view (a). Scale: 0.1 mm.

Pronotum more convex than *M. pygmaea* and the three precedings species, with lateral margins ± straight in posterior half and hind angles indistinct; punctation very fine and sparse, similar to *M. plana*; in ♂♂ along median line with rather narrow, weakly sulcate longitudinal impression.
Legs with length and proportions approximately as in *M. elisa* and *M. plana* (see measurements).
Abdomen with punctation slightly less dense than in *M. hilfi*.
♂: sternum VIII convex posteriorly; ventral process of median lobe in ventral view with ± straight lateral margins, similar in shape to *M. pygmaea*, but without angle at base (Fig. 8a).
♀: unknown.

Derivatio nominis: The name (lat. (adj.): convex) refers to the shape of the dorsal surface of head and pronotum which is distinctly convex, an external character that distinguished this species from *M. pygmaea* and the other members of the subgenus occurring on Crete.

Bionomics and distribution:
The labels attached to the holotype specify neither the precise locality on Crete nor any ecological data.

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2.4.1.9. *Myrmecopora* (s. str.) *crassiuscula* (AUBÉ, 1850)

Falagria crassiuscula AUBÉ, 1850, 301f.
Myrmecopora (s. str.) *crassiuscula* (AUBÉ) partim: GANGLBAUER 1895, 250
Myrmecopora (s. str.) *crassiuscula* (AUBÉ) partim: BERNHAUER & SCHEERPELTZ 1926, 581
nec *Myrmecopora* (s. str.) *crassiuscula* (AUBÉ): SCHEERPELTZ 1972, 95f.

Comments:
As stated in section 2.4.1.3., it was impossible to locate material of this species. According to HORN et al. (1990) Aubé's material, apart from specified exceptions, is deposited in the MNHNP. The curator in charge, Dr. NICOLE BERTI, kindly informed me that there is a label '*crassiuscula*' in the Aubé collection, but not the corresponding specimen(s). Since for the reasons stated in section 2.4.1.3. it is likely that *M. crassiuscula* represents a distinct species, it is here considered a (hopefully temporary) nomen nudum. The collection or discovery of specimens from the type locality, the surroundings of Batumi, will have to be awaited until the identity of this taxon can be clarified.

2.4.2. The subgenus *Iliusa* MULSANT & REY

Type species: *Tachyusa fugax* ERICHSON

Description:
Species of intermediate size; body colour darker than in *Myrmecopora* s. str., apart from the base of the antennae and the legs dark brown to blackish; pronotum and elytra without, abdomen and particularly head usually at least partly with faint microsculpture.
Head transverse and subquadrangular with obtusely rounded posterior corners; eyes large and prominent; punctures minute and sparse; dorsal surface in ♂♂ with often large impression of variable depth; ♀♀ with convex vertex and without such impression.
Antenna distinctly incrassate apically; antennomeres 1 - 3 clearly elongate and subequal in length, distinctly longer than 4 - 10; antennomeres 7 - 10 distinctly transverse and increasing in width apically; antennomere 11 ca. 2x longer than penultimate joint (Fig. 9h).
Right mandible with obtuse molar tooth, without a row of faint teeth in dorsal molar region; labrum with anterior membranous appendage trilobed (Fig. 9i); third joint of maxillary palpus rather densely pubescent.
Pronotum distinctly and densely punctate, punctures often faintly granulose, wider than or as wide as interstices; dorsally in ♂♂ with usually rather wide, oval and in the middle often weakly sulcate impression of variable depth; impression in ♀♀ shallower and narrower.
Elytra relatively long, with distinct and rather dense punctation, but less so than pronotum.
Abdomen with tergal punctation less pronounced and less dense than on pronotum and elytra; density and depth of punctures somewhat variable, but usually greater on anterior than on posterior terga; hind margin of tergum VIII weakly pointed (Figs 9d, f).

Figs 9 a - i: (p. 97) *Myrmecopora fugax* (ERICHSON). Median lobe in lateral and in ventral view (**a**); paramere (**b**); spermatheca (**c**); hind margins of ♂ tergum and sternum VIII (**d, e**); hind margins of ♀ tergum and sternum VIII (**f, g**); ♂ antenna (**h**); labrum (**i**). Scales: **a - c, i**: 0.1 mm; **d - h**: 0.2 mm.

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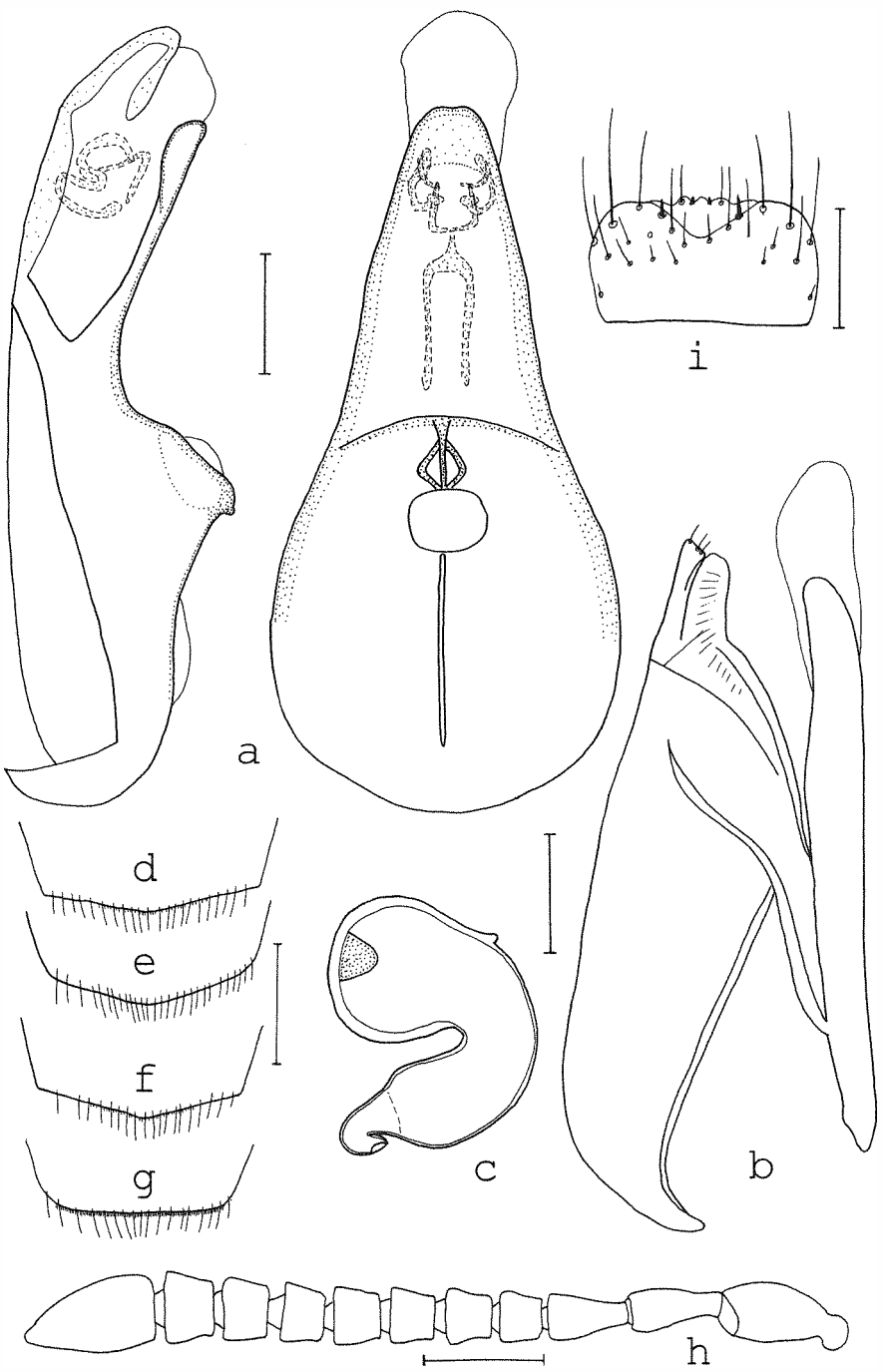

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♂: aedeagus unmodified, paramere similar to that in *Myrmecopora* s. str. (Fig. 9b).
♀: spermatheca with capsule simply rounded and slightly more sclerotized than the short and curved duct, cuticular protrusion small (Fig. 9c).

Ecology and distribution:
Since both *Myrmecopora turanica* EPPELSHEIM and *M. afghanica* SCHEERPELTZ are here transferred to *Eccoptoglossa* LUZE (see section 3), the subgenus *Iliusa* is at the time represented by only one species, *M. (Iliusa) fugax* (ERICHSON) in the Western Palaearctic region. For comments on bionomics and distribution see remarks below this species.

2.4.2.1. *Myrmecopora (Iliusa) fugax* (ERICHSON, 1839)
Figs 9a-i

Tachyusa fugax ERICHSON, 1839, 74
Iliusa fugax (ERICHSON): MULSANT & REY 1874, 38
Ilyusa fugax (ERICHSON): MULSANT & REY 1875a, 451ff.
Ilyusa fugax (ERICHSON): MULSANT & REY 1875b, 425ff., 459
Myrmecopora (Ilyusa) fugax (ERICHSON): GANGLBAUER 1895, 250
Myrmecopora (Ilyusa) fugax (ERICHSON): BERNHAUER & SCHEERPELTZ 1926, 581
Myrmecopora (Ilyusa) fugax (ERICHSON): SCHEERPELTZ 1972, 97f.
Myrmecopora uludaghensis FAGEL, 1971, 130ff., **syn. nov.**

Types examined:
Tachyusa fugax ERICHSON: Neotype ♂, here designated and labelled accordingly: Sard. Sargono, Krausse, Bernh. vid., coll. L.v. Heyden, DEI Eberswalde, Neotypus *Tachyusa fugax* Erichson, desig. V. Assing 1996 (deposited in MNHUB).
Myrmecopora uludaghensis FAGEL: Holotype ♂, Anatolie occ., Uludagh, 2000 - 2200m, VI.1970, G. Fagel, *Myrmecopora uludaghensis* n. sp. G. Fagel det., Type (IRSNB).

Comments:
ERICHSON (1839) based his original description on a single specimen from Sardinia, collected and sent to him by Prof. Gené for examination ("Prof. Gené specimen singulum examandum communicavit"). Apparently the holotype was deposited in the Museo Regionale di Scienze Naturali, Torino ("Mus. Reg. Taurin"), which is confirmed by the fact that it could not be found in Erichson's collection at the MNHUB (UHLIG, pers. comm.). However, according to the curator of the Museo Regionale, Torino, the type in question "is not in our collections" and "Gené's collection is for the most part destroyed" (DACCORDI, in litt.), so that it seems safe to assume that the type is lost. The original description is in agreement with the species here treated as *M. fugax* (ERICHSON). Therefore, and in order to avoid further taxonomic confusion and to ensure nomenclatural stability, a neotype was designated. The specimen, which was collected in Sardinia (type locality) and taken from the collection of the DEI, is now, by common consent, in the MNHUB, where Erichson's collection is deposited.
FAGEL (1971) based his original description of *M. uludaghensis* on a single specimen and regarded the species as a representative of what is here considered the subgenus *Myrmecopora* s. str., since he treated *Xenusa* and *Iliusa* as distinct genera and, among others, explicitly mentioned *M. publicana* SAULCY and *M. crassiuscula* (AUBÉ) as further species of the genus. An examination of the holotype (including the aedeagus) revealed, however, that *M. uludaghensis* does not belong to *Myrmecopora* s. str., is without doubt conspecific with *M. fugax* (ERICHSON) and must therefore be regarded as a junior synonym of the latter.

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Further material examined:

SPAIN: 1♂, Sierra Nevada, Notaez, Rio Guadalfeo, 670m, 15.VI.1991, leg. Wrase (cAss).

FRANCE: 4♂♂, Provence, Menton, 'Cl. Rey vidit', coll. Leonhard (DEI); 1♂, 1♀, Provence, Menton, coll. Scheerpeltz (NHMW); 1♂, Provence, Saint Martin Lantosque, coll. Stierlin (DEI); 1♀, Provence, leg. Fauvel, coll. Scheerpeltz (NHMW); 5♂♂, Provence, VII.1892, leg. Rey (NHMW); 1♀, Tanneron, car-net, VI.1988, leg. Wunderle (cWun); 2♂♂, 1♀, [without locality] (MNHUB).

MONACO: 1♀, Monte-Carlo (MNHUB).

ITALY (continental): 1♂, 2♀♀, Liguria, Bordighera, 1884, coll. Heyden (DEI); 2♂♂, Liguria, Bordighera, v. Heyden, coll. Eppelsheim (NHMW); 1♂, Liguria [without locality] (DEI); 3♂♂, 2♀♀, Liguria, Vertri, 21.VIII.1892, leg. Fiori (MNHUB, NHMW); 2♀♀, Liguria [locality illegible], leg. Fiori (MNHUB); 1♂, 1♀, Roma, 1899, leg. Münster, colls Skalitzky, Scheerpeltz (NHMW); 2♂♂, Campania, Vico Equense, 20.X./29.XI.1957, leg. Liebmann (MNHUB); 2♂♂, 2♀♀, Basilicata, Policoro (MT), 7.II.1982, 1.IV.1984, 5.IX.1989, leg. Angelini (cAss, cZan); 1♂, Basilicata, Salandra sc., 2.VII.1994, leg. Angelini (cAss); 1♂, Basilicata, Ferrandina dint. (MT), 9.XI.1994, leg. Angelini (cAss); 1♂, 2♀♀, Basilicata, Cassano, 27.VIII.1995, leg. Dodero, coll. Eppelsheim (NHMW); 1♂, 1♀, Puglia, Casamassima (BA), 31.X.1989, leg. De Marzo (cAss); 1♀, Puglia, Francavilla F., 140m, 10.XII.1988, leg. Angelini (cAss); 1♂, 1♀, Luca, Pirazzoli, coll. Eppelsheim (NHMW); 2♀♀, [without locality], colls Letzner, Stierlin (DEI); 1♀, [without locality] (MNHUB).

ITALIAN ISLANDS: 1♂, Sardegna, Assuni, leg. Krausse, coll. Leonhard (DEI); 1♂, Sardegna (CA), Flumini, 5.XI.1973, leg. Meloni (cWun); 1♂, 1♀, Sardegna, Genargentu, Desulo-Tonnara, car-net, 4.X.1989, leg. Wunderle (cWun); 1♀, Sardegna, leg. Lostia, coll. Lokay (NMP); 1♀, Ischia, S. Angelo, 10.-27.X.1969, leg. G. Benick (cAss); 1♀, Sicilia, Castelbuono, IV.1873, leg. Fauvel, coll. Heyden (DEI); 1♂, Sicilia, Ragusa, Desbroch., '*Calodera cavernosa*', coll. Heyden (DEI); 1♀, Sicilia, Palermo, IV.1895, leg. Flach, coll. Lokay (NMP); 1♀, Sicilia, coll. Lokay (NMP); 3♂♂, 1♀, Sicilia, coll. Koltze (DEI); 1♂, 3♀♀, Sicilia, leg. Baudi, Fauvel, colls Skalitzky, Scheerpeltz (NHMW); 2♂♂, 1♀, Sicilia, Messina, coll. Scheerpeltz (NHMW); 1♂, Sicilia, leg. Fauvel (NHMW).

CROATIA: 1♂, 3♀♀, Istria, Pula, leg. Lang, coll. Scheerpeltz (NHMW).

BOSNIA: 1♂, 1♀, [without locality], leg. Apfelbeck, coll. Eppelsheim (NHMW).

GREECE: 2♂♂, Thessalia, Volo, coll. Scheerpeltz (NHMW); 1♀, Attiki, colls Skalitzky, Scheerpeltz (NHMW); 1♀, Attiki, leg. Plasop, coll. Eppelsheim (NHMW); 1♀, Attiki (MNHUB); 1♀, [without locality] coll. Scheerpeltz (NHMW).

GREEK ISLANDS: 2♂♂, 3♀♀, Kriti [Crete], Grotte de Catholica, 21.IV.1949, leg. K. Lindberg, coll. Scheerpeltz (NHMW); 1♂, 1♀, Kriti, Assitaes, leg. Holtz; 26♂♂, 20♀♀, Rodhos, 23.V.-6.VI.1962, leg. Mandl, coll. Scheerpeltz (NHMW); 1♂, Rodhos, Lindos, 16.-30.IV.1981, leg. Köstlin (cAss); 1♂, Kérkira [Corfu], 4.XI.1972, leg. G. Benick (cAss); 3♂♂, 2♀♀, Kérkira (NO), Archaravi, 20.-25.X.1991, leg. Katschak (cAss, cWun); 1♀, Kérkira (N), Arkadades, tiefe Laublagen, 27.IX.1994, leg. Wunderle (cWun); 1♀, Levkás, Karia, 600m, dunkles Bachtal, Laubgesiebe, 25.IX.1993, leg. Assing (cAss); 1♂, Thásos, Limenária, 22.X.1994 (cAss); 1♂, Kos, X.1984 (cWun); 1♀, Kefallinia, Samos, coll. Scheerpeltz (NHMW); 1♂, Kárpathos, leg. v. Oertzen (MNHUB); 1♂, Skíros, Linariá, V.1926, leg. Holtz (MNHUB).

CYPRUS: 1♀, Limassol, 26.V.1955, leg. Haaf, coll. Scheerpeltz (NHMW); 4♂♂, 4♀♀, Mt. Arménien, coll. Lokay (NMP, cAss); 1♀, Larnaka, coll. Scheerpeltz (NHMW).

TURKEY: 1♂, 1♀, 22km W Alanya, Avsallar b. Incekum, 9.-23.V.1995, leg. Pütz (cAss); 2♂♂, Antalya, Mt. Saricinar Dag b. Beldibi, 300m, 6.-18.VI.1994, leg. Pütz (cAss); 1♀, Antalya, Side, light, 25.V.1988, leg. Lundberg (cWun); 1♂, [without locality] colls Luze, Scheerpeltz (NHMW);

LEBANON: 1♂, Beyrouth, leg. Schaum, coll. Kraatz (DEI); 1♂, 2♀♀, Beyrouth, 1878, leg. Appel (NHMW).

Locality not specified or unidentified: 1♂, coll. Kraatz (DEI); 1♀, Sartorius, 1876 (NHMW); 1♂, Mencome [?], coll. Eppelsheim (NHMW); 1♀, [Lebanon?] Beytmary, 1878, leg. Appel (NHMW); 1♂, S. [= Sardegna?] (MNHUB).

DOI: 10.21248/contrib.entomol.47.1.69-151

Description:

Measurements (n=30): TL: 2.6 - 4.0 (3.3); AL: 1010 - 1210 (1110); HL: 390 - 470 (436); HW: 450 - 560 (518); PL: 420 - 550 (505); PW: 470 - 610 (557); EL: 420 - 530 (481); HTiL: 570 - 700 (641); HTaL: 470 - 580 (535); HT1L: 165 - 210 (189); HT24L: 190 - 260 (226).

Body colour dark brown to blackish with elytra often slightly lighter, the basal 2 or 3 antennomeres and the legs light brown to brown; pubescence pale and decumbent.

Head transverse (HW/HL: 1.12 - 1.26), shape subquadrangular, sides behind eyes subparallel or slightly rounded, not dilated; eyes prominent and in dorsal view longer than temples; shine of dorsal surface variable, with or without superficial microsculpture, with minute punctures and with inconspicous pale pubscence directed ± mediad; ♂♂ with dorsal impression of variable depth and size, sometimes deep and extensive rendering almost all of the vertex ± concave, sometimes very shallow or confined to relatively small area in the middle of the vertex; dorsal surface in ♀♀ evenly convex, without such impression. Antenna as in Fig. 9h.

Pronotum with maximal width near anterior angles, slightly to distinctly wider than head (PW/HW: 1.02 - 1.21) and wider than long (PW/PL: 1.04 - 1.23); lateral margins posteriorly straight or weakly convex, hind angles indistinct; dorsal surface shining, without microsculpture between punctures; punctation clearly coarser and denser than on head, often faintly granulose; interstices equal to or smaller than diameter of punctures; pubescence directed caudad along median line and almost transverse in lateral areas of dorsal surface; sexual dimorphism pronounced: ♂♂ with variable, but distinct and mostly rather deep and extensive longitudinal impression in the middle, often extending almost from the front to the hind margin; ♀♀ only with rather narrow shallow, often faintly sulcate impression, which usually increases in depth posteriorly.

Elytra clearly wider than pronotum, their length somewhat variable, at suture approximately as long as pronotum or only slightly shorter (EL/PL: 0.88 - 1.03); dorsal surface shining, without microsculpture; with distinct and slightly granulose punctation, which is less dense and coarse than that of pronotum; pubescence pale, decumbent and directed ± caudad; scutellum punctate, often with distinct microsculpture and therefore ± mat; hind wings present.

Legs rather slender (see measurements); hind tarsi somewhat shorter than hind tibiae (HTaL/HTiL: 0.80 - 0.90); first tarsomere of hind tarsi longer than the combined length of tarsomeres 2 and 3, but shorter than the following 3 tarsomeres together (HT1L/HT24L: 0.78 - 0.90).

Abdomen often with traces of microsculpture, and with fine punctation of variable density, but usually denser on terga III-IV than on VI-VII.

♂: sternum VIII distinctly convex posteriorly (Fig. 9e); aedeagus unmodified (Fig. 9a), velum of condylite almost reaching or projecting over the tip of the apical lobe of the paramerite (Fig. 9b).

♀: hind margin of sternum VIII ± straight centrally (Fig. 9g); spermatheca with distinctly enlarged capsule and short duct (Fig. 9c).

Bionomics and distribution:

Based on the ecological data available from the literature and the labels of the examined specimens it appears difficult to draw conclusions regarding the specific habitat of *M. fugax* (ERICHSON). According to MULSANT & REY (1875a,b) the species digs into moist soil near water (see also GANGLBAUER 1895), whereas SCHEERPELTZ (1972) states that it occurs in moist sand under seaweed and other decaying matter. Paul Wunderle and I found it in moist and deep litter layers of inland biotopes. In Italy ZANETTI (in litt.) collected the species in a dry wood (macchia mediterranea) in the Toscana and in a riparian biotope under rotting hay in Abruzzo; ANGLINI (in litt.) found it in moist meadows in southern Italy. It is, however, noteworthy that

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the vast majority of the localities are situated either near the coast or on islands. Adults are apparently present throughout the year; I have seen no records from January and March, but this is likely to be due to the lower collecting activity during these months. Three of the specimens examined were collected in flight, two by car-net (June and October) and one at a light source (May).

M. fugax appears to have a circummediterranean distribution. The material examined was collected in southern Spain, southern France, Monaco, numerous localities in northern and southern Italy including Sardinia, Sicily and smaller islands (see also BORDONI 1973, 1982; CICERONI et al. 1995; PORTA 1926; SCHEERPELTZ 1964), from Croatia, Greece including Crete and numerous further islands (see also KRAATZ 1858; SCHEERPELTZ 1962/1963), Cyprus, Turkey and Lebanon. The species is also indicated from Tunisia (FAUVEL 1902; NORMAND 1934) and from Romania, Bulgaria and the coast of the Black Sea (SCHEERPELTZ 1972).

2.4.3. The subgenus *Paraxenusa* nov.

Type species: *Tachyusa laesa* ERICHSON, present designation.

Diagnosis:

Species of intermediate size; body colour darker than in *Myrmecopora* s. str., dark brown to blackish, antennae and legs lighter; integument of head, pronotum and elytra with distinct microreticulation, that of abdomen with superficial and ± transverse microsculpture.

Head subquadrate with bluntly rounded posterior corners; eyes of intermediate size; punctures minute and sparse; dorsal surface in ♂♂ with sulcate impression of variable depth posteriorly; ♀♀ with convex vertex and without such impression.

Antenna slender and weakly incrassate apically (Fig. 10h); antennomeres 1 - 8 (♂♂) or 1 - 6/7 (♀♀) elongate; fourth antennomere relatively longer than in other subgenera of *Myrmecopora*, ca. 2/3 the length of and subequal in length of third; antennomere 11 approximately 2x longer than penultimate joint.

Right mandible with acute molar tooth and with a row of faint teeth in dorsal molar region (Fig. 10i); labrum with anterior membranous appendage trilobed (Fig. 10j); third joint of maxillary palpus rather densely pubescent.

Pronotum more oblong and convex than in other subgenera of *Myrmecopora*, as wide as or only slightly wider than head; with fine and relatively sparse punctation, interstices wider than punctures; dorsally in ♂♂ with deep longitudinal impression; impression in ♀♀ distinctly shallower and almost obsolete in anterior half.

Elytra clearly wider than pronotum, with fine and relatively sparse punctation. Legs, especially hind tarsi, long and slender.

Abdomen with fine, ± evenly spaced tergal punctation and distinctly more shine than forebody; posterior margin of tergum VIII distinctly, but bluntly pointed in both sexes (Figs 10d,f).

♂: aedeagus unmodified, ventral process of median lobe without apical incision in ventral view (Fig. 10a); condylite approximately as long as paramerite, the former slightly bent (Fig. 10b).

♀: spermatheca with relatively small and apically ± truncate capsule, the latter with rather large cuticular protrusion; duct very long and almost straight (Fig. 10c).

Comments:

M. laesa (ERICHSON) is here excluded from *Xenusa* MULSANT & REY and assigned to a separate subgenus for the following reasons: It is distinguished from the species of *Xenusa* as defined

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below, with which it shares especially the habitat and the distinct microrecticulation of the forebody, by a variety of external and internal characters: the slenderer and more convex head, the different position and shape of the ♂ impression on the head, the distinctly different shape of the pronotum (which is oblong and clearly more convex), the slenderer legs, the different microsculpture of the abdomen, the shape of the labrum (which is similar to that of *Myrmecopora* s. str. and *Iliusa*), the absence of an apical incision of the ventral process of the median lobe (like *Euphorbiusa*), and the different construction of the condylite and of the spermatheca.

Ecology and distribution:
At the time this subgenus is represented by only one seashore-inhabiting species in the Western Palaearctic region. For further comments on bionomics and distribution see remarks below this species.

2.4.3.1. *Myrmecopora* (*Paraxenusa*) *laesa* (ERICHSON, 1839)
Figs 10a-j

Tachyusa laesa ERICHSON, 1839, 73
Iliusa laesa (ERICHSON): MULSANT & REY 1874, 38
Ilyusa laesa (ERICHSON): MULSANT & REY 1875a, 448ff.
Ilyusa laesa (ERICHSON): MULSANT & REY 1875b, 422ff.
Myrmecopora (Xenusa) laesa (ERICHSON): GANGLBAUER 1895, 251
Myrmecopora tenuicornis (KÜSTER, 1854): FAUVEL 1902, 151
Myrmecopora (Xenusa) laesa (ERICHSON): BERNHAUER & SCHEERPELTZ 1926, 582
Myrmecopora (Xenusa) laesa (ERICHSON): SCHEERPELTZ 1972, 99
Myrmecopora (Xenusa) sydowi BERNHAUER: SCHEERPELTZ 1972, 100
Myrmecopora (Xenusa) boehmi BERNHAUER: SCHEERPELTZ 1972, 100

Types examined:
Lectotype ♂ (remounted, dissected, aedeagus examined), here designated and labelled accordingly: Sard., Gené, *laesa* Er., 5334, Typus (MNHUB).
Paralectotypes: 1♂, 2♀♀, present designation, same data as lectotype (MNHUB).

Comments:
Myrmedonia tenuicornis, which was described by KÜSTER (1854) from Sardinia, was considered a junior synonym of *M. laesa* (ERICHSON) by FAUVEL (1902) and subsequent authors (BERNHAUER & SCHEERPELTZ 1926; SCHEERPELTZ 1972). Most of the characters indicated in the original description of *M. tenuicornis* are indeed in agreement with such an interpretation. On the other hand, KÜSTER (1954) - perhaps erroneously? - states that the species is "ungeflügelt" (= brachypterous), which is not the case in *M. laesa*. Unfortunately, the type seems to be lost; there is no reference in HORN et al. regarding the whereabouts of KÜSTER's collection. Therefore, the indicated synonymy is here maintained.

Figs 10 a - j: (p. 103) *Myrmecopora laesa* (ERICHSON). Median lobe in lateral and in ventral view (**a**); paramere (**b**); spermatheca (**c**); hind margins of ♂ tergum and sternum VIII (**d, e**); hind margins of ♀ tergum and sternum VIII (**f, g**); ♂ antenna (**h**); right mandible (**i**); labrum (**j**). Scales: **a-c, i-j**: 0.1 mm; **d-h**: 0.2 mm.

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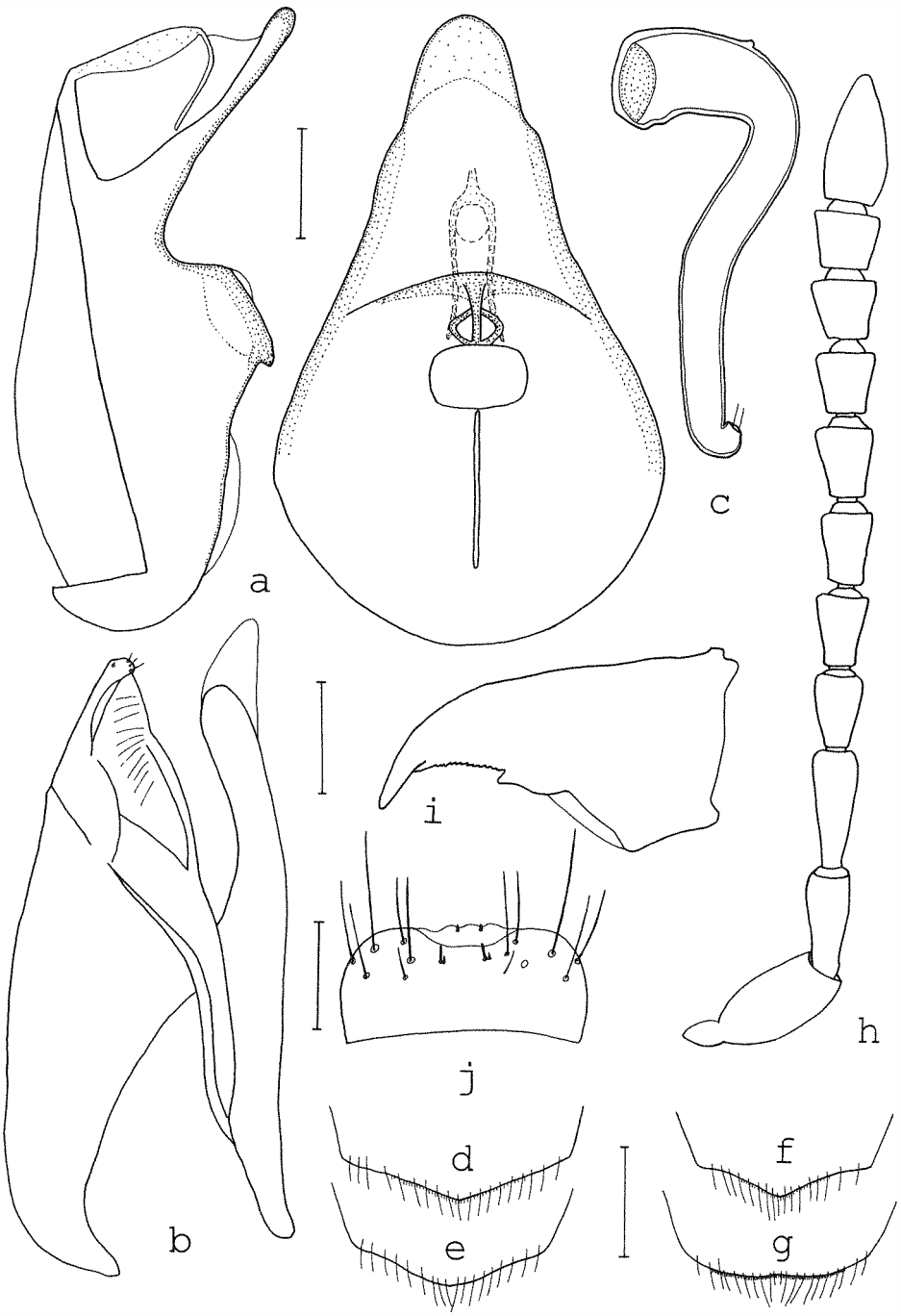

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It should be noted that (like FAGEL) SCHEERPELTZ (1972) misinterpreted both *M. sydowi* BERNHAUER and *M. boehmi* BERNHAUER; the corresponding specimens in his collection are misidentified specimens of *M. laesa* (see below), a confusion also reflected in his key.

Further material examined:
PORTUGAL: 2♀♀, Lisboa (MNHUB); 2♂♂, Lisboa, leg. Quedenfeldt, coll. Scheerpeltz (NHMW); 2♀♀, Faro, coll. Scheerpeltz (NHMW); 2♂♂,1♀, Faro, VI.1910, coll. Leonhard (NHMW, cAss); 1♂, Faro, leg. Schatzmayr, coll. v. Heyden (DEI).
SPAIN: 3♂♂, 5♀♀, Cataluna, Stiges, 19.-23.X.1922, leg. Liebmann (DEI, cAss); 1♂, 2♀♀, Andalucia, Tarifa, 6.V.1956, leg. Fagel, '*sydowi* Bernh. G. Fagel det.' [sic!] (IRSNB); 2♂♂, Andalucia, Tarifa, 12.V.1975, leg. Fülscher (cAss); 1♀, Andalucia, Tarifa, III.1991, leg. Poot (cAss); 3♂♂, Tarifa, III.1994, leg. Poot (cWun); 4♀♀, Andalucia, leg. Müller, coll. Leonhard (DEI); 3♂♂, 5♀♀, Andalucia, Almeria, leg. Quedenfeldt, coll. Eppelsheim (NHMW); 1♀, Alicante, 20.X.1978; 1♂, [without locality] (MNHUB); 1♂, [without locality] coll. Leonhard (DEI).
BALEARIC ISLANDS: 1♂, Mallorca, S. Albufereta, beach drift, 25.X.1990, leg. Whitehead; 1♀, Mallorca, VI.1957, '*sydowi* Bernh. G. Fagel det.' [sic!] (IRSNB).
CANARY ISLANDS: Tenerife, Las Palmas, IX.-X.1965, leg. G. Benick (cAss).
FRANCE: 4♂♂, Provence (MNHUB); 2♀♀, Provence, Marseille, 'Meereslitoral', 15.VII.1959, leg. Schuster, '*sydowi* Bh.' [sic!], coll. Scheerpeltz (NHMW); 2♂♂, 1♀, Var, La Croix Valmer, 5.-26.V. 1968, leg. Köstlin (NHMW, cAss); 2♂♂, same data, '*sydowi* Bh.' [sic!], coll. Scheerpeltz (NHMW); 4♂♂, 1♀, Var, Claire-Deville (NHMW); 1♀, Var, Hyères, VII.1892, leg. Rey (NHMW); 1♂, Var, Toulon, coll. Scheerpeltz (NHMW).
1♀, Corse [without locality] (MNHUB); 1♂, 3♀♀, Corse, Desert des Agriotes, 12.VIII.1979, leg. Sette (cAss, cWun).
ITALY: 2♂♂, 'Südtirol', Korb., coll. Eppelsheim (NHMW); 2♀♀, Lazio, Santa Severa, 11.VI.1916, Luig. (MNHUB); 2♀♀, Roma, coll. Kraatz (DEI); 2♂♂, 2♀♀, Roma, leg. Pirazzoli, colls Eppelsheim, Scheerpeltz (NHMW); 4♂♂, 1♀, Campania, Napoli, colls Stierlin, v. Heyden (DEI); 2♂♂, 1♀, [without locality] colls Kraatz, Leonhard, Stierlin (DEI).
ITALIAN ISLANDS: 1♂, Sardegna, Cagliari, 8.III.1892, leg. Dodero (MNHUB); 4♂♂, 2♀♀, Sardegna [without locality] (MNHUB, NHMW); 11♂♂, 9♀♀, Sardegna, Porto Ferro, dunes, 2.X.1989, leg. P. Wunderle (cWun, cAss); 1♀, Sardegna, Cat. d. Marghine, Mt. Palai, 1000m, car-net, 12.X.1989, leg. Wunderle (cWun); 1♂, 1♀, Sardegna, colls Kraatz, Koltze (DEI); 2♀♀, Sardegna, leg. Reitter, coll. Weise (DEI); 1♀, Sardegna, leg. Schaufuss, coll. Eppelsheim (NHMW); 2♂♂, 1♀, Sardegna, leg. Dodero, Lostia, coll. Lokay (NMP); 1♀, Sardegna, leg. Fauvel, coll. Eppelsheim (NHMW); 3♂♂, Sardegna, leg. Staudinger, coll. Eppelsheim (NHMW); 2♂♂, Sardegna, V.1879, leg. Reitter (NHMW); 1♂, Sardegna, Sant'Antonio di Santadi (CA), 17.V.1995, leg. Angelini (cAss); 1♂, Sardegna, stagno di Cabras (OR), 19.V.1995, leg. Angelini (cAng); 2♂♂, 2♀♀, Sicilia, Messina, coll. Scheerpeltz (NHMW); 1♂, Isola d'Elba, leg. Holdhaus (NHMW); 1♂, 1♀, Isola di Pantelleria, Khamma, 12.IX.1986, leg. Sette (cZan, cAss); 1♀, Isola di Pantelleria, VII.1954, leg. Mottoni, coll. Scheerpeltz (NHMW).
CROATIA: 1♂, Istra, Portoroz, 13.VI.1981 (cAss); 1♂, Istra, Kovinj, Eaia di Cuvi, 'feinkiesiger bis feinsandiger Untergrund', 13.IX.1959, leg. Schuster, coll. Scheerpeltz (NHMW); 1♀, Istra, Kovinj, 'zwischen Steinbruch u. unter Corrente', IX.1962, leg. Schuster, coll. Scheerpeltz (NHMW);
GREEK ISLANDS: 2♂♂, 1♀, Crete, V.1970, leg. G. Benick (cAss); 1♀, Crete, Perivolia, 10.VII.1976, leg. Daccordi (cZan); 1♂, Rodhos, X.1980, leg. Katschak (cAss).
CYPRUS: 8♂♂, 2♀♀, 10km O Limassol, beach, under seagrass, 8.IV.1995, leg. Assing & Wunderle (cAss, cWun).
ALGERIA: 4♂♂, Cherchell, 12.VI.1955, leg. Liebmann (MNHUB, cAss); 2♂♂, Alger, coll. Kraatz (DEI).
TUNISIA: 1♂, 8♀♀, Tunis, Soliman, colls Leonhard, Scheerpeltz (DEI, NHMW); 1♀, Soliman, '*Myrmecopora boehmi* Bernh.' [sic!], coll. Scheerpeltz (NHMW).
Locality not indicated or unidentified: 9♂♂, 8♀♀, colls. Kraatz, Letzner, Kiesenwetter, Schaufuss (DEI, MNHUB, NHMW).

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Description:

Measurements (n=30): TL: 2.7 - 4.4 (3.5); AL: 1210 - 1660 (1437); HL: 420 - 530 (464); HW: 420 - 570 (500); PL: 440 - 630 (544); PW: 410 - 575 (504); EL: 410 - 550 (484); HTiL: 575 - 830 (738); HTaL: 500 - 730 (614); HT1L: 195 - 320 (250); HT24L: 200 - 300 (247).

Body colour dark brown to blackish with elytra often slightly lighter, legs and antennae light to dark brown, the base of the antennae lighter; pubescence pale and decumbent. Body size and proportions subject to considerable, but apparently no clinal variation.

Head of relatively variable shape, subquadrate or slightly transverse (HW/HL: 1.0 - 1.15); sides behind eyes mostly weakly converging, rarely ± parallel; eyes in dorsal view slightly shorter than temples; dorsal surface with distinct microreticulation, with rather fine and shallow punctation, which is often barely visible due to the microsculpture; pale pubscence mostly directed ± anteriorly, sometimes partially mediad; ♂♂ with faintly sulcate dorsal impression of variable width and depth posteriorly, increasing in depth towards occiput; dorsal surface in ♀♀ evenly convex, without such impression. Antennae very slender (Fig. 10h), but length variable (sea measurements); longer and slenderer in ♂♂ than in ♀♀; antennomeres 1 and 2 clearly elongate, subequal in length; 3 slightly longer than 2, the fourth very elongate and ca. 2/3 the length of third, 5 - 8 (♂♂) or 5 - 6/7 (♀♀) elongate, 9 - 10 (♂♂) or 7/8 - 10 (♀♀) subquadrate or slightly transverse.

Pronotum with maximal width near anterior angles, strongly convex, slightly to distinctly oblong (PW/PL: 0.88 - 0.97) and about as wide as head (PW/HW: 0.95 - 1.06); lateral margins posteriorly straight or weakly concave, hind angles distinct or obsolete; dorsal surface rather mat and with distinct microreticulation; punctation similar to that of head, fine and rather sparse; pubescence directed cephalad along median line and almost transverse in lateral areas of dorsal surface; sexual dimorphism pronounced: ♂♂ with variable, but distinct, rather deep oval longitudinal impression, which is widest in the middle, usually extending almost from the front to the hind margin; ♀♀ with much narrower and shallower, often sulcate impression, which usually increases in depth and width posteriorly and is often obsolete in anterior half; occasionally this impression is sulcate over most of the pronotal length, but never as wide in the middle as in ♂♂.

Elytra clearly wider and at suture slightly shorter than pronotum (EL/PL: 0.88 - 0.94); dorsal surface with pronounced microreticulation and fine, indistinct punctation; pubescence pale, decumbent and directed ± caudad; scutellum with distinct microsculpture and therefore ± mat; hind wings present.

Legs rather long and slender, but of variable length and proportions (see measurements); hind tarsi somewhat shorter than hind tibiae (HTaL/HTiL: 0.80 - 0.93); first tarsomere of hind tarsi approximately as long as the combined length of tarsomeres 2 - 4 (HT1L/HT24L: 0.90 - 1.15).

Abdomen only with superficial ± transverse microsculpture, therefore with clearly more shine and more distinct punctation than forebody; tergum VIII obtusely pointed in both sexes (Figs 10d,f).

♂: sternum VIII distinctly convex posteriorly (Fig. 10e); aedeagus unmodified (Fig. 10a), paramere with condylite slightly curved (Fig. 10b).

♀: hind margin of sternum VIII ± straight to slightly concave centrally (Fig. 10g); spermatheca as in Fig. 10c.

Bionomics and distribution:

According to the literature (e. g. NORMAND 1934, SCHEERPELTZ 1972, WHITEHEAD 1993) and my own observations *M. laesa* typically inhabits coastal habitats where it was collected on sandy substrates under various kinds of debris (seaweed, seagrass etc.). In Corse the species was also

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observed in a cave near the coast (COIFFAIT 1968). Dispersal power seems to be very high in *M. laesa*. One specimen was even captured with a car-net on Mt. Palai, Sardegna, at an altitude of 1000m, which also suggests that flight activity is not confined to the coast-line. It is therefore not surprising that the species is widely distributed in Southern Europe and Northern Africa. 3 specimens collected in March (southern Spain) were teneral.
Although it has been recorded from practically all of the Mediterranean coasts, apart from the extreme east (Israel, Lebanon), including at least the larger islands, it appears to be more common in the Western than in the Eastern Mediterranean. It is here for the first time recorded from Tenerife and from Cyprus. In addition to the localities listed above it has been indicated from La Palma, Canary Islands (HERNANDEZ et al. 1994), the southern Atlantic coast of France (SCHEERPELTZ 1972), Morocco and Egypt (FAUVEL 1902; KOCH 1936).

2.4.4. The subgenus *Xenusa* MULSANT & REY

Type species: *Tachyusa uvida* ERICHSON

Description:
Species of small to intermediate size; body colour darker than in *Myrmecopora* s. str., dark brown to blackish, antennae and legs lighter; integument of head, pronotum and elytra usually with distinct microreticulation, that of abdomen with superficial to distinct, predominantly reticulate microsculpture.
Head subquadrate; eyes of intermediate size; punctures variable; ♂♂ dorsally with usually extensive and often deep concavity between eyes; ♀♀ with smaller and shallower impression, which is often confined to anterior region of vertex.
Antenna weakly to distinctly incrassate apically (cf. Figs 11h, 14h); antennomeres 1 - 3 elongate, 4 - 6 oblong to weakly transverse, 7 - 9 oblong to distinctly transverse, 10 subquadrate to distinctly transverse, and 11 slightly shorter than or approximately as long as the two preceding joints together.
Right mandible with acute molar tooth and with a row of faint teeth in dorsal molar region (Fig. 11i); labrum with anterior membranous appendage bilobed (Fig. 11j); third joint of maxillary palpus less densely pubescent than in *Myrmecopora* s. str.
Pronotum slightly to distinctly convex dorsally, but always less so than in *Paraxenusa*; in ♂♂ with shallow to very deep longitudinal impression of variable width; impression in ♀♀ less deep and wide.
Elytra of variable length, usually wider than pronotum; alae in most species developed; one species with wing dimorphism, the brachypterous form with short and narrow elytra. Legs less long and slender than in *Myrmecopora* s. str. and *Paraxenusa*.
Abdomen with variable tergal punctation and distinctly more shine than forebody. Hind margin of tergum VIII truncate to concave, rarely sinuate.
♂: aedeagus in most species with modified median lobe, ventral process with apical incision (cf. Fig. 11a) or distinctly acute (Fig. 17a); condylite often clearly shorter than paramerite (cf. Figs 11b, 14c).
♀: capsule of spermatheca rather large and distinctly truncate, with apical process(es) and with conspicuous cuticular protrusion, duct long and ± straight (cf. Figs 11c, 14b).

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Ecology and distribution:
The known distribution of the Western Palaearctic species of the subgenus *Xenusa* - as defined here - ranges from the coasts of the Baltic and the North Sea, the European and Northern African Atlantic coasts, including the Atlantic Islands, and the Mediterranean, to the coasts of the Black Sea and the Red Sea. All species occur in coastal habitats and are usually found on beaches under various kinds of debris (algae, seagrass, seaweed etc.).

2.4.4.1. *Myrmecopora (Xenusa) uvida* (ERICHSON, 1840)
Figs 11a-j, 23, p. 150/151

Tachyusa uvida ERICHSON, 1840, 916
Xenusa uvida (ERICHSON): MULSANT & REY 1874, 38
Xenusa uvida (ERICHSON): MULSANT & REY 1875a, 439ff.
Xenusa uvida (ERICHSON): MULSANT & REY 1875b, 413ff.
Myrmecopora (Xenusa) uvida (ERICHSON): GANGLBAUER 1895, 251
Myrmecopora (Xenusa) uvida (ERICHSON): BERNHAUER & SCHEERPELTZ 1926, 582
Xenusa uvida (ERICHSON): FAGEL 1969, 117
Myrmecopora (Xenusa) uvida (ERICHSON) partim: SCHEERPELTZ 1972, 101f.
Myrmecopora (Xenusa) meridiogallica SCHEERPELTZ, 1972, 101, **syn. nov.**

Types examined:
Tachyusa uvida ERICHSON: Lectotype ♂ (remounted), here designated and labelled accordingly: Insul. Vectis, Rudd., Nr. 5335, Typus (MNHUB).
Paralectotypes: 2♂♂, 1♀, present designation, same data as lectotype (MNHUB).
Mymecopora meridiogallica SCHEERPELTZ: Holotype ♂ (aedeagus examined): Gallia mer., Var, La Croix Falmer, 5.-26.V.1968, R. Köstlin leg., Typus *Myrmecopora meridiogallica* O. Scheerpeltz, coll. Scheerpeltz (NHMW).

Comments:
In his original description SCHEERPELTZ (1972) states that *M. meridiogallica* is distinguished from *M. uvida* and related species particularly by its larger size and stouter build. A comparison (including measurements) with material of *M. uvida* from various regions, however, showed that *M. meridiogallica* is at the upper end of the range of the variable *M. uvida*. Furthermore, no differences in the primary and secondary sexual character were found, so that *M. meridiogallica* is without doubt conspecific with *M. uvida* and consequently a junior synonym of the latter.

Further material examined:
GREAT BRITAIN: 4♂♂, 'Anglia' [without locality] (DEI, MNHUB); 1♂, Kingston, coll. Stierlin (DEI).
GERMANY: 1♂, 1♀, Niedersachsen, Borkum, 24.III./9.IV.1938, leg. Struve (NHMW, cAss); 3♂♂, 3♀♀, Niedersachsen, Borkum, 3.-9.IV.1937 (MNHUB, WMNM, cAss).
AZORES: 2♂♂, 2♀♀, Santa Maria, Praia, 8.VIII.1983, leg. Gillerfors (cGil, cAss).
SPAIN: 1♀, Oviedo, Playa de la Franca, 31.VII.1972, leg. Lohse (cAss); 1♂, 'Hispan.', coll. Scheerpeltz (NHMW).
FRANCE: 1♂, 3♀♀, Bretagne, Brest, colls Eppelsheim, Skalitzky, Scheerpeltz (NHMW); 1♂, Bordeaux, Arcachon, VI.1965, leg. Vogt (cAss); 1♂, Île de Ré, Fauvel, coll. v. Heyden (DEI); 1♂, 'Gallia', colls Letzner, Moser (DEI, MNHUB); 1♂, Var, Toulon, Claire-Deville, coll. Scheerpeltz (NHMW); 4♂♂, 1♀, Var, St. Tropez, leg. St. Claire-Deville, colls Schuster, Scheerpeltz (NHMW, cAss); 2♂♂, 4♀♀, 'Gallia merid.' (NHMW, NMP).

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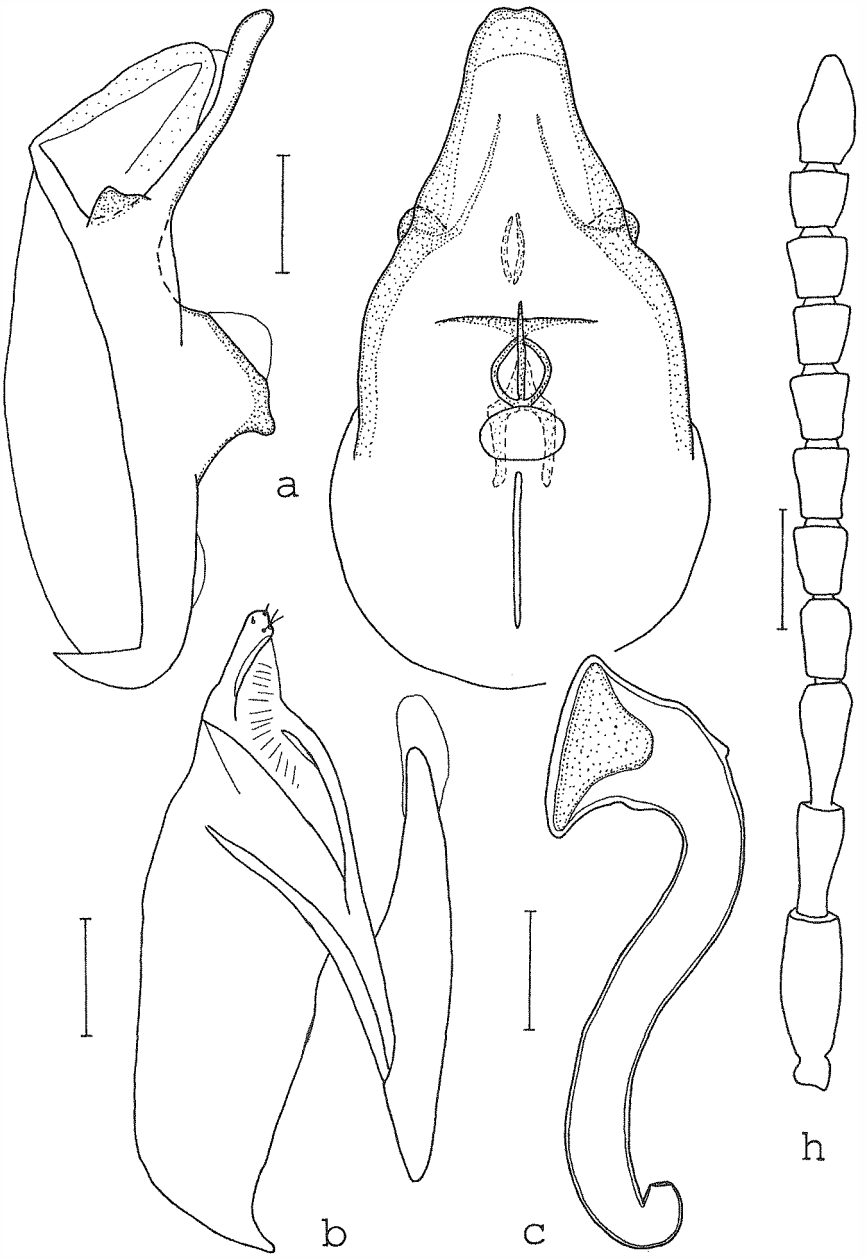

Figs 11 a - j: *Myrmecopora uvida* (ERICHSON). Median lobe in lateral and in ventral view (**a**); paramere (**b**); spermatheca (**c**); hind margins of ♂ tergum and sternum VIII (**d, e**); hind margins of ♀ tergum and sternum VIII (**f, g**); ♂ antenna (**h**); mandibles (**i**); labrum (**j**). Scales: **a - c, j**: 0.1 mm; **d - i**: 0.2 mm.

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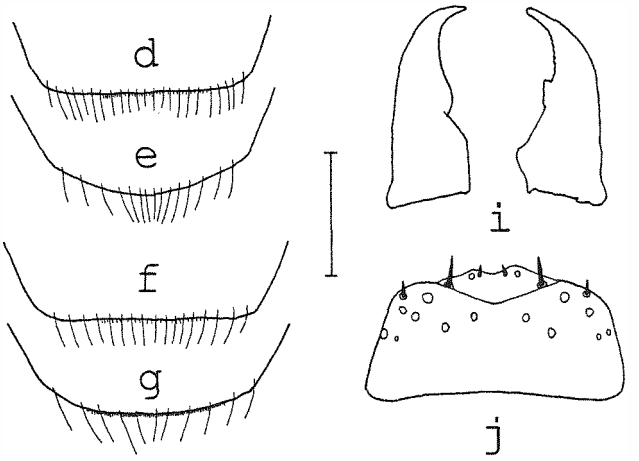

ITALY: 9♂♂, 7♀♀, Venezia, Sistiana, colls Breit, Luze, Scheerpeltz (NHMW, cAss); 1♂, 4♀♀, Venezia, Sistiana, 6.VI.1929, coll. Ihssen (MNHUB); 2♂♂, Venezia, Trieste (MNHUB); 1♀, Venezia, Trieste, coll. Lokay (NMP); 1♀, Venezia, Grado, Laguna, 30.VI.1986, leg. Zanetti (cAss); 1♀, Marche, Cónero, loc. Due Sorelle, 15.VII.1983, leg. Zanetti (cAss); 8♂♂, 6♀♀, Puglia, Circummarpiccolo (TA), 24.IV.1993, leg. Angelini (cAng, cAss, cWun).
CROATIA: 5♂♂, 3♀♀, Istra, coast near Portoroz, 23.VI.1981, leg. Lohse (cAss); 3♂♂, 6♀♀, Istra, Koper, 23.VI.1981, leg. Lohse (cAss, cZan); 1♀, Liruski [?] fiord, 27.III.1965 (NHMW).
MONTENEGRO: 1♀, Herceg-Novi.
ALBANIA: 1♂, Durres, leg. Mader, coll. Scheerpeltz (NHMW).
GREECE (including Peloponnisos): 1♀, Makedhonía, Thessaloníki, Neakrini, 'Spalten des Steilufers im Gezeitenbereich', VII.-VIII.1963, leg. Schuster (NHMW); 1♂, Makedhonía, Khalkidhiki, Kassándra, Polichoron, beach, under debris, 22.III.1989, leg. Assing (cAss); 1♂, 1♀, Peloponnisos, Patras, coast, 'zw. Grobsand', 27.III.1985, leg. Sprick (cAss).
GREEK ISLANDS: 1♂, 1♀, Kérkira, NO Kalami, under seaweed, 28.IX.1994, leg. Wunderle (cWun); 3♂♂, 1♀, Kikladhes, Kéa, leg. v. Oertzen (MNHUB, cAss); 1♂, Évvoia, Khalkís, IV.1926 (MNHUB).
BULGARIA: 9♂♂, 1♀, coast of Black Sea, Nessebar, Vlas, 17.-26.VII.1983, leg. Wrase & Schüler (cAss, cWun); 11♂♂, 9♀♀, coast of Black Sea, 10km N Varna, Drushba, rock crevices/ beachdrift, 1.-14.X.1965, leg. Schuster, coll. Scheerpeltz (NHMW, cAss); 1♂, 1♀, Eminska Planina, Vlas, 11.V.1987, leg. Behne & Heinig, coll. Zerche (DEI).
UKRAINE: 1♂, 3♀♀, Krymskaya, V.1970, leg. Tikhomirova (cBoh).
GEORGIA: 1♂, 1♀, Picunda, 17.VII.1974, leg. Bohác & Werner (cBoh, cAss).
Locality not indicated or not identified: 1♂, Nw. Vossemeer, 1.IX.1969, leg. v. d. Krift (cWun); 1♂, 'MS. Brazza', coll. Künnemann (DEI); 1♂, 1♀, 'Jus. Veglia', 1879, Reitter (NHMW); 2♂♂, 2♀♀, colls Eppelsheim, Kraatz, Leonhard (DEI, NHMW).

Description:

Measurements (n=30): TL: 2.9 - 3.9 (3.5); AL: 1300 - 1600 (1447); HL: 420 - 530 (469); HW: 505 - 605 (547); PL: 490 - 605 (542); PW: 500 - 605 (551); EL: 420 - 530 (481); HTiL: 590 - 700 (639); HTaL: 430 - 500 (467); HT1L: 150 - 190 (166); HT24L: 165 - 200 (179).
Body colour dark brown to blackish with often the elytra and the tip of the abdomen and sometimes also the abdominal terga III-V slightly lighter, legs and antennae light to dark brown, the latter usually only weakly darkened apically; pubescence pale and decumbent. Body size and

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proportions subject to considerable variation both within and between populations, specimens from the coast of the Black Sea and the Eastern Mediterranean on average smaller.

Head slightly to distinctly transverse (HW/HL: 1.04 - 1.24), in ♂♂ on average more transverse than in ♀♀; sides behind eyes weakly convex, often slightly narrowed towards hind angles; eyes in dorsal view slightly shorter than temples; posterior corners bluntly rounded; hind margin straight to weakly concave; dorsal surface with distinct microreticulation, with somewhat variable, rather shallow punctation; diameter of punctures variable, but usually about as wide as interstices; pale pubscence on vertex mostly directed ± anteriorly, in lateral regions ± anteromediad; dorsal surface in ♂♂ with usually extensive shallow concavity, which is often faintly sulcate in the middle and generally reaches hind margin of head; dorsal surface in ♀♀ with less extensive and shallower concavity, which is usually obsolete near occiput.

Antennae rather slender (Fig. 11h), but length highly variable (sea measurements); on average slightly longer in ♂♂ than in ♀♀; antennomeres 1 - 3 very elongate, 2 slightly shorter than the neighbouring joints; 4 - 7 (♂♂) or 4 - 6 (♀♀) oblong, 8 - 9 (♂♂) or 7/8 - 9 (♀♀) ± subquadrate, 10 usually slightly transverse, 11 oblong but shorter than the two preceding joints together.

Pronotum with maximal width near anterior angles, ± weakly convex (variable!), approximately as wide as long (PW/PL: 0.98 - 1.07) and about as wide as head (PW/HW: 0.97 - 1.05); lateral margins posteriorly ± straight, hind angles obtuse, but usually distinct; dorsal surface often with less distinct microreticulation than head; punctation usually denser and slightly finer than that of head; ♂♂ with variable, but distinct, rather deep, wide (usually ca. 1/3 of pronotal width) and ± parallel longitudinal impression, which is often weakly sulcate in the middle, almost reaches the front margin and posteriorly often ends in a small transverse impression; ♀♀ on average with shallower, narrower and anteriorly narrowed impression (variable!), often, however, approaching the ♂ condition.

Elytra clearly wider (but less so than in *M. laesa*) and at suture slightly shorter than pronotum (EL/PL: 0.80 - 0.98), relative length rather variable; dorsal surface with distinct microreticulation; punctation variable, but usually denser and coarser than that of pronotum; pubescence pale, decumbent and ± diagonal; hind wings present.

Legs, particularly the tarsi, shorter than in *M. laesa*, but of highly variable length and proportions (see measurements); one ♀ from Venezia, Italy, not included in the original sample of measured specimens had extremely short legs (HTiL: 560; HTaL: 390); hind tarsi clearly shorter than hind tibiae (HTaL/HTiL: 0.69 - 0.77); first tarsomere of hind tarsi slightly shorter than or as long as the combined length of tarsomeres 2 - 4 (HT1L/HT24L: 0.84 - 1.0).

Abdomen only with superficial isodiametric microsculpture, and rather fine and sparse, ± evenly spaced punctation; therefore with clearly more shine than forebody; tergum VIII straight to weakly concave in both sexes (Figs 11d,f).

♂: sternum VIII distinctly convex posteriorly (Fig. 11e); aedeagus with rather wide ventral process; in ventral view lateral parts of median lobe slightly projecting behind base of ventral process (Fig. 11a); paramere as in Figs 11b.

♀: hind margin of sternum VIII convex (Fig. 11g); spermatheca variable in size and shape, capsule with sclerotized cuticular protrusion projecting towards duct (Fig. 11c).

Bionomics and distribution:

M. uvida (ERICHSON) has been collected at the seashore, under debris and in rock crevices, from March through October. The northernmost examined record of this species is on the island of Borkum, northern Germany; HORION (1967) doubted this record, since the corresponding

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specimens could not be located and the species was unknown from the Dutch coast. *M. uvida* was also found at the English south coast east of Devon (BUTLER 1909) including the Isle of Wight (type locality). Further south the species is distributed from the Bretagne in the northwest along the Atlantic coasts of France and Spain, the Mediterranean coasts of France, continental Italy, Croatia, Montenegro and Greece (including the Peloponnisos) to the Black Sea, where examined specimens were collected at the west, north and east coast. *M. uvida* also occurs on Santa Maria, Azores (BORGES 1990, GILLERFORS 1986); the corresponding specimens (leg. Gillerfors) were correctly identified. I have seen no records from North Africa, Corse or Sardegna, where *M. uvida* is apparently replaced by the following species (Fig. 23). A number of further localities are indicated in the literature, but they are either doubtful or incorrect; misidentifications and confusion with related species, especially *M. boehmi* BERNHAUER, were rather common in the collections examined in the course of this study. SCHEERPELTZ (1972), for instance, misinterpreted *M. boehmi* (see section 2.4.3.1.) and believed the true *M. boehmi* to be conspecific with *M. uvida*.

The fact that the distribution of *M. uvida* extends over many thousands of kilometres of coastline, from Germany to the Black Sea, without any significant geological barrier may, at least to some extent, explain the considerable external variability in this species.

2.4.4.2. *Myrmecopora* (*Xenusa*) *boehmi* BERNHAUER, 1910

Figs 12a-g, 23, p. 150/151

Myrmecopora boehmi BERNHAUER, 1910, 259f.
Myrmecopora sydowi BERNHAUER, 1927b, 97f., **syn. nov.**
Xenusa mediterranea FAGEL, 1970, 152f., **syn. nov.**
Myrmecopora (Xenusa) uvida (ERICHSON) partim: SCHEERPELTZ 1972, 101f.
nec *Myrmecopora (Xenusa) sydowi* BERNHAUER: SCHEERPELTZ 1972, 100
nec *Myrmecopora (Xenusa) boehmi* BERNHAUER: SCHEERPELTZ 1972, 100

Types examined:

Myrmecopora boehmi BERNHAUER: Lectotype ♂ (remounted, aedeagus examined), here designated and labelled accordingly: Aboukir, Juillet, 113, *boehmi* Bh., Typus, coll. Bernhauer (FMNH).

The original description is probably based on the single specimen in BERNHAUER´s collection. However, since this is not explicitly indicated in the description (BERNHAUER 1910), a lectotype designation was necessary.

Myrmecopora sydowi BERNHAUER: Lectotype ♂, present designation: Corsica, Staudinger, *sydowi* Brnh., Cotypus, coll. Bernhauer (FMNH). Paralectotype ♀, Riviera, Cannes, 17.V.-1899, *sydowi* Bernh., Typus, coll. Bernhauer (FMNH).

BERNHAUER (1927b) doubtlessly based his description on these two specimens, but did not specify a holotype. Therefore, the ♂ was chosen as lectotype; the female had been dissected prior to this study, and the terminalia and the spermatheca had apparently been mounted on a slide, but are now missing.

Xenusa mediterranea FAGEL: Holotype ♂, France, Banyuls, Pyrénées orientales, V.1950, F.G. Overlaet, *mediterranea* n. sp., G. Fagel det., Type (IRSNB).

Paratypes: 1♂, 1♀, France, Toulon; 1♂, France, Cette, marais salants; 1♀, France, Marseille; 1♂, France, St. Raphaël; 2♂♂, Tunisia, La Goulette, Normand; 1♂, Tunisia, La Goulette; 1♂, Tunisia, Zarzis; 1♀, Egypt, Ramleh; all '*Xenusa mediterranea* n. sp. G. Fagel det.' (IRSNB).

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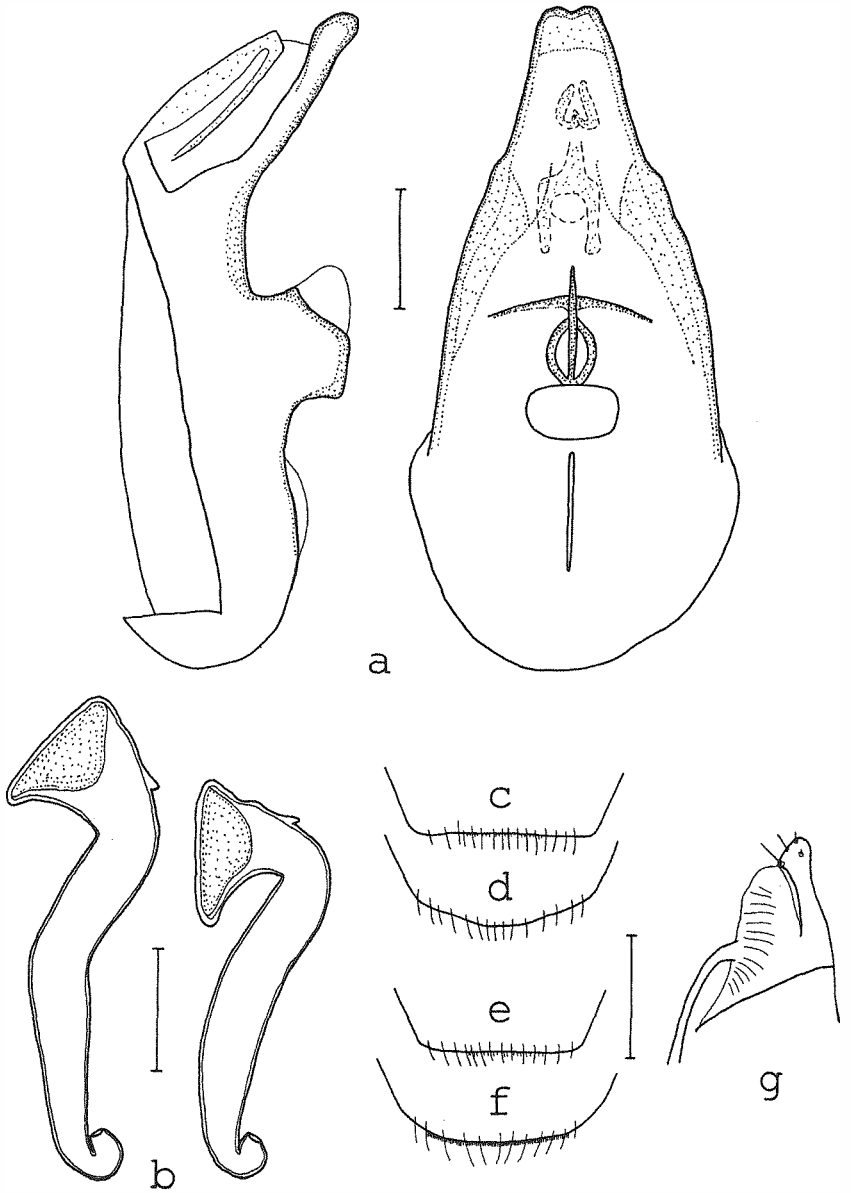

Figs 12 a - g: *Myrmecopora boehmi* BERNHAUER. Median lobe in lateral and in ventral view (**a**); spermathecae (**b**); hind margins of ♂ tergum and sternum VIII (**c, d**); hind margins of ♀ tergum and sternum VIII (**e, f**); apical lobe of paramere (**g**). Scales: **a - b, g**: 0.1 mm; **c - f**: 0.2 mm.

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Comments:
An examination of the types listed above, particularly the genitalia, revealed that they are all conspecific. Therefore, *M. sydowi* BERNHAUER and *M. mediterranea* FAGEL are here synonymized with *M. boehmi* BERNHAUER, the oldest name available.

Further material examined:
FRANCE: 2♂♂, Languedoc, Béziers, coll. Kraatz (DEI); 2♂♂, Var, Hyères, VII.1892, leg. Rey (NHMW); 2♂♂, St. Raphaël, leg. Fauvel, coll. Eppelsheim (NHMW); 2♂♂, 1♀, 'Gallia m.', colls Koltze, Kraatz, v. Heyden (DEI); 2♂♂, 5♀♀, 'Gallia merid.' (DEI, MNHUB); 1♀, 'Gall.' (NHMW).
CORSE: 4♂♂, 3♀♀, Piraldo, Desert des Agriotes, 12.VIII.1979, leg. Sette (cWun, cAss); 2♂♂, 2♀♀, Rearchiere [?], coll. Eppelsheim (NHMW, cAss).
ITALY: SARDEGNA: 1♂, S. Antioco, 22.IX.1982 (cAss); 1♀, S. Antioco, X.1982, leg. Wunderle (cWun); 4♂♂, S. Antioccho, Calasetta, under seaweed, 11.X.1989, leg. Wunderle (cWun, cAss); 2♂♂, Pula, under seaweed, 30.IX.1987, leg. Wunderle (cWun, cAss); 1♀, Fertilia, Alghero, dune, 10.VI.1963, leg. Malicki (cAss); SICILIA: 1♂, Palermo, IV.1895, leg. Flach, coll. Lokay (NMP).
GREECE: 1♂, Náxos, coll. v. Heyden (DEI).
CYPRUS: 6♂♂, 7♀♀, 10km O Limassol, beach, under seagrass, 8.IV.1995, leg. Assing & Wunderle (cAss, cWun).
MOROCCO: 1♀, Agadir, 7.-30.XI.1970, leg. G. Benick (cAss).
TUNISIA: 3♂♂, 1♀, Tunis, Jerba, beach, 25.II.1967, leg. G. Benick (cAss); 4♀♀, Tunis, Soliman (DEI, NHMW, cAss); 2♂♂, 3♀♀, La Goulette, leg. Normand, coll. Scheerpeltz (NHMW, cAss).
Locality not indicated or not identified: 1♂, 4♀♀, colls v. Heyden, Hampe, Miller (DEI, NHMW).

Description:
Measurements (n=30): TL: 2.4 - 3.9 (3.2); AL: 1175 - 1450 (1323); HL: 360 - 440 (399); HW: 450 - 550 (509); PL: 430 - 515 (479); PW: 450 - 560 (513); EL: 390 - 530 (465); HTiL: 500 - 635 (582); HTaL: 345 - 445 (396); HT1L: 105 - 170 (138); HT24L: 120 - 180 (156).
Since this species is in general appearance - body colour, proportions, microsculpture, pubescence - very similar to *M. uvida* and also highly variable, the description will focus on differential characters.
Size of body and body parts on average smaller; microsculpture often more, punctation less distinct.
Head similar in shape to *M. uvida*, but shorter and more strongly transverse (HW/HL: 1.22 - 1.40) in both sexes; dorsal surface in ♂♂ with similar, but often - particularly near hind margin of head - deeper and more extensive concavity; dorsal surface in ♀♀ with less extensive and shallower concavity, which, in contrast to *M. uvida*, mostly reaches the hind margin.
Antennae similar in shape and proportions of antennomeres to the preceding species, but on average shorter (see measurements).
Pronotum at least slightly wider than long (PW/PL: 1.03 - 1.10); punctation often barely visible in coarse microreticulation; sexual dimorphism distinctly more pronounced than in *M. uvida*: dorsal impression in ♂♂ clearly different from that in the preceding species, much deeper, rather well-defined, not sulcate in middle and of roughly oval shape, therefore widest in the middle; ♀♀ with clearly less deep, longitudinal and sulcate impression, which is usually widest near posterior margin and often approaches the condition in ♂ *uvida*.
Elytra on average relatively longer than in *M. uvida* (EL/PL: 0.88 - 1.07), but relative length rather variable.
Legs of similar proportions, but on the whole shorter than in *M. uvida* (see measurements).
Abdomen with microsculpture and punctation similar to *M. uvida*.

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♂: sternum VIII distinctly convex posteriorly (Fig. 12d); aedeagus smaller and with slenderer ventral process; lateral parts of median lobe of different form and not projecting behind base of ventral process in ventral view (Fig. 12a); apical lobe of paramere as in Fig. 12g.
♀: hind margin of sternum VIII less convex (Fig. 12f); spermatheca smaller, capsule with sclerotized cuticular protrusion of different shape (Fig. 12b).

Bionomics and distribution:
From the information available, it can be concluded that *M. boehmi* lives in similar habitats as *M. uvida*. In contrast to the latter, the distribution of *M. boehmi* is confined to the Mediterranean. It has been recorded from the south coast of France, where it occurs together with *M. uvida*, and from Corsica, Sardinia, Sicily, Náxos, Cyprus and the North African coast from Morocco to Egypt, where it apparently replaces *M. uvida* (Fig. 23, p. 150/151).

2.4.4.3. *Myrmecopora (Xenusa) oweni spec. nov.*
Figs 13a-g, 23, p. 150/151

Myrmecopora (Xenusa) brevipes BUTLER: SCHEERPELTZ 1972, 102

Holotype ♂, Isle of Wight, Steephill, IV.1977, leg. Owen (cAss).
Paratypes:
ENGLAND: 2♂♂, 1♀, same data as holotype (cOwe, cAss); 2♀♀, Dorset, Eypes Mouth, 1. VI.1992, leg. Owen (cOwe, cAss); 4♀♀, Dorset, Holworth, 11.V.1930, leg. Harwood (cAss); 1♀, Devon, Slapton Ley, IX.1977, leg. Owen (cOwe); 1♀, Devon, Plymouth, VII.1909, (cAss); 2♀♀, Devonshire, leg. Reitter, coll. Scheerpeltz (NHMW); 1♀, Devonshire, coll. Lokay (NMP); 2♀♀, 'Britannia', leg. Reitter, coll. Scheerpeltz (NHMW); 1♀, 'Britannia', coll. v. Heyden (DEI); 1♀, 'Anglia', coll. Kraatz (DEI); 2♀♀, 'Anglia' (IRSNB); 1♀, [locality illegible] leg. Champion, coll. Scheerpeltz (NHMW).
FRANCE: 1♀, Manche, Cherbourg, coll. Scheerpeltz (NHMW); 1♀, Manche, Cotentin, Gatteville, VII.1928, leg. Frennet (IRSNB); 1♂, Channel Islands, Jersey, coll. v. Heyden (DEI); 1♂, Bretagne, Finistère, Morlaix, Heroé, coll. Scheerpeltz (NHMW); 1♂, Bretagne, Cancale (cAss); 1♂, Bretagne, Finistère, Fouesnant, leg. St. Claire Deville (IRSNB); 1♂, Gironde, V.1887 (cAss); 2♀♀, Tours de Vauloger, coll. Scheerpeltz (NHMW); 1♀, [without locality], coll. Scheerpeltz (NHMW), 2♂♂, [locality illegible] leg. Fauvel (NHMW).

Description:
Measurements (n=24): TL: 2.4 - 3.4 (2.9); AL: 1100 - 1440 (1102); HL: 385 - 455 (385); HW: 450 - 550 (453); PL: 430 - 530 (481); PW: 440 - 580 (506); EL: 375 - 485 (378); HTiL: 445 - 560 (501); HTaL: 285 - 380 (329); HT1L: 80 - 120 (105); HT24L: 105 - 135 (121).
In general appearance (proportions, microsculpture, punctation) similar to, but on average smaller than the two preceding species; like them subject to considerable variability especially in size (cf. measurements), but also in punctation and microsculpture.
Shape of head intermediate between *M. uvida* and *M. boehmi*, distinctly transverse (HW/HL: 1.16 - 1.25) in both sexes; temples slightly longer than eyes; sides of head ± straight or weakly converging behind eyes; hind margin weakly concave; vertex usually with more distinct microreticulation and therefore less distinct punctation in ♂♂ than in ♀♀, due to coarser microsculpture; dorsal concavity in ♂♂ very large, of ± round to subquadrate shape, not sulcate, deeper and more extensive than in *M. uvida*; dorsal surface in ♀♀ with less extensive and shallower concavity only in anterior region, posteriorly often with faintly sulcate extension, which does not reach the hind margin.

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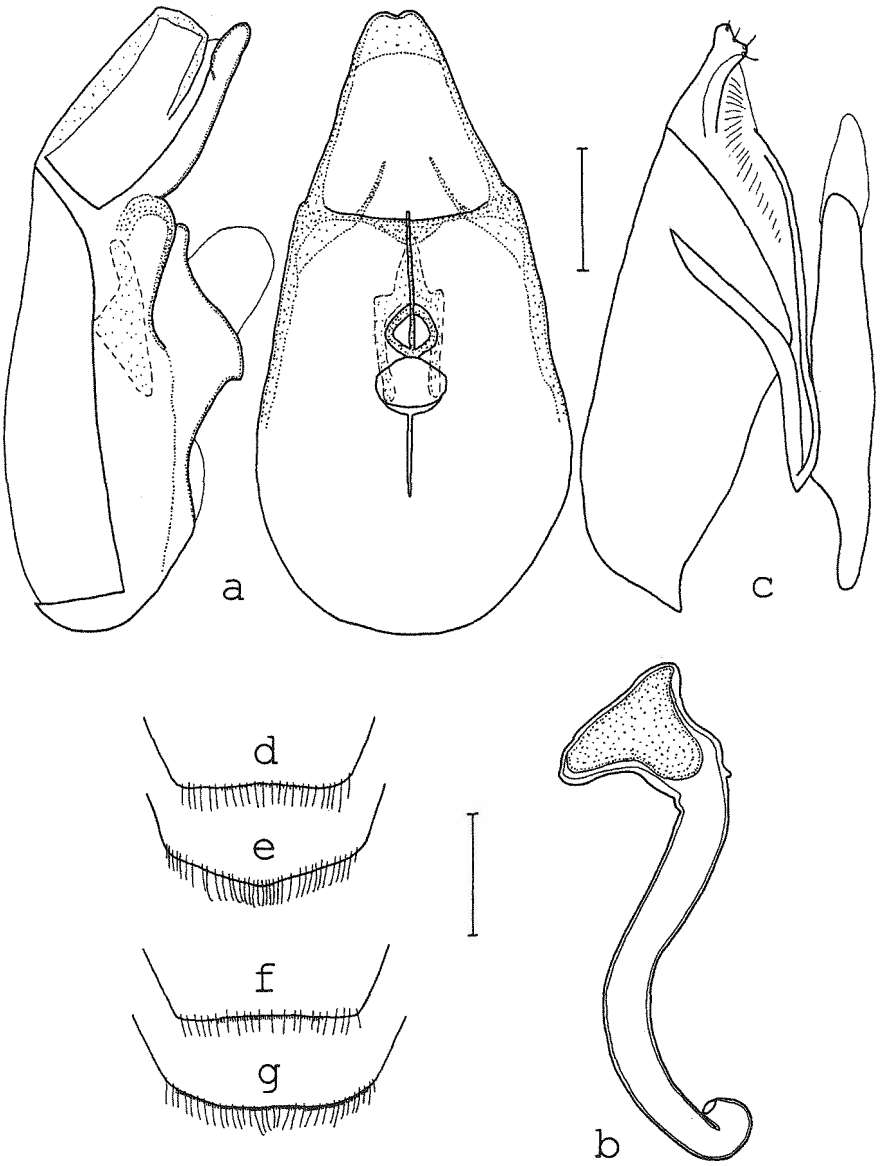

Figs 13 a - g: *Myrmecopora oweni* sp. n. Median lobe in lateral and in ventral view (**a**); spermatheca (**b**); paramere (**c**); hind margins of ♂ tergum and sternum VIII (**d, e**); hind margins of ♀ tergum and sternum VIII (**f, g**). Scales: **a - c**: 0.1 mm; **d - g**: 0.2 mm.

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Antennae similar in shape and proportions of antennomeres to the preceding species, but on average shorter (see measurements).
Proportions of pronotum similar to *M. boehmi* (PW/PL: 1.01 - 1.10); punctation and microsculpture variable; sexual dimorphism similar to *M. uvida*, clearly less distinct than in *M. boehmi*: in ♂♂ with sometimes weakly sulcate longitudinal impression of variable depth and width; ♀♀ with on average shallower longitudinal impression, which is usually widest and deepest near hind margin and ± effaced anteriorly.
Elytra at suture shorter than pronotum (EL/PL: 0.86 - 0.95); pubescence in most specimens distinctive: on inner 2/3 of each elytron (apart from narrow margin near suture) almost completely transverse. (In some specimens particularly from the Fagel collection this character was indistinct, possibly an artefact caused in the course of mounting.)
Legs on average even shorter than in M. *boehmi* and distinctly shorter (no overlap) than in *M. uvida* (see measurements).
Abdomen with microsculpture and punctation similar to, but setae on hind margins of tergum and sternum VIII denser than in *M. uvida* (Figs 13d,f).
♂: sternum VIII distinctly convex posteriorly (Fig. 13e); aedeagus smaller than in the two preceding species; in ventral view of similar shape as in *M. uvida*, but lateral parts not projecting; in lateral view with distinctive crista and lateral structures (Fig. 13a); apical lobe of paramere characteristic (Fig. 13c).
♀: hind margin of sternum VIII ± straight to weakly concave centrally (Fig. 13g); spermatheca smaller, duct slenderer than in *M. uvida* (Fig. 13b).

Derivatio nominis: I dedicate the species to the distinguished British coleopterist John Owen, whose material first made me aware of this species.

Bionomics and distribution:
Like the two preceding species *M. oweni* is an inhabitant of the seashore, where it was collected under seaweed and under stones. At present, the species is known to occur in the southwest of England, the Channel coast of northwestern France including the Channel Islands and the French Atlantic coast (Fig. 23). Note that the literature records for *M. brevipes* BUTLER, such as that in JOY (1932) for Ireland, may in fact refer to *M. oweni*, since the former was apparently misinterpreted by all the coleopterists whose collections were studied in the course of this study, apart from BUTLER himself (see section 2.4.4.10). Practically all the specimens identified as *M. brevipes* by SCHEERPELTZ, FAGEL and others were in fact *M. oweni*. In addition, the new species has been misidentified as *M. uvida* quite frequently and, in the case of two specimens from the SCHEERPELTZ collection, even as *M. sulcata* (KIESENWETTER). Therefore, before any conclusion can be drawn regarding the wider distribution - and the segregation - of these two species, further material particularly from the British Isles and from France will have to be revised.

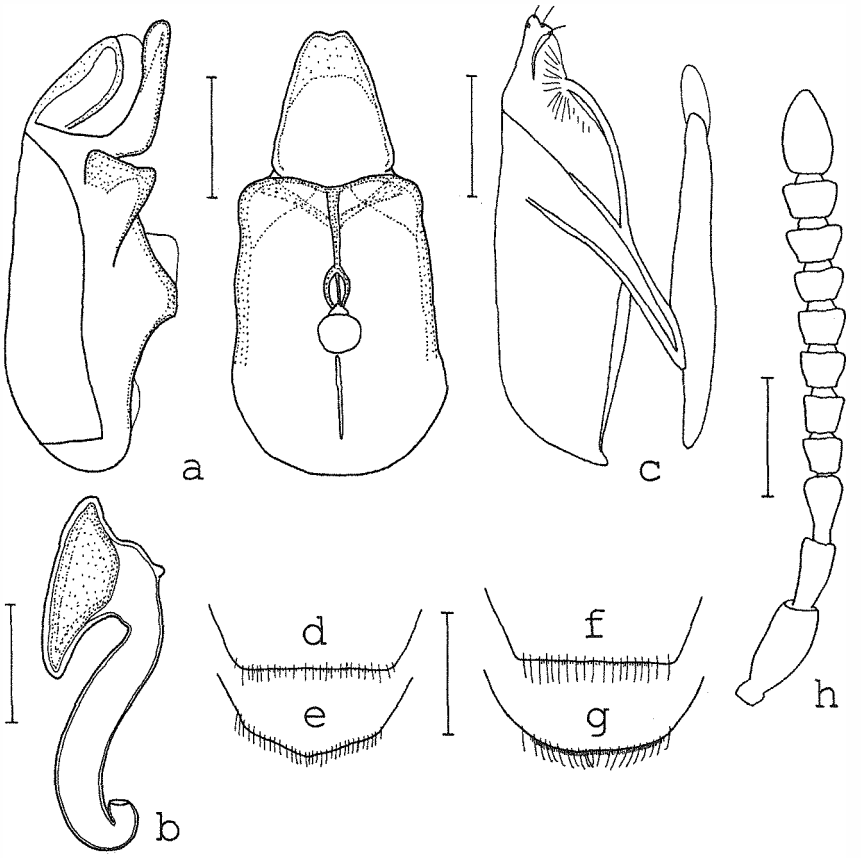
2.4.4.4. *Myrmecopora* (*Xenusa*) *sulcata* (KIESENWETTER, 1850)

Figs 14a-h, 24, p. 151

Tachyusa sulcata KIESENWETTER, 1850, 218
Xenusa sulcata (KIESENWETTER): MULSANT & REY 1874, 38
Xenusa sulcata (KIESENWETTER): MULSANT & REY 1875a, 442ff.
Xenusa sulcata (KIESENWETTER): MULSANT & REY 1875b, 416ff.
Myrmecopora (Xenusa) sulcata (KIESENWETTER): GANGLBAUER 1895, 251

DOI: 10.21248/contrib.entomol.47.1.69-151

Myrmecopora (Xenusa) sulcata (KIESENWETTER): BERNHAUER & SCHEERPELTZ 1926, 582
Xenusa sulcata (KIESENWETTER): FAGEL 1969, 117
Myrmecopora (Xenusa) sulcata (KIESENWETTER): SCHEERPELTZ 1972, 102f.
Myrmecopora (Xenusa) minima BERNHAUER: SCHEERPELTZ 1972, 104
Myrmecopora sulcata (KIESENWETTER): LOHSE 1974, 68
Xenusa sulcata (KIESENWETTER): LOHSE 1989, 198
Xenusa lohmanderi (BERNHAUER) syn.?: LOHSE 1989, 198
Xenusa carica FAGEL, 1970, 155f., **syn. nov.**



Figs 14 a - h: *Myrmecopora sulcata* (KIESENWETTER). Median lobe in lateral and in ventral view (**a**); spermatheca (**b**); paramere (**c**); hind margins of ♂ tergum and sternum VIII (**d, e**); hind margins of ♀ tergum and sternum VIII (**f, g**); ♀ antenna (**h**). Scales: **a - c**: 0.1 mm; **d - h**: 0.2 mm.

Types examined:

Tachyusa sulcata KIESENWETTER: Lectotype ♂, here designated and labelled accordingly (remounted, aedeagus examined): Venedig, Kiw., *sulcata* Kiesenwetter, Eur. mer., coll. Kraatz, Syntypus (DEI).

Xenusa carica FAGEL: Holotype ♂, Anatolia merid., Marmaris (algues), V.1969, G. Fagel, *carica* n.sp., G. Fagel det., Type, I.G. 24885 (IRSNB). Paratypes: 6♂♂, 5♀♀, same data as holotype (IRSNB).

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Comments:

The types of *X. carica* FAGEL are clearly conspecific with *M. sulcata* (KIESENWETTER), so that the former must be considered a junior synonym of the latter. The drawings of the genitalia in FAGEL (1970) suggest that the specimens of what he believed to be *M. sulcata*, which he used for comparison, in fact belong to another species of *Myrmecopora*.

Further material examined:

FRANCE (continental): 1♀, Calvados, coll. Scheerpeltz (NHMW); 1♂, Provence, Hyères, coll. Kraatz (DEI); 1♂, 4♂♂, Provence, Hyères, VII.1892, leg. Rey (NHMW); 1♂, Provence, Var, La Londe l.M., 3.-16.IV.1977, leg. Poot (cAss); 2♂♂, 3♀♀, Provence, Golfe Juan, leg. St. Claire Deville (NHMW, cAss); 2♂♂, 1♀, Languedoc, Hérault, colls Leonhard, Scheerpeltz (DEI, NHMW); 6♂♂, 8♀♀, Southern France [without locality] (DEI, NHMW).

CORSE: 1♂, Aleria, beach, 8.IV.1990, leg. Assing (cAss); 3♂♂, 2♀♀, Piraldo, Desert des Agriotes, 12.VIII.1979, leg. Sette (cWun, cAss); 1♂, 1♀, Porto, 1.-23.V.1966, leg. G. Benick (cAss); Porto Vecchio, Saline, coll. Eppelsheim (NHMW).

ITALY (continental and smaller islands): 1♂, 1♀, Liguria, Genova, 13.III.1901, leg. Dodero (MNHUB, cAss); 2♀♀, Liguria, Borghetto, 6.VIII.1895, leg. Fiori (MNHUB); 2♂♂, 2♀♀, Toscana, Livorno, 20.VIII.1902 (MNHUB, cAss); 1♂, 1♀, M. Argentario, beach, under horse dung and algae, 5.III.1921, leg. Moczarski & Scheerpeltz, coll. Scheerpeltz (NHMW); 1♂, Emilia, 18.III.1894, leg. Fiori (MNHUB); 2♀♀, Campania, Ischia, S. Angelo, 10.-27.X.1963, leg. Lohse (cAss); 1♀, Marche, Conero, loc. Due Sorelle, sotto ulva, 15.VIII.1983, leg. Zanetti (cAss); 1♂, 1♀, Venezia, coll. Kraatz (DEI); 1♀, Venezia, Chioggia, 10.IX.1896, leg. Fiori (MNHUB); 1♂, Venezia, Foce del Tagliamento, 19.IV.1973, leg. Zanetti; 4♂♂, 4♀♀, Venezia, Grado (GO), leg. Bernhauer (MNHUB, NHMW); 5♂♂, 2♀♀, Venezia, Grado (GO), Ten. Primero, 6.VII.1986, leg. A. Zanetti (cZan); 11♂♂, 5♀♀, Venezia, Grado, leg. Bernhauer (NHMW); 2♂♂, 7♀♀, Venezia, Grado (GO), sandy beach, seaweed, 10.VIII.1977, leg. Lohse (cAss); 9♂♂, 1♀, Venezia, Grado (GO), 9.-11.VIII.1977, leg. Lohse (cWun, cAss); 1♂, Venezia, Grado, 7.VIII.1910, leg. Pinker (NHMW); 6♂♂, 8♀♀, Venezia, Grado (NHMW); 11♂♂, 14♀♀, Venezia, Monfalcone, leg. Bernhauer, Fleischer, Formanek, Liebmann, Reitter (DEI, MNHUB, NHMW); 1♂, Venezia, Sistiana, leg. Breit (NHMW); 2♀♀, Venezia, Sistiana, 24.VI.1910, leg. Pinker (NHMW); 1♂, Venezia, Trieste (DEI); 4♂♂, Venezia, leg. Duchon (MNHUB); 1♂, [without locality] (DEI).

SARDINIA: 1♂, 1♀, Teulada, Capo Malfatano (CA), stagno Piscini, 14.V.1995, leg. Angelini (cAss); 1♀, S. Antioco, IX.1982, leg. Wunderle (cWun); 1♀, S. Antioco, 27.V.1982, leg. Wunderle (cAss); 4♂♂, 7♀♀, Porto Corallo, Villaputzu, beach, 7.X.1989, leg. Wunderle (cWun, cAss).

SICILIA: 1♂, 1♀, Messina, leg. Rottenberg, coll. Eppelsheim (NHMW); 1♂, [without locality] leg. Rottenberg, coll. Heyden (DEI).

CROATIA: 3♂♂, 4♀♀, Mlini, 27.IX.-4.X.1968, leg. G. Benick (cAss); 2♂♂, 1♀, Mlini, beach, 27.IX.-4.X.1968, leg. G. Benick (cAss); 1♂, 1♀, Dalmatia, Herzeg-Novi, coll. Leonhard (DEI); 4♂♂, 3♀♀, Dalmatia, Herzeg-Novi, leg. Hummler (MNHUB, NHMW); 1♀, Dalmatia, Herzeg-Novi, leg. Paganetti (NHMW); 4♀♀, Dalmatia, Budva, 11.V.1939, leg. Liebmann (DEI); 5♂♂, 3♀♀, Dalmatia [without locality] (DEI, NHMW, ZSM).

ALBANIA: 2♂♂, 3♀♀, Durazzo, leg. Mader (NHMW).

ROMANIA: 1♂, 1♀, Dobrogea (NHMW, cAss); 1♂, Dobrogea, leg. Breit (NHMW).

BULGARIA: 2♀♀, Lozenec, 23.VII.1971, leg. Kacenka (cBoh); 3♂♂, 3♀♀, coast of Black Sea, 10km N Varna, Drushba, debris, 1.-14.X.1965, leg. Schuster, *minima* det. Scheerpeltz [sic!], coll. Scheerpeltz (NHMW, cAss).

UKRAINE: 1♂, 1♀, Krym., Feodosiya, leg. Faust, coll. Eppelsheim (NHMW).

GREECE: 1♀, Kérkira, Lake Korission, brackish water, 29.IX.1995, leg. Wunderle (cAss); 2♀♀, Kefallínia, beach, 6.X.1992, leg Sprick (cAss); 4♂♂, 4♀♀, Makedhonía, Hagia Triada near Thessaloníkí, beach, 13.VIII.1964, leg. Puthz (cAss); 1♂, Khalkidhikí, 6 km N Sarti, 28.VII.1987, leg. Schuh (cAss).

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Description:

Measurements (n=31): TL: 2.2 - 2.9 (2.5); AL: 830 - 1060 (909); HL: 295 - 355 (325); HW: 360 - 430 (392); PL: 330 - 410 (367); PW: 360 - 455 (401); EL: 315 - 410 (357); HTiL: 330 - 440 (380); HTaL: 225 - 290 (254); HT1L: 70 - 100 (80); HT24L: 80 - 120 (99).

Body colour dark brown to blackish with usually the elytra slightly lighter, legs and antennae light to dark brown, tarsi yellowish to yellowish brown. Body size and proportions subject to considerable variation both within and between populations.

Head distinctly transverse (HW/HL: 1.13 - 1.26); sides behind eyes weakly rounded, subparallel or weakly narrowed towards hind angles; eyes rather large and prominent, in dorsal view as long as or slightly shorter than temples; posterior corners bluntly rounded; hind margin weakly concave; dorsal surface with distinct microreticulation; punctation somewhat variable, rather shallow and often indistinct, particularly in ♂♂; diameter of punctures variable, usually smaller than interstices; pale pubescence on vertex mostly directed ± antero-mediad; dorsal surface in ♂♂ with usually extensive and ± transverse, suboval or subquadrate concavity posteriorly extending to or almost reaching hind margin of head, its shape and depth subject to some variability; concavity rarely weakly sulcate; ♀♀ with less extensive and shallower concavity, which is usually confined to frons and anterior area of vertex and often of roughly triangular shape.

Length of antennae (see measurements) and shape of antennomeres highly variable; antennomeres 1 - 3 oblong, 2 and 3 subequal in length and shorter than 1; 4 - 6 usually weakly oblong to subquadrate, 7 subquadrate to weakly transverse, 8 - 10 distinctly transverse, 11 oblong but shorter than the two preceding joints together (Fig. 14h); note that in some specimens the antennae were very slender with antennomeres 4 - 7 clearly and 8 - 9 weakly oblong.

Pronotum with maximal width near anterior angles, weakly to distinctly convex, at least slightly wider than long (PW/PL: 1.04 - 1.15) and about as wide as head (PW/HW: 0.98 - 1.08); lateral margins posteriorly ± straight, rarely weakly concave, hind angles obtuse, distinct or indistinct; dorsal surface often with less distinct microreticulation than head; punctation usually barely visible; pale pubescence decumbent to ± suberect, directed cephalad along midline, transverse or diagonal on either side of midline and ± diagonally cephalad near side margins; ♂♂ with distinct, ± parallel or oblong suboval, sometimes weakly sulcate longitudinal impression of variable depth, which often reaches both the anterior and the posterior margin of the pronotum; ♀♀ with shallower, narrower and anteriorly usually effaced impression, its shape and depth subject to some variablity.

Elytra clearly wider and at suture slightly shorter than or approximately as long as pronotum (EL/PL: 0.90 - 1.04), relative length rather variable; dorsal surface with distinct microreticulation; punctation rather indistinct; pubescence pale, decumbent, directed caudad near suture and ± diagonally caudad on remainder of dorsal surface; hind wings present.

Legs and tarsi distinctly shorter than in the three preceding species (see measurements); hind tarsi clearly shorter than hind tibiae (HTaL/HTiL: 0.62 - 0.70); first tarsomere of hind tarsi shorter than the combined length of tarsomeres 2 - 4 (HT1L/HT24L: 0.75 - 0.90).

Abdomen with more shine than forebody due to more superficial microreticulation; depth and density of punctation highly variable; tergum VIII straight to weakly concave in both sexes (Figs 14d,f).

♂: sternum VIII bluntly pointed posteriorly (Fig. 14e); aedeagus with ventral process angular in lateral view (Fig. 14a); paramere as in Fig. 14c.

♀: hind margin of sternum VIII straight to weakly convex (Fig. 14g); capsule of spermatheca

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truncate, with apical processes and with sclerotized cuticular protrusion hardly projecting towards duct (Fig. 14b).

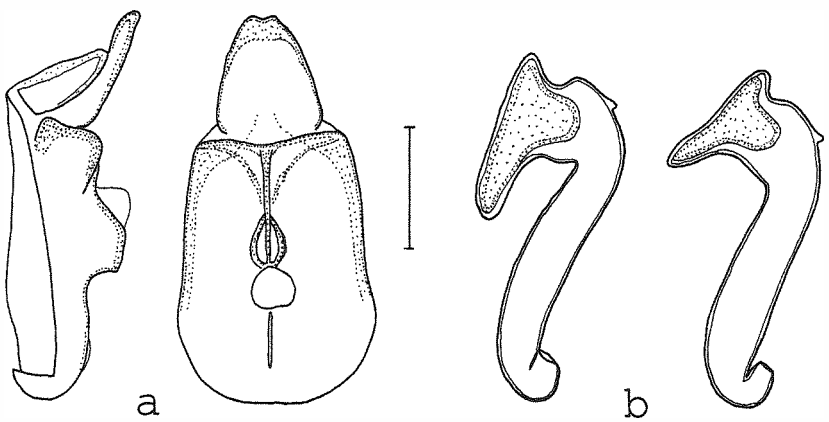
Bionomics and distribution:

Due to frequent confusion with related species, an evaluation of literature records is here refrained from. As can be concluded from the material examined, *M. sulcata* (KIESENWETTER) inhabits the coasts of the northern Mediterranean from Southern France to Southern Turkey, where it is apparently rather common; the species has also been found at various localities around the Black Sea (Fig. 24, p. 151). The single record of 1♀ from Calvados in Northwestern France (not included in Fig. 24) seems rather doubtful (confusion of labels?) and needs confirmation. *M. sulcata* has been collected under seaweed, seegrass and various other kinds of debris, usually on sandy beaches.

2.4.4.5. *Myrmecopora* (*Xenusa*) *simillima* (WOLLASTON, 1864)

Figs 15a-b, 24, p. 151

Tachyusa simillima WOLLASTON, 1864, 534
Tachyusa simillima WOLLASTON: WOLLASTON 1865, 456
syn. *Myrmecopora sulcata* (KIESENWETTER): FAUVEL 1897, 342
syn. *Myrmecopora maritima* (WOLLASTON): FAUVEL 1902, 150
Myrmecopora (Xenusa) maritima (WOLLASTON): SCHEERPELTZ 1972, 105
Xenusa simillima (WOLLASTON) spec. propr. nec syn. *X. maritima* (WOLLASTON): LOHSE 1987, 138ff.
Myrmecopora lohmanderi BERNHAUER, 1927a, 167, **syn. nov.**



Figs 15 a - b: *Myrmecopora simillima* (WOLLASTON). Median lobe in lateral and in ventral view (**a**); spermathecae (**b**). Scale: 0.1 mm.

Types examined:

Tachyusa simillima WOLLASTON: Lectotype ♂, present designation: Type [curator label], *simillima* Woll., The Canary Is., T.V. Wollaston, Brit. Mus. 1864-80., Holotype [curator label] (BMNH).

Myrmecopora lohmanderi BERNHAUER: Lectotype ♂, here designated and labelled accordingly (aedeagus examined): Boh. Grebbestad, 6.X.1926, unter Tang, Lohmander, *Myrmecopora lohmanderi* Bernh., Typus, coll. Bernhauer (FMNH).

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Comments:

According to the original description of *Tachyusa simillima* WOLLASTON (1864), who did not specify a holotype, had two specimens before him, one from Lanzarote and one from Fuerteventura. Hence, the specimen in the Wollaston collection at the BMNH is a syntype irrespective of the labels attached to it and is therefore designated as the lectotype. Presumably, the second syntype, now considered a paralectotype, is deposited at the Hope Deparment of Entomology, Oxford. LOHSE (1987) states that he saw "den Typus", but there remains some doubt whether he referred to the Oxford or the London specimen, so that this is not considered a lectotype designation.

BERNHAUER (1927a), who did not specify a holotype either, based his description of *Myrmecopora lohmanderi* on two specimens (syntypes), which he erroneously believed to be ♀♀. Apparently only one of these specimens, here designated as the lectotype, has remained in his collection at the FMNH.

Since, in the course of a revision of numerous specimens from various localities in Northern, Central and Western Europe, the Atlantic Islands and the Mediterranean, no constant differences between *M. simillima* and *M. lohmanderi* were observed, they are here regarded as representatives of one highly variable species. Consequently, *M. lohmanderi* BERNHAUER has to be considered a junior synonym of *M. simillima* (WOLLASTON).

Further material examined:

NORWAY: 1♂, Oslo, beach, coll. Scheerpeltz (NHMW).

DENMARK: 1♂, 1♀, Jylland, Århus, leg. Hansen, *lohmanderi* Bnh., det. Bernhauer, coll. Bernhauer (FMNH).

GERMANY: 1♂, Helgoland, Brandung, 18.VIII.1891, *lohmanderi* Bh., det. Bernhauer, coll. Bernhauer (FMNH); 3♂♂, 1♀, Helgoland, 29.IV.1963, leg. Lohse (cAss).

SCOTLAND: 1♀, East Lothian, IV.1975, leg. Owen (cAss).

ENGLAND: 2♀♀, Cornwall, 4.X.1986, leg. Owen (cOwe); 4♂♂, 1♀, Isle of Wight, Steephill, IV.1977, leg. Owen (cOwe, cAss); 1♂, Devon, Slapton Ley, IX.1977, leg. Owen (cOwe); 3♂♂, Spurn, EY, 17.VII.1948 (cAss); 1♀, [without locality] coll. Kraatz (DEI); 1♀, [without locality] (IRSNB); 1♂, 3♀♀, [without locality] Kiesenwetter (ZSM).

FRANCE: 1♀, Manche, Cancale (IRSNB); 1♀, Calvados, 16.VIII.1929 (IRSNB); 3♂♂, 1♀, Calvados, coll. Stierlin (DEI); 5♂♂, 1♀, Bretagne, Finistère, Fouesnant (IRSNB); 1♀, Bretagne, Finistère, Audierne, 17.VII.1931 (cAss); 1♂, 1♀, Bretagne, Finistère, Morlaix, leg. Hervé (NHMW, cAss); 1♂, Northern France [without locality] (ZSM); 1♀, 'Gallia' [without locality] (DEI); 3♂♂, 2♀♀, Southern France [without locality] (DEI, MNHUB); 1♂, 2♀♀, [locality illegible] (IRSNB).

PORTUGAL (continental): 16♂♂, 9♀♀, Algarve, coast near Olhao, 2.VI.1992, leg. Wunderle (cWun, cAss).

AZORES: 1♂, 1♀, Santa Maria, 30.IV./1.V.1935, leg. Schatzmayr, *lohmanderi* Bh., det. Bernhauer, coll. Bernhauer (FMNH); 1♂, 1♀, Santa Maria, Praia, 8.VIII.1983, leg. Gillerfors (cGil, cAss).

SPAIN (continental): 4♂♂, 1♀, Andalucia, Almeria, Cabo de Gata, 7.X.1993, leg. Wunderle (cWun, cAss); 1♂, Costa del Sol, 12.-25.X.1968, leg. G. Benick (cAss).

CANARY ISLANDS: 4♂♂, 7♀♀, Tenerife, Puerto de la Cruz, 10.IX.-12.X.1965, leg. G. Benick; 2♂♂, 9♀♀, Gran Canaria, Calomas, 25.X.1975, leg. G. Benick (cAss); 1♀, Gran Canaria, Maspalomas, 24.-26.II.1949, leg. Lindberg, *Myrmecopora maritima* Woll. [sic!], coll. Scheerpeltz (NHMW).

ALGERIA: 2♂♂, 1♀, Cherchell, 10.VI.1955, leg. Liebmann (MNHUB).

TUNISIA: 5♀♀, Soliman, leg. Normand, colls Leonhard, Scheerpeltz (DEI, NHMW, cAss); 2♂♂, 2♀♀, Djerba, beach, 25.II.1967, leg. G. Benick (cAss).

EGYPT: 1♀, Aboukir, 12.VII.1936, leg. Rabinovitch, coll. Alfieri, '*Myrmecopora alfierii* Koch i. litt.', coll. Frey (ZSM).

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Description:

Measurements (n=30): TL: 1.8 - 2.9 (2.3); AL: 680 - 940 (828); HL: 270 - 360 (314); HW: 315 - 425 (374); PL: 300 - 395 (349); PW: 325 - 430 (378); EL: 270 - 385 (332); HTiL: 285 - 425 (357); HTaL: 195 - 270 (235); HT1L: 60 - 90 (73); HT24L: 75 - 115 (94).

Due to high similarity in general appearance and considerable overlap regarding external characters, separation of this species and *M. sulcata* (KIESENWETTER) is difficult, the only constant difference being the construction of the spermatheca. In addition, body size and proportions are extremely variable, even more so than in *M. sulcata* (cf. measurements). While specimens from the Canary Islands and from Great Britain are usually distinctly smaller than average *M. sulcata*, those from Northern Germany and from the Mediterranean are at the upper end of the size range.

Head with shape, pubescence and microsculpture similar to *M. sulcata*, but on average relatively wider (PW/HW: 0.92 - 1.05) and in specimens from northern Europe and from the Canaries usually with more shine and more distinctly punctate, particularly in males; eyes in most specimens relatively smaller, usually clearly shorter than temples in dorsal view; sides of head behind eyes often almost parallel, sometimes even widened posteriorly, as opposed to *M. sulcata* where the lateral outline of the head is usually slightly or distinctly convex and narrowed posteriorly; hind corners often more distinct than in *M. sulcata*; dorsal impression in both sexes similar to *M. sulcata*, but highly variable, usually rather weak in Canarian and British specimens and very pronounced in ♂♂ from the south of the Iberian Peninsula and particularly from Northern Africa.

Length of antennae highly variable (sea measurements), but mostly shorter than in *M. sulcata*, especially in Canarian specimens.

Pronotum of similar shape as in *M. sulcata*, but, except for specimens from the Mediterranean, often more shining; dorsal impressions in general shape as in *M. sulcata*, but highly variable, in ♂♂ ranging from rather shallow, ± parallel and sometimes weakly sulcate longitudinal impressions in Canarian material to deep suboval concavities in specimens from Northern Africa; dorsal impressions in ♀♀ often sulcate.

Elytra clearly wider (particularly so in specimens from the Azores) and at suture usually slightly shorter than, sometimes approximately as long as pronotum (EL/PL: 0.86 - 1.02); pubescence and microsculpture similar to *M. sulcata*.

Legs and tarsi similar to *M. sulcata*.

Abdomen with microsculpture, punctation and tergum and sternum VIII similar to *M. sulcata*.

♂: aedeagus very variable in size (255-330 μm), its shape similar to that in *M. sulcata*, but ventral process often stouter (Fig. 15a)

♀: capsule of spermatheca with shape similar to *M. sulcata*, but with sclerotized cuticular protrusion clearly projecting towards duct (Fig. 15b), the most reliable diagnostic character for the distinction from *M. sulcata*.

Bionomics and distribution:

The species is widely distributed with examined or reliable literature records (*M. lohmanderi* BERNHAUER) from the southern North Sea coasts of Scandinavia (Norway, Sweden), the western Baltic Sea (see also BERNHAUER 1927a, HORION 1967 and BENICK & LOHSE 1959), Germany (Helgoland), the North Sea coast of Great Britain as far north as Scotland, the Channel coasts of England and France, the Atlantic coasts from France to Spain and the northwestern Mediterranean from Spain to Southern France. In addition, *M. simillima* occurs in the Azores (see

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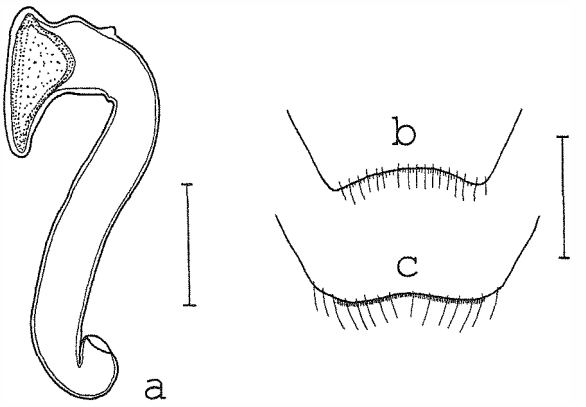
also GILLERFORS 1986), the Canary Islands (Tenerife, Gran Canaria, Fuerteventura, Lanzarote (material examined from the former two islands; reported as *Xenusa maritima* (WOLLASTON) in HERNANDEZ et al. (1994) from the latter two), and on the Mediterranean coasts of North Africa from Algeria to Egypt (Fig. 24). Concluding from the safe records known, the only region in which the distributions of *M. simillima* and *M. sulcata* overlap - not considering the doubtful single record of the latter in the northwest of France - is Southern France. Unfortunately, the localities for *M. simillima* in this region were either illegible or not indicated. Considering the extensive range of distribution of the species, its remarkable morphological variation does not appear surprising. *M. simillima* has been collected under similar ecological circumstances as *M. sulcata*. Two specimens taken in June were teneral.

2.4.4.6. *Myrmecopora* (*Xenusa*) *maritima* (WOLLASTON, 1860)

Figs 16a-c, 23

Tachyusa maritima WOLLASTON, 1860, 51f.
Tachyusa maritima WOLLASTON: WOLLASTON 1865, 456
syn. *Myrmecopora uvida* (ERICHSON): FAUVEL 1897, 342
Myrmecopora maritima (WOLLASTON): FAUVEL 1902, 150
nec *Myrmecopora (Xenusa) maritima* (WOLLASTON): SCHEERPELTZ 1972, 105
Xenusa maritima (WOLLASTON): LOHSE 1987, 138f.



Figs 16 a - c: *Myrmecopora maritima* (WOLLASTON) (LT). Spermatheca (**a**); hind margins of ♀ tergum and sternum VIII (**b, c**). Scales: **a**: 0.1 mm; **b - c**: 0.2 mm.

Type examined:
Lectotype ♀, present designation: Sao Vicente, *maritima* Woll., Syntype, The Madeira Is., T.V. Wollaston, B.M. 1855-7 (BMNH).

Comments:
WOLLASTON (1860) based his description on two specimens without specifying a holotype. The syntype on loan from the Wollaston collection at the BMNH is here designated as the lectotype. According to LOHSE (1987), who saw both syntypes without clearly selecting a lectotype, there is another syntype (♀), now a paralectotype, in the collection of the Hope Department of Entomology, Oxford.

DOI: 10.21248/contrib.entomol.47.1.69-151

Description of lectotype:

Measurements: TL: 2.7; AL: 1060; HL: 400; HW: 445; PL: 410; PW: 430; EL: 385; HTiL: 440; HTaL: 300; HT1L: 90; HT24L: 115.

Body colour dark brown with the elytra light brown, legs and antennae light brown, tarsi yellowish to yellowish brown. (The specimen may have lost colour to some extent, since it was collected approximately 140 years ago.)

Head slightly transverse (HW/HL: 1.1), distinctly larger than in *M. sulcata*, about as wide as in *M. brevipes* BUTLER (see below), but clearly more oblong than in that species; sides behind eyes subparallel; temples distinctly longer than eyes in dorsal view; hind margin ± truncate; dorsal surface somewhat shiny in spite of distinct microreticulation; punctation shallow, but distinct; front of vertex with shallow, roughly triangular impression.

Antennae long and slender; antennomeres 1 - 3 elongate and subequal in length, 4 - 6 distinctly oblong, 7 weakly oblong, 8 - 10 transverse, 11 shorter than the two preceding joints together.

Pronotum similar in shape to *M. sulcata*; slightly wider than long (PW/PL: 1.05) and narrower than head (PW/HW: 0.97); dorsal surface with rather superficial microreticulation and shallow punctation; median impression shallow, faintly sulcate, widened posteriorly and obsolete in anterior 1/4 of median line.

Elytra clearly wider and at suture 0.94x shorter than pronotum (EL/PL: 0.90 - 1.04), weakly microsculptured and with shallow, but distinct punctation; hind wings present.

Legs and tarsi longer than in *M. sulcata* (see measurements).

Abdomen with superficial microsculpture, punctation similar to *M. sulcata*.

♂: unknown.

♀: hind margin of tergum VIII deeply concave, that of sternum VIII with shallow central concavity (Figs 16b-c); spermatheca as in Fig. 16a.

Bionomics and distribution:

WOLLASTON (1860) collected the two types "during December 1858, below high-water mark, on the shingly beach at Sao Vicente". No further records have become known; those in HERNANDEZ et al. (1994) for the Canary Islands refer to the preceding species.

2.4.4.7. *Myrmecopora* (*Xenusa*) *minima* BERNHAUER, 1900

Figs 17a-g, 24, p. 151

Myrmecopora minima BERNHAUER, 1900, 537f.
Myrmecopora (Xenusa) buresi RAMBOUSEK, 1910, 21, **syn. nov.**
Myrmecopora (Xenusa) buresi RAMBOUSEK: SCHEERPELTZ 1972, 104f.
nec *Myrmecopora minima* BERNHAUER: SCHEERPELTZ 1972, 104
Xenusa pamphylica FAGEL, 1969, 120ff., **syn. nov.**

Types examined:

Myrmecopora minima BERNHAUER: Lectotype ♀, present designation (spermatheca examined): Attica, Reitter, *minima* Bernh. Type, coll. Bernhauer (FMNH).

Xenusa pamphylica FAGEL: Holotype ♂, Anatolia mér., Alanya (plage), VI.1968, G. Fagel, *pamphylica* n. sp. G. Fagel det., Type (IRSNB). Paratypes: 1♂, 2♀♀, same data as holotype (IRSNB).

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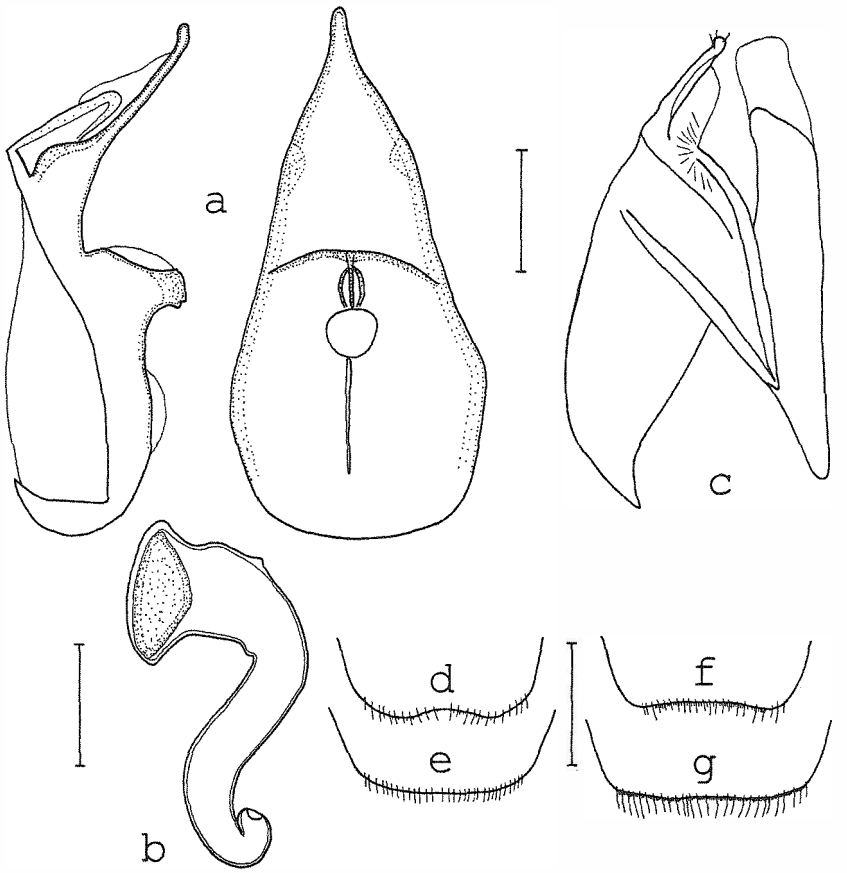

Figs 17 a - g: *Myrmecopora minima* BERNHAUER. Median lobe in lateral and in ventral view (**a**); spermatheca (**b**); paramere (**c**); hind margins of ♂ tergum and sternum VIII (**d, e**); hind margins of ♀ tergum and sternum VIII (**f, g**). Scales: **a - c**: 0.1 mm; **d - g**: 0.2 mm.

Comments:

Since a comparison of external characters and the genitalia showed that the types of *X. pamphylica* are doubtlessly conspecific with the lectotype of *M. minima* BERNHAUER, the former is here synonymized with the latter. In addition, *M. buresi* RAMBOUSEK is here recognized as a further synonym of *M. minima* BERNHAUER. The holotype of this species was looked for by Dr. Jelínek and myself in the Rambousek collection in the NMP, but could not be located. Only when the manuscript was practically finished was I informed that the specimen was out on loan and not immediately available. Nevertheless, an examination of the primary and secondary sexual characters and such prominent external characters as the short elytra and the short antennae of specimens, which were in absolute agreement with the original description, partly collected at the type locality (Burgas) with three specimens even identified by RAMBOUSEK himself, left no doubt that *M. buresi* in fact represents a brachypterous form of *M. minima* BERNHAUER.

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Further material examined:
BULGARIA: 4♂♂, 3♀♀, Burgas, III./IV.1909, leg. F.G. Rambousek, *buresi* m., det. Rambousek, colls. Frey, Leonhard, Rambousek, Scheerpeltz (DEI, NHMW, NMW, ZSM); 1♂, 2♀♀, Kranevo, 6.IX.1966, leg. P. Nohel, coll. Scheerpeltz (NHMW, cAss).
ROMANIA: 1♂, Dobroge, Mangalia, colls Breit/Scheerpeltz (NHMW).
GREECE: 2♀♀, Makedhonía, Hagia Triada near Thessaloníki, beach, 13.VIII.1964, leg. Puthz (cAss).
MOROCCO: 2♀♀, Casablanca, leg. Reitter, coll. Eppelsheim (NHMW, cAss).

Description:
Measurements:
a) Macropterous form (n=5): TL: 2.0 - 2.7; AL: 680 - 770; HL: 285 - 320; HW: 360 - 390; PL: 325 - 355; PW: 360 - 400; EL: 300 - 340; HTiL: 300 - 360; HTaL: 210 - 235; HT1L: 60 - 75; HT24L: 75 - 90.
b) Brachypterous form (n=11): TL: 1.8 - 2.2; AL: 635 - 725; HL: 265 - 295; HW: 325 - 355; PL: 300 - 330; PW: 325 - 350; EL: 210 - 245; HTiL: 285 - 300; HTaL: 195 - 210; HT1L: 60 - 75; HT24L: 75 - 90.
Dimorphic species: macropterous form larger than brachypterous form (cf. measurements). Body colour and general appearance similar to *M. sulcata*, but on average (macropterous) or clearly (brachypterous) smaller and whole body with less shine due to pronounced microsculpture.
Head distinctly transverse (HW/HL: 1.18 - 1.26); sides behind eyes subparallel, eyes slightly (macropterous) or distinctly (brachypterous) shorter than temples in dorsal view; posterior corners slightly more distinct than in average *M. sulcata*; sexual dimorphism of dorsal impression similar to *M. sulcata*, but in the ♂♂ examined less extensive, roundish and not reaching hind margin of head Antennae shorter and stouter than in *M. sulcata*; antennomeres 2 - 3 shorter and more strongly widened towards apex, 4 - 6 weakly and 7 - 10 strongly transverse.
Pronotum similar in shape, relative size and pubescence to *M. sulcata*; however, sexual dimorphism of dorsal impression less pronounced: in ♂♂ rather wide, but very shallow; in ♀♀ of similar width of depth, but obsolete in anterior 1/3 of pronotum.
Elytra in macropterous specimens clearly wider and at suture slightly shorter than pronotum (EL/PL: 0.90 - 0.97), in brachypterous specimens only indistinctly wider and clearly shorter than pronotum (EL/PL: 0.68 - 0.76); punctation more distinct and denser than in *M. sulcata*.
Legs and tarsi similar to *M. sulcata*.
Abdomen with more distinct microreticulation and therefore less shine than in *M. sulcata*.
♂: hind margin of tergum VIII distinctly concave, sternum VIII weakly convex posteriorly (Figs 17d,e); aedeagus with ventral process rather long, very acute and not angular in lateral view (Fig. 17a); paramere with broad condylite (Fig. 17c).
♀: tergum VIII broadly concave posteriorly, hind margin of sternum VIII straight to weakly convex (Figs 17e,f); capsule of spermatheca weakly truncate and with short apical processes (Fig. 17b).

Bionomics and distribution:
The brachypterous form of *M. minima*, the only known dimorphic species of *Myrmecopora*, has been recorded from the west coast of the Black Sea, the macropterous form from various localities in the Meditanean: the coasts of Greece, Southern Turkey (type locality of *X. pamphylica* FAGEL), and Morocco (Fig. 24). The scattered records indicate that, although rather widespread in the Mediterranean region, the species is apparently much rarer than *M. sulcata*

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(KIESENWETTER) and *M. simillima* (WOLLASTON). The holotype of *M. buresi* RAMBOUSEK was collected under seaweed, the types of *M. pamphylica* (FAGEL) "dans le gravier sous des détritus végétaux" (FAGEL 1969).

2.4.4.8. *Myrmecopora* (*Xenusa*) *anatolica* (FAGEL, 1969), comb. nov.

Figs 18a-f, 24, p. 151

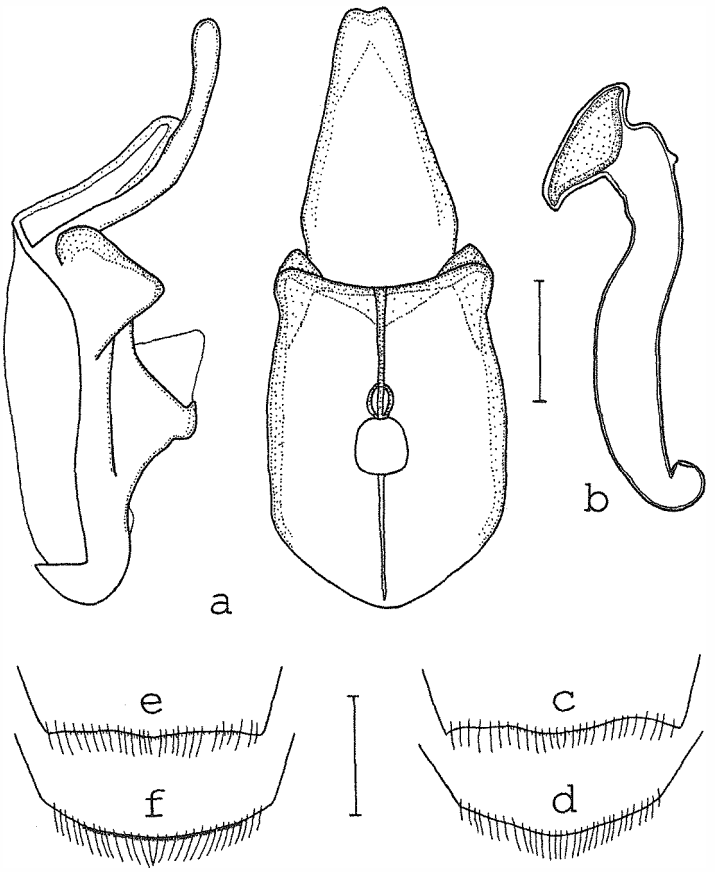
Xenusa anatolica FAGEL, 1969, 117ff.

Types examined:

Holotype ♂, Anatolie mér., Alanya (plage), VI.1968, G. Fagel, *anatolica* n. sp., G. Fagel det., Type (IRSNB). Paratypes: 6♂♂, 4♀♀, same data as holotype (IRSNB).

Further material examined:

CYPRUS: 2♂♂, 4♀♀, 10 km O Limassol, sandy beach, under seagrass, 8.IV.1995, leg. Assing & Wunderle (cAss, cWun).



Figs 18 a - f: *Myrmecopora anatolica* (FAGEL). Median lobe in lateral and in ventral view (**a**); spermatheca (**b**); hind margins of ♂ tergum and sternum VIII (**c, d**); hind margins of ♀ tergum and sternum VIII (**e, f**). Scales: **a - b**: 0.1 mm; **c - f**: 0.2 mm.

DOI: 10.21248/contrib.entomol.47.1.69-151

Description:
Measurements (n=17): TL: 2.2 - 3.5 (2.9); AL: 965 - 1130 (1064); HL: 315 - 380 (346); HW: 405 - 455 (430); PL: 360 - 430 (402); PW: 405 - 470 (441); EL: 330 - 440 (390); HTiL: 370 - 470 (443); HTaL: 250 - 320 (284); HT1L: 75 - 100 (88); HT24L: 95 - 120 (112).
Body colour and proportions similar to *M. sulcata*, but body size on average larger.
Head sometimes slightly widened behind eyes, but in general shape, pubescence, microsculpture, punctation and sexual dimorphism of dorsal impression highly similar to *M. sulcata*.
Antennae longer and slenderer than in *M. sulcata* (see also measuments), antennomeres 8 - 10 only weakly transverse.
Pronotum similar to *M. sulcata*, but sexual dimorphism of dorsal impression more pronounced: longitudinal impression in ♂♂ mostly deeper than in *M. sulcata* and wide, with maximum width and depth usually in anterior half, in ♀♀ narrower and often sulcate, similar to *M. sulcata*; shape and depth of dorsal impression, however, subject to some variability.
Elytra, legs and abdomen similar to *M. sulcata*. Hind margin of abdominal tergum VIII faintly sinuate (Figs 18c,e).
♂: sternum VIII weakly pointed posteriorly (Fig. 18d); aedeagus with ventral process distinctly longer and slenderer than in *M. sulcata*, in lateral view strongly curved (Fig. 18a); condylite of paramere slender.
♀: hind margin of sternum VIII convex (Fig. 18f); spermatheca with relatively smaller capsule and shorter apical processes than in *M. sulcata* (Fig. 18b).

Bionomics and distribution:
At present, the species is only known from the type locality in Southern Turkey, where it was collected together with *M. minima* BERNHAUER, and from Cyprus, where P. Wunderle and I found it together with *M. laesa* (ERICHSON) and *M. boehmi* BERNHAUER under the conditions indicated above (Fig. 24, p. 151).

2.4.4.9. *Myrmecopora* (*Xenusa*) *bernhaueri* KOCH, 1936
Figs 19a-f

Myrmecopora (Xenusa) bernhaueri KOCH, 1936, 210ff.
Myrmecopora (Xenusa) bernhaueri KOCH, SCHEERPELTZ 1972, 103

Types examined:
Lectotype ♂, present designation: Sinai (Tor), 23.II.1933, A. Schatzmayr, Holotypus [sic!], *M. (X.) bernhaueri* Koch, det. C. Koch (MCSNM). Paralectotypes, here designated: 1♂, same data as lectotype, Paratypus (MCSNM); 1♀, Sinai (Tor), 5.III.1933, A. Schatzmayr, Paratypus (MCSNM).

Further material examined:
EGYPT: 2♂♂, 3♀♀, Ghardagah, Abu Menkar, 22.IV.1956, leg. Kühnelt, coll. Scheerpeltz (NHMW); 1♂, Ghardagah, III.1956, leg. Remane (cAss); 22♂♂, 15♀♀, coast of Red Sea, Hurghada, beach, 26.II.1993, leg. Wunderle (cAss, cWun); 1♀, Sharm el Sheikh, 5.IV.1980, leg. Renner (cAss); 1♂, 2♀♀, Tor (Sinai), 26.II./8.III.1935, leg. Wittmer, coll. Frey (ZSM).
ISRAEL: 1♀, Elat, IV.1965, leg. Goosens (IRSNB).

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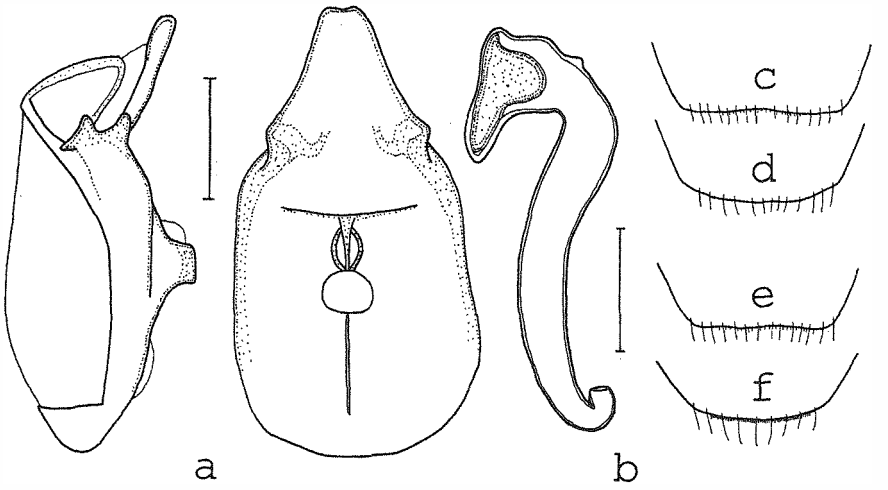

Figs 19 a - f: *Myrmecopora bernhaueri* KOCH. Median lobe in lateral and in ventral view (**a**); spermatheca (**b**); hind margins of ♂ tergum and sternum VIII (**c, d**); hind margins of ♀ tergum and sternum VIII (**e, f**). Scales: **a - b**: 0.1 mm; **c - f**: 0.2 mm.

Comments:
Since KOCH (1936) did not specify a holotype in his original description, the specimens indicated above had to be considered syntypes irrespective of the type labels attached to them.

Description:
Measurements (n=30): TL: 2.1 - 2.9 (2.4); AL: 840 - 1030 (934); HL: 310 - 360 (330); HW: 370 - 425 (397); PL: 315 - 400 (355); PW: 355 - 425 (390); EL: 285 - 365 (326); HTiL: 340-425 (386); HTaL: 240 - 290 (264); HT1L: 70 - 100 (80); HT24L: 90- 120 (103).
Body colour, especially legs and antennae, on average slightly lighter than in *M. sulcata*, but in size and body proportions highly similar; integument with less distinct microsculpture and therefore more shine than in *M. sulcata*.
Head behind eyes usually ± parallel, but shape on the whole very similar to *M. sulcata*; punctation on average more distinct due to weaker microreticulation; dorsal impression in ♀♀ similar to *M. sulcata*, but in ♂♂ less extensive, mostly weakly sulcate centrally.
Antennae of similar size and shape as in *M. sulcata*, but antennomeres 4 weakly oblong to subquadrate, 5 subquadrate to weakly transverse, 6 weakly and 7 - 10 distinctly transverse.
Pronotum with shape and relative size similar to *M. sulcata* (see measurements), but punctation usually distinct due to superficial microreticulation; sexual dimorphism weak: longitudinal impression in ♂♂ mostly rather shallow, sometimes even effaced near anterior margin, rarely sulcate; in ♀♀ shallow and mostly sulcate; shape and depth of dorsal impression subject to some variability.
Legs, elytra and abdomen similar to *M. sulcata*, the latter two, however, with weaker microsculpture and consequently more shine.
Abdomen with more shine than forebody due to more superficial microreticulation; depth and density of punctation highly variable; hind margins of tergum and sternum VIII faintly concave in both sexes, their pubescence and marginal setae very sparse (Figs 19c-f).

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♂: aedeagus with ventral process only weakly bent in lateral view and broadly triangular in ventral view (Fig. 19a); condylite of paramere slender.
♀: capsule of spermatheca relatively smaller than in *M. sulcata*; sclerotized cuticular protrusion distinctly projecting towards duct (Fig. 19b).

Bionomics and distribution:
Judging from the records that have become known the area of distribution of *M. bernhaueri* appears to be restricted to the coasts of the Red Sea (Gulf of Suez, Gulf of Aqaba). All the specimens examined were collected in winter and spring.

2.4.4.10. *Myrmecopora* (*Xenusa*) *brevipes* BUTLER, 1909
Figs 20a-g

Myrmecopora brevipes BUTLER, 1909, 29ff., 63
nec *Myrmecopora brevipes* BUTLER: SCHEERPELTZ 1972, 102

Types examined:
Lectotype ♂, here designated and labelled accordingly (aedeagus examined): Dawlish Warren, seaweed, III.1907, de la Garde, *brevipes*, coll. de la Garde (ECM). Paralectotypes, present designation: 2♂♂, 2♀♀, Dawlish Warren, tide rubbish, XI.1908, leg. de la Garde, *brevipes*, coll. de la Garde (ECM).

Comments:
In spite of rather extensive inquiries involving the assistance of several British museums and coleopterists I have been unable to locate the syntypes collected by BUTLER himself. However, in his original description, which does not specify a holotype, BUTLER (1909) states that, apart from his own material, he had "seen a good many specimens taken in Devonshire, and kindly sent for [his] inspection by Mr. KEYS and Mr. DE LA GARDE, the former from Plymouth and Slapton, the latter from Dawlish" (p. 30) . Since these specimens have to be considered syntypes, too, a lectotype was chosen from the Dawlish specimens in the DE LA GARDE collection, which is held at the ECM.

Further material examined:
ENGLAND: 2♂♂, 4♀♀, Devon, Exmouth, IX.1976, leg. Owen (cOwe, cAss).
FRANCE: 1♀, Bretagne, Belle Île en Mer, VII.1929, leg. Frennet, coll. Fagel (IRSNB); 4♂♂, 3♀♀, Languedoc, Hérault, coll. Scheerpeltz (NHMW, cAss).

Description:
Measurements (n=13): TL: 2.1 - 3.0; AL: 935 - 1180; HL: 325 - 380; HW: 410 - 490; PL: 360 - 440; PW: 400 - 480; EL: 330 - 410; HTiL: 380 - 470; HTaL: 240 - 320; HT1L: 80 - 115; HT24L: 100 - 120.
Closely related and externally similar to *M. sulcata*, but on the whole larger (see measurements); specimens from England on average larger than those from Southern France. Body colour - in the recently collected material from England - blackish with the elytra slightly lighter; legs ± bicoloured, dark to blackish brown with the proximal part of the femora, the knees, the apices of the tibiae and the tarsi ± yellowish to light brown; antennae light to dark brown with the first antennomere slightly darker than the flagellum.
Head relatively massive, distinctly transverse (HW/HL: 1.21 - 1.31); sides behind eyes subparallel; eyes slightly shorter than temples in dorsal view; hind margin concave; dorsal surface

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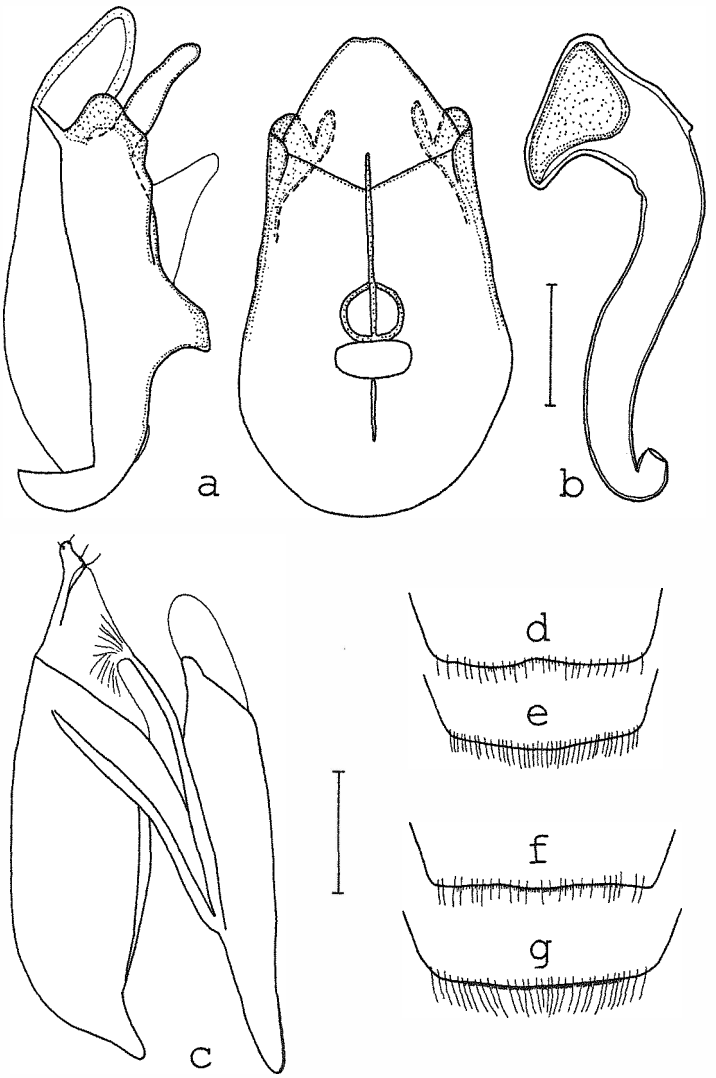
with distinct microreticulation; punctation more distinct than in average *M. sulcata*; pale dorsal pubescence mostly directed anteriorly or antero-laterally; dorsal surface in ♂♂ shallowly concave, sometimes with faint median sulcus, particularly near hind margin; dorsal surface in ♀♀ from England flat to faintly concave, usually with faint, sometimes almost effaced posterior sulcus, rarely with distinct median impression.
Antennae similar to *M. sulcata*, but longer (sea measurements) and stouter.



Figs 20 a - g: *Myrmecopora brevipes* BUTLER. Median lobe in lateral and in ventral view (**a**); spermatheca (**b**); paramere (**c**); hind margins of ♂ tergum and sternum VIII (**d, e**); hind margins of ♀ tergum and sternum VIII (**f, g**). Scales: **a - c**: 0.1 mm; **d - g**: 0.2 mm.

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Pronotum similar to *M. sulcata*, but on average relatively narrower (PW/HW: 0.93 - 1.0);dorsal impression shallower than in *M. sulcata*: in ♂♂ rather wide, but very shallow and weakly sulcate in the middle; ♀♀ partly with a faint and narrow median sulcus, sometimes almost effaced.
Elytra clearly wider and at suture slightly shorter than pronotum (EL/PL: 0.85 - 0.98); dorsal surface with distinct microreticulation; punctation more distinct than in average *M. sulcata*, punctures mostly exceeding interstices in width; hind wings present.
Legs and tarsi on average longer than in *M. sulcata*; first tarsomere of hind tarsi slightly shorter than or approximately as long as the combined length of tarsomeres 2 - 4 (HT1L/HT24L: 0.85 - 1.0).
Abdomen with punctation and microsculpture similar to *M. sulcata*; tergum VIII straight to weakly concave in both sexes (Figs 20d,f).
♂: hind margin of sternum VIII bluntly convex (Fig. 20e); aedeagus with characteristic crista (lateral view!), ventral process in ventral view short and broad, in lateral view only weakly bent (Fig. 20a); paramere with broad condylite (Fig. 20c).
♀: hind margin of sternum VIII weakly convex (Fig. 20g); spermatheca with longer duct than in *M. sulcata*, capsule relatively smaller, sclerotized cuticular protrusion projecting towards duct (Fig. 20b).

Bionomics and distribution:
Considering the large distance between the type localities in the south of England and the record from the northwest and south of France, it appears likely that *M. brevipes* is more widespread than is presently known. Since this species has commonly been misinterpreted (see remarks below *M. oweni* sp. n.), an evaluation of literature records is here refrained from.

2.4.5. The subgenus *Euphorbiusa* nov.

Type species: *Myrmecopora gravata* PEYERIMHOFF, present designation.

Description:
Integument of head, pronotum,elytra and scutellum with distinct isodiametric microsculpture and ± mat, abdominal terga with superficial and mostly transverse microsculpture.
Head with obtusely rounded posterior corners; dorsal surface faintly convex, in ♂♂ without impression.
Antenna distinctly incrassate apically (Fig. 21e); antennomeres 1 - 3 clearly elongate, 4 distinctly transverse, 5 - 8 subquadrate to weakly transverse, 9 - 10 transverse and 11 about twice as long as broad.
Right mandible with obtuse molar tooth, with rudiments of faint teeth in dorsal molar region (Fig. 21f); labrum with anterior membranous appendage trilobed (Fig. 21g); third joint of maxillary palpus sparsely pubescent.
Pronotum with indistinct punctation; dorsally in ♂♂ with longitudinal median sulcus, which is anteriorly effaced and posteriorly gradually deepened and ending in an impression of roughly triangular shape.
Elytra with fine, slightly granulose punctation; microsculpture clearly less distinct than on pronotum; hind wings present. Mesosternal process apically obtuse.
Abdomen with tergal punctation fine and ± evenly spaced punctation; tergum VIII weakly pointed posteriorly.
♂: Posterior margin of tergum VIII with fringe of microscopic hairs; aedeagus unmodified, ventral process without apical incision.

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Ecology and distribution:
The only known species of the subgenus apparently inhabits dead *Euphorbia* and occurs in North Africa.

2.4.5.1. *Myrmecopora gravata* PEYERIMHOFF, 1945
Figs 21a-g

Myrmecopora gravata PEYERIMHOFF, 1945, 254f.

Lectotype ♂, here designated and labelled accordingly: Maroc, Timoulitt, coll. Thery, euphorbes, ex coll. Peyerimhoff, *Myrmecopora gravata* Peyerimhoff Type 2, 'Paratype´ [sic!] (MNHNP).
Paralectotype ♂ (teneral and partly damaged), here designated and labelled accordingly: Maroc, Qued Abid près Demnat, 29 juin 1923, *Euphorbia resinifera*, ex coll. Peyerimhoff, *Myrmecopora gravata* Peyerimhoff Type 1, 'Holotype´ [sic!] (MNHNP).

Comments:
Without explicitly designating a holotype PEYERIMHOFF (1945) based his original description on two specimens, which must therefore be considered syntypes. Since both of them were ♂♂, one of them teneral, the mature specimens is here selected as lectotype.

Description:
Measurements (LT, PLT): TL: 3.4, 3.2; HL: 500, 455; HW: 535, 500; PL: 575, 515; PW: 610, 560; EL: 470, 410; HTiL: 635, 595; HTaL: 470, 425; HT1L: 135, 120; HT24L: 180, 165.
Colour of head and pronotum blackish brown to black; elytra and abdomen dark brown with tergum VI somewhat darker; legs and antennae brown to dark brown.
Head wider than long (HW/HL: ca. 1.1), shape roughly transversely quadrangular, sides only faintly convex, not widened behind eyes, posterior corners obtusely rounded; eyes large, approximately as long as temples in dorsal view; dorsal surface with distinct isodiametric microsculpture, mat, with rather sparse fine punctation and with inconspicuous pale pubscence ± directed mediad; ♂♂ without dorsal impression.
Antennae distinctly incrassate apically (Fig. 21e).
Pronotum with maximal width in anterior half, wider than head (PW/HW: 1.10 - 1.15) and wider than long (PW/PL: 1.05 - 1.10); lateral margins posteriorly weakly concave, hind angles obtuse or rounded; dorsal surface mat due to very distinct isodiametric microsculpture, the fine punctation therefore indistinct; pubescence in median line somewhat irregular, in posterior half caudad and in anterior half partly cephalad or caudad; pubescence on either side of median line ± transverse; ♂♂ with longitudinal median sulcus, not reaching anterior margin and gradually increasing in depth posteriorly, widened to triangular impression a short distance before posterior margin.
Elytra clearly wider than pronotum, their length at suture shorter than pronotum (EL/PL: 0.8); dorsal surface more shining than head and pronotum, with fine and slightly granulose punctation; pubescence pale, decumbent and rather inconspicuous; scutellum with distinct microsculpture and therefore mat, punctation indistinct; hind wings present.
Legs of intermediate length (see measurements); hind tarsi shorter than hind tibiae (HTaL/HTiL: 0.70 - 0.75); first tarsomere of hind tarsi approximately as long as the following 2 tarsomeres together (HT1L/HT24L: 0.70 - 0.75).
Abdomen with fine and ± evenly spaced punctation; surface more shining than forebody; with superficial, mostly transverse microsculpture.

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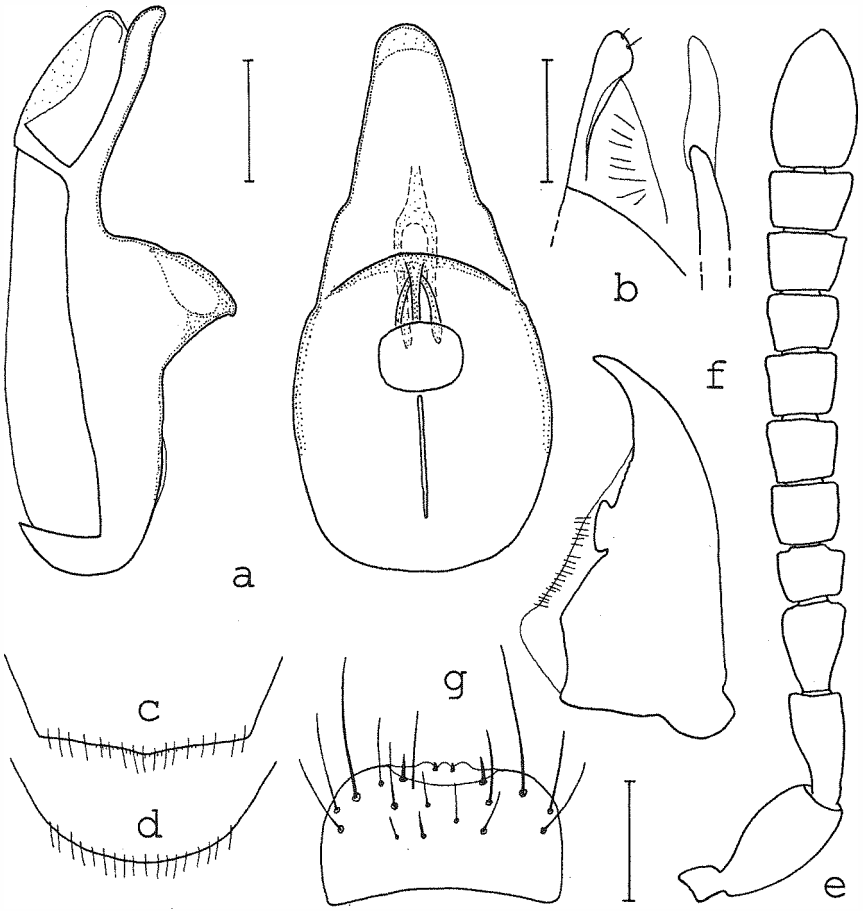
♂: sternum VIII convex posteriorly; tergum VIII with fringe of microscopic hairs at posterior margin (Figs 21c,d); aedeagus and paramere as in Figs 21a,b.
♀: unknown.



Figs 21 a - g: *Myrmecopora gravata* PEYERIMHOFF (LT). Median lobe in lateral and in ventral view (**a**); apical part of paramere (**b**); hind margins of ♂ tergum and sternum VIII (**c, d**); antenna (**e**); right mandible (**f**); labrum (**g**). Scales: **a - b, f - g**: 0.1 mm; **c - e**: 0.2 mm.

Bionomics and distribution:

The two syntypes were collected in Morocco in dead *Euphorbia* (PEYERIMHOFF 1945). So apparently the species has similar habitat requirements as *Euphorbagria rotundicollis* (LINDBERG) (ASSING, 1997). The records from the north of Algeria (Hamman Salahine, Biskra, and Ain Zaatout, Mt. Aures) (BOHAC 1980) are based on specimens which were examined in the course of this study and which do not belong to this species, but to a yet unidentified falagriine genus.

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2.6. Key to the Western Palaearctic species of *Myrmecopora* SAULCY

For an explanation of the abbreviations and further comments the introduction of section 2.4. should be referred to. Note that *M.* (s. str.) *crassiuscula* (AUBÉ) is not accounted for in the key, since no material was available. For a safe identification, an examination of the genitalia is advised; it is indispensable in most species of the subgenus *Xenusa*. Some of the species of this subgenus are extremely variable regarding external characters.

1. Integument of pronotum and elytra without microsculpture between punctures; head and abdomen occasionally with only traces of or superficial microsculpture. 2
- Integument of body between punctures with distinct isodiametric or transverse microsculpture, which is sometimes less distinct on abdomen. 10

2. Colour of head, pronotum and abdomen dark brown to black, the elytra often lighter; punctation of pronotum and elytra very dense and coarser, interstices on pronotum as wide as or smaller than punctures; dorsal surface of abdomen and particularly head often with ± indistinct or superficial microsculpture; antenna clearly darkened and incrassate apically, with antennomeres 4 subquadrate and 5 - 10 increasingly, 9 and 10 distinctly transverse; legs of normal shape and length. ♂♂ with central ± extensive dorsal impression on head; aedeagus as in Fig. 9a. ♀♀: spermatheca as in Fig. 9c. Occurring in moist terrestrial habitats of the Mediterranean. . . . . ***M. (Iliusa) fugax*** (ERICHSON)
- Colour of head, pronotum, elytra and abdomen reddish brown to dark brown with abdominal terga often partly darker; punctation of pronotum and elytra fine and less dense, interstices clearly larger than punctures, whole surface therefore with distinctly more shine; microsculpture absent on head, very indistinct traces rarely visible on parts of the abdomen; antennae ± reddish with the base usually lighter, very slender and only weakly incrassate apically, antennomeres 4 - 5 elongate, 6 - 9 subquadrate or elongate, and 10 elongate to faintly transverse; legs long with conspicuously long and slender tarsi. ♂♂ with less extensive, indistinct to very deep dorsal impression in posterior area of head. In ± dry terrestrial habitats, all species presumably myrmecophilous. Subgenus ***Myrmecopora* s. str.** 3

3. Pronotum as wide as long or only slightly transverse (PW/PL: 1.0 - 1.1), scarcely wider than head (PW/HW: 1.01 - 1.09). 4
- Pronotum distinctly transverse (PW/PL: 1.11 - 1.35) and usually clearly wider than head (PW/HW: 1.06 - 1.26, in most cases 1.1 - 1.2). 5

4. Antennae and legs shorter and less slender: antennomere 4 subquadrate to weakly elongate, 5 - 9 ± elongate and 10 subquadrate to weakly elongate (Fig. 1h); hind legs shorter (HTiL: 575 - 800; HTaL: 560 - 725); hind tarsi shorter than hind tibiae (HTaL/HTiL: 0.84 - 0.94); first tarsomere of hind tarsi shorter than the following 3 tarsomeres together (HT1L/HT24L: 0.83 - 0.90). Eyes larger, temples in dorsal view clearly less than twice as long as eyes. Sexual dimorphism pronounced: ♂♂ with variable, but distinct and mostly rather deep and extensive longitudinal impression in the middle; ♀♀ only with very shallow, usually faintly sulcate impression, which increases in depth posteriorly and is often restricted to posterior half of pronotum.
♂: ventral process of median lobe shorter and relatively broader (Fig. 1a); apical lobe of paramerite not distinctly enlarged apically (Fig. 1g).

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♀: spermatheca with more distinctly enlarged and strongly sclerotized capsule (Fig. 1b).
Israel, Lebanon, Syria, southeastern Anatolia. . . . . ***M.* (s. str.) *publicana*** SAULCY

- Antennae and legs longer and slenderer than in any other species of the subgenus: antennomeres 2 - 3 2.5-3x as long as apical width, 4 - 10 all clearly elongate and only weakly increasing in width (Fig. 2h); hind legs very long (HTiL: 680 - 830; HTaL: 665 - 785); hind tarsi approximately as long as hind tibiae (HTaL/HTiL: 0.94 - 1.0); first tarsomere roughly as long as the following 3 tarsomeres together (HT1L/HT24L: 0.90 - 1.08). Eyes on average smaller, temples in dorsal view approximately twice as long as eyes. Sexual dimorphism less pronounced: ♂♂ with shallow and less broad dorsal impression, which is usually faintly sulcate along the middle; ♀♀ with very shallow and faintly sulcate impression along midline.
♂: ventral process of median lobe longer and slenderer in ventral view (Fig. 2a); apical lobe of paramerite enlarged apically (Fig. 2g).
♀: spermatheca with slender and less strongly sclerotized capsule (Fig. 2b).
Southern Turkey. . . . . ***M.* (s. str.) *wunderlei*** sp. n.

5. Small species (TL: 2.5 - 3.2). Antennae shorter (AL: 950 - 1160) (Fig. 4f), and legs relatively short: antennomeres 4 -5 or 4 - 6 slightly elongate, 6-9 or 7-9 subquadrate or slightly oblong, and 10 subquadrate or slightly transverse. Legs, especially tarsi, shorter (HTaL: 500 - 605). Dorsal surface of head and pronotum rather convex; the latter clearly transverse (PW/PL: 1.22 - 1.35). Sexual dimorphism very indistinct: ♂♂ with very faint, almost obsolete dorsal impression on head, pronotum with roughly triangular shallow median impression near posterior margin and very fine and narrow, almost obsolete sulcus along median line; ♀♀ with shallow triangular impression, occasionally with short and sulcate anterior extension.
♂: ventral process of median lobe relatively wide and short in ventral view (Figs 4a).
♀: spermatheca similar to that in *M. pygmaea* (Fig. 4b).
Only known from the surroundings of Izmir, Western Anatolia, and the southeast of Bulgaria. . . . . ***M.* (s. str.) *convexula*** sp. n.

- Antennae longer (AL: >1100) and slenderer, antennomeres 6 - 9 elongate, 10 not transverse. Hind tarsi longer (HTaL: >530). Dorsal surface of head and pronotum less convex or flattened. Sexual dimorphism usually more distinct: ♂♂ mostly with shallow to deep dorsal impression on head, pronotum generally with broader longitudinal impression; ♀♀ usually with more extensive impression in posterior half of pronotum. 6

6. On average smaller (TL: 2.4 - 3.5; HW: 450 - 550; PW: 480 - 620); variable species. Antennae usually less slender; antennomere 3 mostly shorter and less distinctly widened apically, penultimate segment subquadrate or slightly elongate (Fig. 3g). Pronotum neither strongly flattened nor conspicuously convex. Sexual dimorphism relatively weak: ♂♂ usually with very shallow dorsal impression on head, pronotum with longitudinal impression of variable, but mostly little depth and width along midline; ♀♀ only with very shallow impression, which is usually confined to posterior half, anteriorly sometimes continued as a fine narrow sulcus.
♂: ventral process of median lobe in ventral view at base angular, rather slender and relatively long, lateral margins ± straight, sometimes subparallel (Fig. 3a).
Balkans, from Croatia to Greece. . . . . ***M.* (s. str.) *pygmaea*** (SACHSE)

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- On average larger (TL: 3.2 - 3.5); HW: 540 - 590; PW: 600 - 680). Antennae usually slenderer, antennomere 3 long and distinctly widened apically, penultimate segment elongate (cf. Fig. 6c). Pronotum sometimes flattened or distinctly convex. Sexual dimorphism mostly more distinct: ♂♂ often with deeper impressions on head and pronotum. ♂ genitalia different. 7

7. Body slenderer, HW: 545, PW: 605. Pronotum distinctly convex, lateral margins in posterior half ± straight, hind angles indistinct. ♂♂ with shallow and ill-defined dorsal impression on head, on pronotum with rather narrow, weakly sulcate longitudinal impression. ♂: ventral process of median lobe similar to that in *M. pygmaea*, relatively slender and long and with straight margins, but without angle at base; aedeagus larger than in *M. pygmaea* (Fig. 8a).
   Crete (Greece). . . . . ***M.* (s. str.) *fornicata*** sp. n.
- Body broader, HW: >550, PW: >620. Pronotum more weakly convex or conspicuously flattened. ♂♂ with wide longitudinal impression on pronotum. ♂ genitalia different. 8

8. Head and pronotum somewhat flattened and with very fine punctation, the former distinctly widened behind eyes; pronotum with pronounced hind angles and with lateral margins distinctly concave in posterior half. ♂♂ with shallow and ill-defined dorsal impression on head, pronotum along median line with rather broad, but shallow longitudinal impression. ♂: ventral process of median lobe in ventral view with straight and distinctly converging lateral margins, broader and relatively shorter than in *M. pygmaea* (Fig. 7a).
   Crete (Greece). . . . . ***M.* (s. str.) *plana*** sp. n.
- Head and pronotum not flattened and with more distinct and denser punctation; lateral margins of pronotum less strongly concave in posterior half. ♂♂ with rather deep impression on head, pronotum with more pronounced longitudinal impression along median line. ♂ genitalia different. 9

9. Head distinctly widened behind eyes; pronotum less convex and with slightly concave lateral margins posteriorly. ♂♂ with pronounced, very large, deep and well-defined impression on head.
   ♂: ventral process of median lobe in ventral view of unique shape (Fig. 6a); velum of condylite extremely long (Fig. 6b).
   Crete (Greece). . . . . ***M.* (s. str.) *elisa*** sp. n.
- Head not distinctly dilated behind eyes; pronotum more convex, lateral margins ± straight posteriorly. ♂♂ with distinct, but less deep and well-defined dorsal impression on head, longitudinal impression on pronotum of roughly the same shape, but deeper; ♀♀ near hind margin of pronotum with rather shallow, roughly triangular median impression with very faint and short sulcate anterior extension.
   ♂: ventral process of median lobe in ventral view rather long and slender (Fig. 5a); velum of condylite of normal length.
   Southwest Anatolia. . . . . ***M.* (s. str.) *hilfi*** SCHEERPELTZ

10. ♂♂ without dorsal impression on head, pronotum with narrow, posteriorly gradually deepened median sulcus. Right mandible with obtuse molar tooth and only rudiments of faint teeth in dorsal molar region.

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♂: ventral process of median lobe without apical incision (Fig. 21a).
♀: unknown.
Inhabitant of dead *Euphorbia*. Morocco. . . . ***M.* (*Euphorbiusa*) *gravata*** PEYERIMHOFF

- ♂♂ with dorsal impression or large concavity on head, pronotum often with wide longitudinal median impression. Right mandible with acute molar tooth and faint teeth in dorsal molar region.
♂: ventral process of median lobe in ventral view ± incised apically or verry acute; in one species with very convex and distinctly oblong pronotum without such incision.
♀: spermatheca with relatively long duct and apically truncate capsule.
Inhabitants of seashores. 11

11. Body length 2.7 - 4.4 mm. Head and pronotum, except for the longitudinal median impression, distinctly convex, the latter oblong (PW/PL: 0.88 - 0.97). Legs long and slender; hind tarsi very long (>500 μm), only slightly shorter than hind tibiae (HTaL/HTiL: 0.80 - 0.93); first tarsomere of hind tarsi approximately as long as the combined length of tarsomeres 2 - 4 (HT1L/HT24L: 0.90 - 1.15). Abdomen with microsculpture composed of transverse striae or transverse meshes. Labrum trilobed.
♂: head posteriorly with faintly sulcate dorsal impression; ventral process of median lobe not incised apically (Fig. 10a).
♀: head without dorsal impression, evenly convex; capsule of spermatheca not distinctly truncate and without process (Fig. 10c).
Coasts of Southern Europe and North Africa. . . . . ***M.* (*Paraxenusa*) *laesa*** (ERICHSON)

- Head and pronotum less convex; pronotum at least as wide as long, mostly transverse. Legs shorter; hind tarsi <500 μm, in most species distinctly shorter than hind tibiae; first tarsomere of hind tarsi usually shorter than the combined length of tarsomeres 2 - 4. Abdomen with ± isodiametric microreticulation. Labrum bilobed. Species often smaller.
♂: head dorsally with often extensive central concavity; ventral process of median lobe incised apically or verry acute.
♀: head with ± shallow dorsal impression anteriorly; capsule of spermatheca with more distinct cuticular protrusion, truncate and with process.
Subgenus *Xenusa* MULSANT & REY 12

12. Larger species (TL: 2.4 - 3.9 mm; AL: 1100 - 1600; HL: 360 - 530; HW: 450 - 605; PL: 430 - 605; PW: 440 - 605; HTiL: 445 - 700; HTaL: 285 - 500). Antennae usually longer, antennomere 4 oblong, penultimate joint subquadrate or only slightly transverse. . . 13

- Smaller species (TL: 1.8 - 3.5 mm; AL: 680 - 1180; HL: 285 - 400; HW: 270 - 490; PL: 300 - 440; PW: 320 - 480; HTiL: 280 - 470; HTaL: 195 - 320). Antennae usually shorter, antennomere 4 mostly subquadrate to weakly oblong, penultimate joint in most species distinctly transverse. 15

13. On average smaller, 2.4 - 3.4 mm. Pubescence of elytra usually distinctive: on inner 2/3 of each elytron in most specimens almost completely transverse. Legs, especially tarsi, short (HTiL: 445-560; HTaL: 285 - 380). Sexual dimorphism of pronotum not pronounced.
♂: aedeagus smaller, lateral parts at base of ventral process in ventral view not projecting, in lateral view with distinctive crista and lateral structures (Fig. 13a); apical lobe of paramere characteristic (Fig. 13c).

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♀: spermatheca smaller, duct slender (Fig. 13b).
Coasts of Southwest England, Northern and Western France. . . . ***M. (X.) oweni*** sp. n.

- On average larger, 2.4 - 3.9 mm. Pubescence of elytra ± diagonal. Legs longer (HTiL: >500; HTaL: >345).
♂: aedeagus larger; lateral parts, ventral process, crista and apical lobe of paramere of different shape.
♀: spermatheca larger. 14

14. 2.9 - 3.9 mm. Head less distinctly transverse (HW/HL: 1.04 - 1.24). Antennae on average longer (AL: 1300 - 1600) (Fig. 11h). Pronotum as wide as long or only slightly transverse (PL/PW: 0.98 - 1.07). Legs on average longer (HTiL: 590 - 700; HTaL: 430 - 500). Dorsal impression of head on average shallower, in ♀♀ not reaching hind margin. Sexual dimorphism of pronotum not pronounced: ♂♂ with variable, but distinct and ± parallel longitudinal impression, which is often weakly sulcate in the middle; ♀♀ on average with shallower, narrower and anteriorly narrowed impression (variable!), often approaching the ♂ condition.
♂: aedeagus larger; lateral parts of median lobe characteristic, in ventral view projecting behind base of ventral process, the latter relatively short and wide (Fig. 11a).
♀: spermatheca larger; capsule with sclerotized cuticular protrusion as in Fig. 11c.
Coasts of Northwest Germany, South England, Western and Southern Europe, coast of the Black Sea. . . . . ***M. (X.) uvida*** (ERICHSON)

- 2.4 - 3.9 mm. Head strongly transverse (HW/HL: 1.22 - 1.40). Antennae on average shorter (AL: 1170 - 1450). Pronotum at least slightly transverse (PW/PL: 1.03 - 1.10). Legs on average shorter (HTiL: 500 - 635; HTaL: 345 - 445). Dorsal impression of head on average deeper, in ♀♀ usually with faint sulcate extension reaching hind margin. Sexual dimorphism of pronotum pronounced: ♂♂ with charateristic dorsal impression, which is of roughly oval shape, therefore widest in the middle, very deep, rather well-defined and not sulcate; ♀♀ with distinctly less deep, longitudinal and sulcate impression, usually widest near hind margin and often similar to ♂ *M. uvida*.
♂: aedeagus smaller and with slenderer ventral process; lateral parts of median lobe different, in ventral view not projecting behind base of ventral process (Fig. 12a).
♀: spermatheca smaller; capsule with sclerotized cuticular protrusion of different shape (Fig. 12b).
Coasts of the Mediterranean. . . . . ***M. (X.) boehmi*** BERNHAUER

15. Rather small (TL: 1.8 - 2.7), dimorphic species; elytra in brachypterous form distinctly (< 0.78x) shorter than pronotum; antennae shorter with antennomeres 2 - 3 short and strongly widened towards apex, antennomeres 4 - 6 weakly and 7 - 10 strongly transverse. Integument ± mat due to distinct microreticulation and punctation. Abdominal tergum VIII posteriorly concave in both sexes (Figs 17d,f).
♂: aedeagus with ventral process acutely pointed in ventral view, not angular in lateral view (Fig. 17a); paramere with broad condylite (Fig. 17c).
♀: spermatheca with short apical processes (Fig. 17b).
Coasts of the Mediterranean and the Black Sea. . . . . ***M. (X.) minima*** BERNHAUER

- Always macropterous, elytra at least 0.85x the length of pronotum; antennae longer and slenderer with antennomeres 2 - 3 more weakly and gradually widened towards apex, antennomeres 4 - 6 usually subquadrate or oblong. Integument often less mat. Hind margin

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of abdominal tergum VIII in most species less distinctly concave or straight.
♂: ventral process not acutely pointed; condylite in most species slenderer.
♀: spermatheca of different shape. 16

16. Relatively large species (TL: ~ 2.7). Head long (HL: ~ 400) and wide (HW: ~ 450), only weakly transverse (HW/HL: 1.1). Antennae slender, antennomeres 4 - 6 distinctly and 7 weakly oblong (AL: ~ 1050).
♂: unknown.
♀: hind margin of abdominal tergum VIII deeply concave, that of sternum VIII with shallow central concavity (Figs 16b,c); spermatheca as in Fig. 16a.
Madeira. . . . . *M.* (*X.*) ***maritima*** (WOLLASTON)
- Head smaller or, if large (*M. brevipes, M. anatolica*), distinctly transverse (HW/HL: 1.16 - 1.31) and HL < 390. Antennae in most species less slender.
♀: hind margin of abdominal tergum VIII either weakly concave or truncate; spermatheca different. 17

17. ♂: ventral process of median lobe of intermediate length and distinctly angular in lateral view (Figs 14a, 15a).
♀: spermatheca with relatively large capsule and long apical processes (Figs 14b, 15b).
. 18
- ♂: ventral process of median lobe either distinctly elongate or very broad in ventral view, in lateral view at most slightly curved.
♀: spermatheca with relatively smaller capsule and shorter apical processes. 19

18. Highly variable species (TL: 2.2 - 2.9). Eyes on average relatively larger, subequal in length to or slightly shorter than temples in dorsal view. Antennae often slenderer (AL: 830 - 1060), with antennomere 4 usually weakly oblong (Fig. 14h). Integument on average with less shine.
♀: capsule of spermatheca with cuticular protrusion only weakly convex proximally (Fig. 14b).
Northern Mediterranean coast from Southern France to Southern Turkey, coast of Black Sea. . . . . *M.* (*X.*) ***sulcata*** (KIESENWETTER)
- Extremely variable species (TL: 1.8 - 2.9). Eyes on average smaller, usually distinctly shorter than temples in dorsal view. Antennae on average shorter (AL: 680 - 940) with antennomere 4 mostly subquadrate. Integument on average more shiny.
♀: capsule of spermatheca with cuticular protrusion distinctly convex and projecting into duct (Fig. 15b).
Coasts of the western Baltic Sea, the North Sea and the Channel, the Atlantic coast of Western and Southwestern Europe, the Mediterranean coasts of Spain, France and Northern Africa from Algeria to Egypt, the Azores and the Canary Islands.
. . . . . *M.* (*X.*) ***simillima*** (WOLLASTON)

19. Smaller species (TL: 2.1 - 2.9); head on average narrower (HW: 370 - 425). Integument more shiny due to only superficial microsculpture. Abdominal tergum and sternum VIII sparsely pubescent (Figs 19c-f).
♂: ventral process of median lobe broadly triangular in ventral view (Fig. 19a).
♀: spermatheca as in Fig. 19b.
Coasts of the Red Sea. . . . . *M.* (*X.*) ***bernhaueri*** KOCH

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- Larger species (TL: 2.2 - 3.5); head on average wider (HW: 405 - 490). Microsculpture more pronounced, integument therefore less shiny. Abdominal tergum and sternum VIII more densely pubescent.
  ♂: ventral process of median lobe either distinctly elongate or very broad in ventral view.
  ♀: spermatheca of different shape. 20

20. Head relatively massive, at least as wide as pronotum (PW/HW: 0.93 - 1.0), subquadrangular and distinctly transverse (HW/HL: 1.21 - 1.31); its dorsal surface more weakly concave in both sexes.
  ♂: ventral process of median lobe very broad and short in ventral view (Fig. 20a), condylite of paramere broad (Fig. 20c).
  ♀: spermatheca as in Fig. 20b.
  Coasts of South England, Northwestern and Southern France.
  . . . . . *M.* (*X.*) ***brevipes*** BUTLER
- Head relatively smaller, at most as wide as pronotum (PW/HW: 1.0 - 1.05) and less distinctly transverse (HW/HL: 1.16 - 1.28); its dorsal surface more strongly concave (similar to *M. sulcata*).
  ♂: ventral process of median lobe distinctly elongate in ventral view (Fig. 18a), condylite of paramere slender.
  ♀: spermatheca, particularly capsule and cuticular protrusion of different shape (Fig. 18b).
  Coasts of Southern Turkey and Cyprus. . . . . *M.* (*X.*) ***anatolica*** (FAGEL)

3. The genus *Eccoptoglossa* LUZE, 1904

3.1. Systematics and phylogenetics

In his description of *Eccoptoglossa* LUZE (1904) included only the type species, *E. obscura* LUZE. According to LUZE (1904) and FENYES (1920) the genus is most closely related to *Falagria* LEACH, from which it is distinguished by the shapes of the mentum, the ligula and the pronotum, and to *Myrmecopora* SAULCY, from which it differs in that the head is distinctly dilated posteriorly and the legs are more elongate. No further species of *Eccoptoglossa* have been described.

An examination of the types of *E. obscura* LUZE revealed that *Eccoptoglossa* is in fact a distinct genus, that it possesses all the typical characters of Falagriini (see section 1) and therefore belongs to the falagriine group of genera, from which it is, however, readily distinguished by the following character combination: pronotum not strongly convex and without distinct median sulcus, hypomera delimited from disk by marginal carina, mesospiracular peritremes reduced, apically narrowed bifid ligula, aedeagus with short flagellum, spermatheca roughly S-shaped. Among those genera with a similar pronotum it additionally differs from *Falagriota* CASEY, 1906, in that the head is less rounded posteriorly, in the construction of paramere and spermatheca, and in the presence of a sexual dimorphism of the shape of tergum and sternum VIII (see also HOEBEKE 1985) and of the pubescence of the hind margin of sternum VIII. In *Anaulacaspis* GANGLBAUER the pronotum is distinctly more convex and more narrowed posteriorly. In *Myrmecopora* SAULCY, with which it shares the sexual dimorphism of the micropubescence of the hind margin of sternum VIII and which might be its sister group, there is usually a more pronounced sexual dimorphism regarding the size and depth of the impressions

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on head and pronotum, the ligula is not narrowed apically, the chaetotaxy of the labrum is different, the velum of paramerite and condylite are much more clearly separated, the aedeagus lacks a distinct flagellum, and the construction of the spermatheca is different (see section 2.2.). It should be noted that the diagnostic characters referred to by LUZE (1904), FENYES (1920) (see above) and SCHEERPELTZ (1940) are inadequate for the separation of *Eccoptoglossa* LUZE and *Myrmecopora* SAULCY.

Regarding most of the 20 characters considered by AHN & ASHE (1995) for their phylogenetic analysis of North American Falagriini the plesiomorphic state is found in *Eccoptoglossa*; apart from the synapomorphies shared by all the Falagriini examined the apomorphic state is realized only in two of the characters: the posteriorly open mesocoxal acetabula and the presence of a flagellum. In addition, however, the unique shape of the ligula and the sexual dimorphism of sternum VIII are probably apomorphic.

3.2. Description

Body small sized, 1.8 - 2.5 mm, slender, ± parallel, and in habitus and size somewhat resembling species of *Phloeopora* ERICHSON; colour variable; integument of head, anterior half of pronotum and elytra without or with very weak microsculpture, abdomen shining and without microsculpture.

Head slightly transverse, sides subparallel or even widened behind eyes, posterior corners abruptly rounded; central dorsal area sometimes with shallow impression; neck slender, ca. 1/3 of head width; integument mostly without, sometimes with indistinct microsculpture; punctation rather sparse and fine; antennae clearly dilated apically, with antennomeres 1 - 3 elongate, 4 subquadrate or slightly transverse, 5-10 transverse and increasing in width and segment 11 elongate, almost as long as 9 and 10 together.

Labrum as in Fig. 26h, without stout setae as in *Myrmecopora*; mandibles asymmetrical, apically acute and curved, right mandible with molar tooth and a row of faint teeth in dorsal molar region, both absent in left mandible (Fig. 26i); maxillary and labial palpi 4- and 3-jointed, respectively, similar to *Myrmecopora*; ligula deeply bifid, with acute apices (Fig. 26g).

Pronotum subequal in width to head, with weakly convex dorsal surface and a shallow longitudinal, ovoid or round central impression in posterior half; sides converging posteriorly; punctation fine, denser than on head; microsculpture absent or superficial; hypomera visible in lateral view and delimited from disk by carina; mesospiracular peritremes reduced.

Elytra variable in length, wider than pronotum; microsculpture absent, punctation fine, slightly granulose, ± uniformly spaced and rather sparse; scutellum flat and with distinct punctation; hind wings present; mesocoxal acetabula not margined posteriorly; mesosternal process acute, reaching between mesocoxae.

Tarsal formula 4-5-5; legs and tarsi slender; hind tarsi almost as long as hind tibiae; first segment of hind tarsi almost or approximately as long as segments 2 - 4 together.

Abdomen with shiny integument, microsculpture absent; punctation distinct, on terga VI and VII denser and coarser than on terga III-V; terga III-V with basal impressions; posterior margin of tergum VIII unmodified, weakly convex posteriorly; sternum IV with gland opening anteriorly; Shape and, like *Myrmecopora*, micropubescence of hind margin of sternum VIII dimorphic (Figs 25e,g, 26d,f): in ♂♂ truncate, concave or only faintly convex, in ♀♀ distinctly convex; posterior margins of ♂ tergum VIII and of ♀ tergum and sternum VIII with, that of ♂ sternum VIII without a row of short microscopic hairs (only visible at magnifications of at least 200x).

Aedeagus with uncoiled flagellum; paramerite and condylite less completely separated than in

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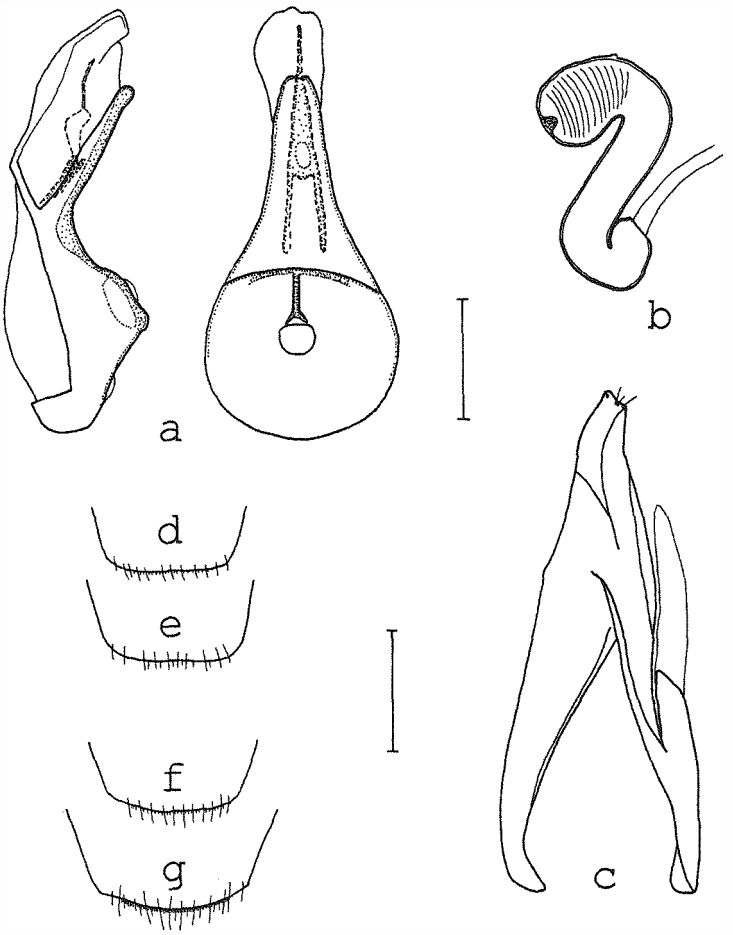
Myrmecopora, velum of condylite of different shape (Fig. 25c); spermatheca roughly S-shaped, capsule not or only slightly wider than the comparatively stout duct.
Presently, species of *Eccoptoglossa* are only known from Afghanistan, Turkmenistan and Tajikistan.

3.3. The species of *Eccoptoglossa* LUZE

3.3.1. *Eccoptoglossa obscura* LUZE, 1904

Figs 25a-g

Eccoptoglossa obscura LUZE, 1904, p. 106ff [type species of *Eccoptoglossa* by monotypy]
Myrmecopora (Ilyusa) afghanica SCHEERPELTZ, 1972, **syn. nov.**



Figs 25 a - g: *Eccoptoglossa obscura* LUZE (LT: **a, c - e**). Median lobe in lateral and in ventral view (**a**); spermatheca (**b**); paramere (**c**); hind margins of ♂ tergum and sternum VIII (**d, e**); hind margins of ♀ tergum and sternum VIII (**f, g**). Scales: **a - c**: 0.1 mm; **d - g**: 0.2 mm.

DOI: 10.21248/contrib.entomol.47.1.69-151

Types examined:

E. obscura LUZE: Lectotype ♂, here designated and labelled accordingly; aedeagus dissected and mounted on slide: Seravshan, Serbent, Glasunov 1892, Type *Eccoptoglossa obscura* Luze, coll. Luze (NHMW).

Paralectotypes: 1♂, 3♀♀, same data as lectotype, partly damaged, colls Luze, Scheerpeltz (NHMW, cAss).

Myrmecopora afghanica SCHEERPELTZ: Holotype ♂ (aedeagus dissected and mounted on slide): Voyage en Afghanistan, K. Lindberg, Baharak (40km südl. Faizabad) [sic! Faydabad?], Schlucht, 2.VIII.1960, Typus *Myrmecopora afghanica* O. Scheerpeltz, coll. Scheerpeltz (NHMW).

Comments:

For the general and diagnostic characters of this species the description of the genus, the key and the figures are referred to. Since both species of *Eccoptoglossa* are rather similar regarding size and further external characters and, therefore, in order to avoid repetition, a detailed description is here refrained from. It should be noted, however, that the size and shape of the pronotal impression, the punctation and microsculpture on the pronotum, and particularly the shape of the head and the size of the eyes are subject to considerable variability, which may be one reason why SCHEERPELTZ (1972) considered his *Myrmecopora afghanica* to represent a distinct species (of a different genus), although he had four of the five syntypes of *Eccoptoglossa obscura* in his collection. According to SCHEERPELTZ (1940) the main differential character separating *Eccoptoglossa* from *Myrmecopora* is the shape of the head, which in the former is "trapezoidal, hinter den Augen nach hinten ziemlich stark erweitert ..." (p. 68). However, this is only the case for one of three syntypes; in the remaining two the head was severely damaged or missing. In external characters the holotype of *M. afghanica* falls well within the range of *E. obscura*. Since no differences in the male genitalia could be observed either, *M. afghanica* SCHEERPELTZ must be regarded as a junior synonym of *E. obscura* LUZE. Apparently *E. obscura* inhabits moist localities. According to LUZE (1904) and SCHEERPELTZ (1940) it was collected under decaying plant material in a swamp biotope; the holotype of *M. afghanica* was taken in a gorge.

3.3.2. *Eccoptoglossa turanica* (EPPELSHEIM, 1888) comb. nov.

Figs 26a-i

Myrmecopora (Ilyusa) turanica EPPELSHEIM, 1888, p. 52f.

Types examined:

Lectotype ♂, here designated and labelled accordingly; aedeagus dissected and mounted on slide: Turcmenia, Leder, Reitter, *turanica* Epp., coll. Solsky (NHMW).

Paralectotypes: 2♂♂, 5♀♀, 1 sex? (terminalia missing), same data as lectotype, colls Eppelsheim, Scheerpeltz, Heyden, Weise (NHMW, DEI, cAss).

Further material:

1♂, Transkaspien, Tedjen, *Eccoptoglossa obscura* Luze [sic!], coll. Scheerpeltz (NHMW).

Comments:

E. turanica possesses all the characters of *Eccoptoglossa* LUZE (see above), is very closely related to *E. obscura* and therefore belongs to *Eccoptoglossa*, not to the subgenus *Iliusa* MULSANT & REY of *Myrmecopora* SAULCY. The species is sufficiently characterized by the

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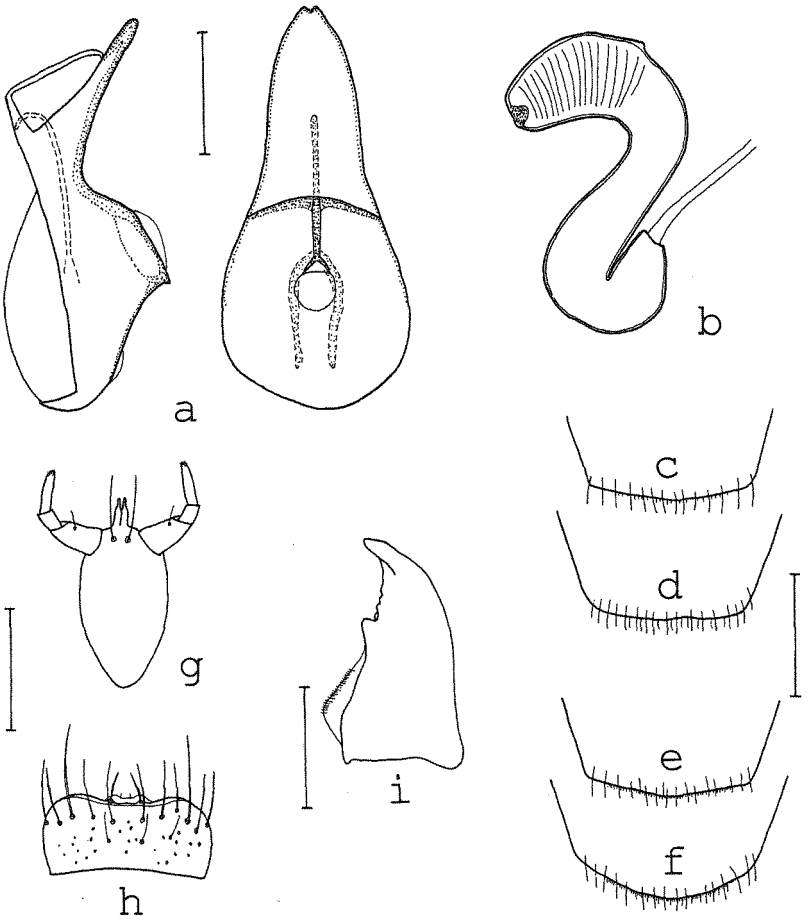
general characters of the genus, the key and the figures. It appears that, judging from the sex labels he attached to the syntypes in his collection, SCHEERPELTZ mistook the ♂♂ for ♀♀ and vice versa, which consequently resulted in a confusion of the secondary sexual characters in his description of *E. turanica* (SCHEERPELTZ 1972).
Nothing is known regarding the ecology of the species.



Figs 26 a - i: *Eccoptoglossa turanica* (EPPELSHEIM). Median lobe in lateral and in ventral view (**a**); spermatheca (**b**);hind margins of ♂ tergum and sternum VIII (**c, d**); hind margins of ♀ tergum and sternum VIII (**e, f**); labium (**g**); labrum (**h**); right mandible (**i**). Scales: **a-b, g-i**: 0.1 mm; **c-f**: 0.2 mm.

3.4. Key to the known species of *Eccoptoglossa* LUZE

1. Colour of body darker: head, pronotum and antennae dark brown, legs brown to dark brown, elytra brown, abdomen black to blackish brown. Punctation of pronotum denser, impression in posterior half of pronotal disk usually roundish and often with apparent

DOI: 10.21248/contrib.entomol.47.1.69-151

microsculpture, particularly so in ♂♂. Elytra relatively longer, length of suture from apex of scutellum to hind margin of elytra 0.95 - 1.05 x the length of pronotum along midline.
♂: tergum VIII truncate posteriorly (Fig. 25d); aedeagus smaller, apical process of median lobe slenderer in ventral view (Figs. 25a).
♀: spermatheca with shorter and apically widened capsule (Fig. 25b).
Known only from Tajikistan and Afghanistan. . . . . ***E. obscura*** LUZE

- Body colour lighter: head, pronotum and antennae light brown to brown, legs yellowish, elytra yellowish brown, abdomen dark brown with the tergal hind margins lighter. Punctation of pronotum less dense; impression in posterior half of pronotal disk more longitudinal, often with faint sulcus along median line; microsculpture absent or very obsolete. Elytra relatively shorter, length at suture 0.82 - 0.92 the length of pronotum along midline.
♂: tergum VIII slightly convex posteriorly (Fig. 26c); aedeagus larger, apical process of median lobe wider in ventral view (Figs. 26a).
♀: capsule of spermatheca longer and not widened apically (Fig. 26b).
Known only from Turkmenistan. . . . . ***E. turanica*** (EPPELSHEIM)

4. Synonymic catalogue of the Western Palaearctic species of *Myrmecopora* SAULCY and *Eccoptoglossa* LUZE

Myrmecopora (s. str.) *publicana* SAULCY, 1864
Myrmecopora (s. str.) *wunderlei* sp. n.
Myrmecopora (s. str.) *pygmaea* (SACHSE, 1852)
Myrmecopora (s. str.) *convexula* sp. n.
Myrmecopora (s. str.) *hilfi* SCHEERPELTZ, 1972
Myrmecopora (s. str.) *elisa* sp. n.
Myrmecopora (s. str.) *plana* sp. n.
Myrmecopora (s. str.) *fornicata* sp. n.
Myrmecopora (s. str.) *crassiuscula* (AUBÉ, 1850)
Myrmecopora (*Iliusa*) *fugax* (ERICHSON, 1839)
= *Myrmecopora uludaghensis* FAGEL, 1971, syn. n.
Myrmecopora (*Paraxenusa*) *laesa* (ERICHSON, 1839)
= *Myrmecopora tenuicornis* (KÜSTER, 1854)
Myrmecopora (*Xenusa*) *uvida* (ERICHSON, 1840)
= *Myrmecopora* (*Xenusa*) *meridiogallica* SCHEERPELTZ, 1972, syn. n.
Myrmecopora (*Xenusa*) *boehmi* BERNHAUER, 1910
= *Myrmecopora sydowi* BERNHAUER, 1927b, syn. n.
= *Xenusa mediterranea* FAGEL, 1970, syn. n.
Myrmecopora (*Xenusa*) *oweni* sp. n.
Myrmecopora (*Xenusa*) *sulcata* (KIESENWETTER, 1850)
= *Xenusa carica* FAGEL, 1970, syn. n.
Myrmecopora (*Xenusa*) *sinillima* (WOLLASTON, 1864)
= *Myrmecopora lohmanderi* BERNHAUER, 1927a, syn. n.
Myrmecopora (*Xenusa*) *maritima* (WOLLASTON, 1860)
Myrmecopora (*Xenusa*) *minima* BERNHAUER, 1900
= *Myrmecopora* (*Xenusa*) *buresi* RAMBOUSEK, 1910, syn. n.
= *Xenusa pamphylica* FAGEL, 1969, syn. n.
Myrmecopora (*Xenusa*) *anatolica* (FAGEL, 1969) comb. nov.
Myrmecopora (*Xenusa*) *bernhaueri* KOCH, 1936
Myrmecopora (*Xenusa*) *brevipes* BUTLER, 1909
Myrmecopora (*Euphorbiusa*) *gravata* PEYERIMHOFF, 1945
Eccoptoglossa obscura LUZE, 1904
= *Myrmecopora* (*Ilyusa*) *afghanica* SCHEERPELTZ, 1972, syn. nov.
Eccoptoglossa turanica (EPPELSHEIM, 1888), comb. nov.

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Appendix: Maps of distribution

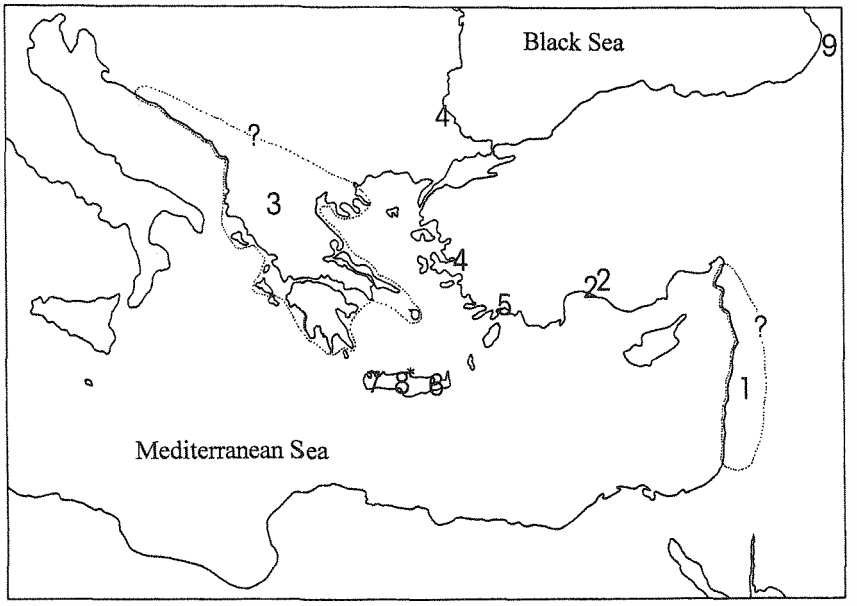

Fig. 22: (p. 150) Distribution of the species of *Myrmecopora* s. str. (examined records only). *M. publicana* SAULCY (**1**, dotted line); *M. wunderlei* sp. n. (**2**); *M. pygmaea* (SACHSE) (**3**, dotted line); *M. convexula* sp. n. (**4**); *M. hilfi* SCHEERPELTZ (**5**); *M. elisa* sp. n. (**6**); *M. plana* sp. n. (**7**); *M. fornicata* sp. n. (**8**, * locality not specified); *M. crassiuscula* (AUBÉ) (**9**, type locality).

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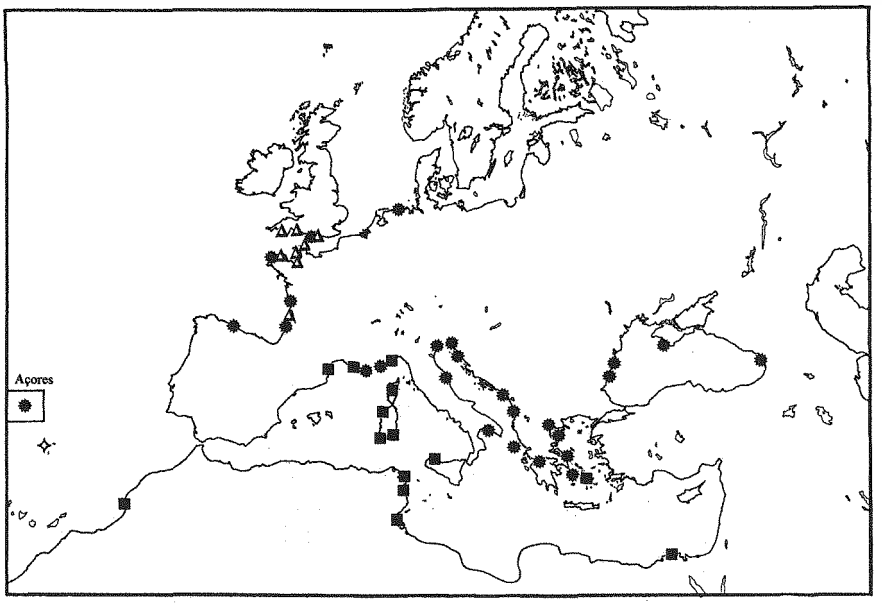

Fig. 23: Distribution of *M. uvida* (ERICHSON) and related species (examined records only). *M. uvida* (✹); *M. boehmi* BERNHAUER (■); *M. oweni* sp. n. (Δ); *M. maritima* (WOLLASTON) (✧).

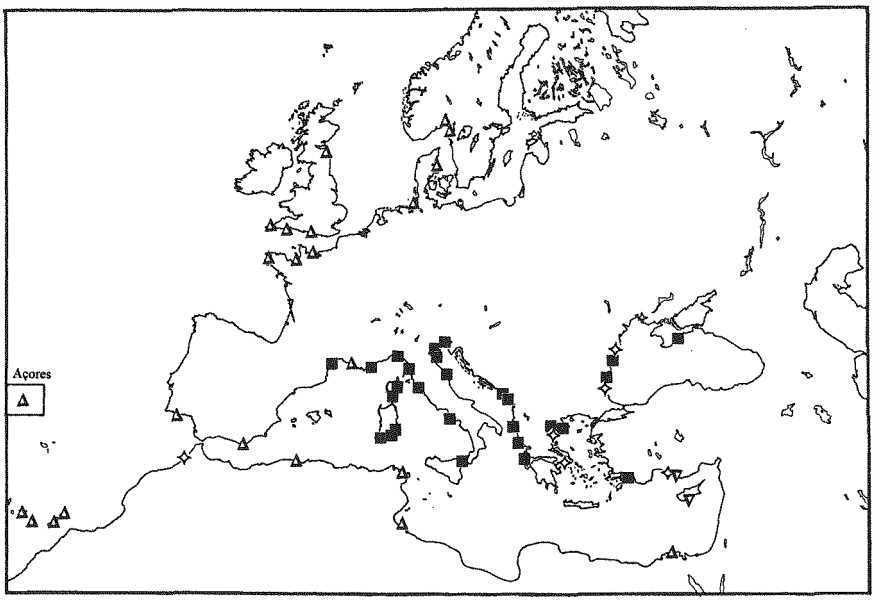

Fig. 24: Distribution of *M. sulcata* (KIESENWETTER) and related species (examined records only). *M. sulcata* (■); *M. sinillima* (WOLLASTON) (Δ); *M. minima* BERNHAUER (✧); *M. anatolica* (FAGEL) (▽).

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