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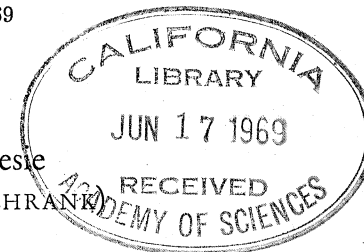
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Beobachtungen zur Phoresie
bei *Lamprochernes nodosus* (SCHRANK)

Von EBERHARD ZIELKE¹⁾

(Mit 2 Abbildungen auf Tafel X)

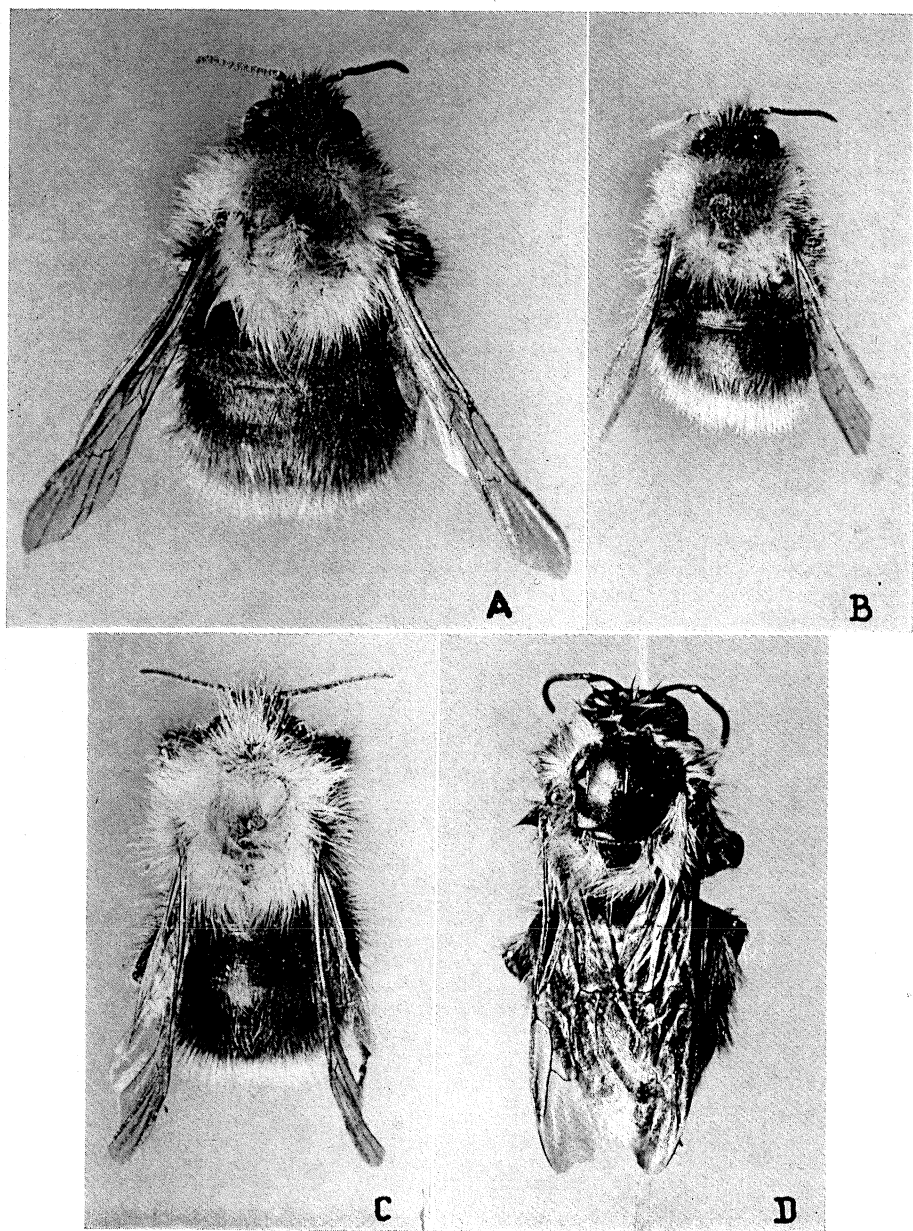


Die Bücherskorpione gehören der Klasse Arachnoidea (Spinnentiere) und der Ordnung Chelonethi (Afterskorpione) an. Einige Arten der Gattung *Chelifer* sind kosmopolitisch. Trotzdem trifft man relativ selten auf Bücherskorpione, von denen der größte — *Chelifer cancroides* (L.) — nicht mehr als 5 mm mißt. Daß die Tiere selten gesehen werden, mag sowohl an der geringen Körpergröße wie auch an der verborgenen Lebensweise liegen.

Am 30. 7. 1968 wurde mir ein Bücherskorpion gebracht, der von einer Fliege abgefallen war. Die Fliege hatte sich in einem Büroraum in der Bernhard-Nocht-Straße, also in der Innenstadt Hamburgs aufgehalten. Sie hatte die Aufmerksamkeit des Fängers durch „Anhängsel“ an den Beinen erregt, so daß er nach ihr schlug und der Bücherskorpion abfiel. Am 31. 7. 1968 wurde eine Fliege gefangen, die neun Bücherskorpionen als Flugwirt diente. Einen Tag später, am 1. 8. 1968, konnten weitere zwei Fliegen erbeutet werden, wobei auf der einen ein Bücherskorpion saß, auf der anderen saßen vier Exemplare. Eine Bestimmung ergab, daß es sich um *Lamprochernes nodosus* (SCHRANK) handelte. Von dieser Art ist bereits bekannt, daß sich bevorzugt begattete Weibchen durch Fliegen verschleppen lassen. GRIMPE (nach BEIER 1948) konnte 1921 nur einmal eine Fliege mit neun Bücherskorpionen nachweisen. Es scheint so ein starker Befall einer Fliege doch recht selten zu sein.

Die Fliege wurde in einem sehr erschöpften Zustand gefangen, was nicht verwunderlich ist, da die Größe der neun Bücherskorpione zwischen

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A New Taxon of the Family Heterogynidae LATREILLE

(Hym., Aculeata)

by

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(with 6 figures)

The genera included by LATREILLE in his 3-me Famille Hétérogynes-Heterogyna appear as a group of Hymenoptera with winged males and wingless females. According to LATREILLE 1825 (Familles naturelles du Règne Animal, p. 451) two tribes belonging in this family: Formicariae and Mutillariae. The latter are component by a *Dorylus*, *Apterogyna*, *Mutilla*, *Psammotherma*, *Myrmosa*, *Scleroderma*, *Methoca* and *Myrmecodes*. KLUG 1840, used this familial name only for the second tribus. GERSTAECKER 1855, 1863 introduced here the *Scolia* and *Sapyga*. MOCSÁRY 1881 established the correct name as Heterogynidae, including here the *Pristocerinae*, *Mutillinae*, *Scoliinae*, *Myzininae*, *Tiphiinae*, *Methocinae*, *Myrmosinae* and *Sapyginae*. HANDLIRSCH 1936 adopted this division, classifying here all major categories as subfamilies. Since MOCSÁRY not designated nominative genus as type of his family. From this standpoint we now select the new species described below to be type-species of genus *Heterogyna*. The species described below appear to be distinct from any of the families previously described in Aculeata. This type designation causes no alteration in the use of generic names, but would cause a most unfortunate alteration between the familiar names Heterogynidae LATREILLE 1825 (Hymenoptera) and Heterogynidae KIRBY 1892 (Lepidoptera). KIRBY pointed his new family for different generic name, *Heterogynis* RAMBUR. We stated that Heterogynidae LATREILLE 1825 and Heterogynidae KIRBY 1892 are not secondary homonyms, because the latter are incorrect grammatically. Cf. Code, art. 53 and especially art. 32 (c) the familiar name for *Heterogynis* RAMBUR will be Heterogynididae KIRBY 1892.

The author wishes to extend sincere thanks to Mr. P. M. F. VERHOEFF of Den Dolder, Netherlands, for the loan of the material described here as new.

Heterogynidae LATREILLE, 1825

Small wasps (the one known species about 4 mm long), fully winged males, without strong sculpturing, known from the male sex only.

Head vertical, hypognathous, rounded laterally. Antennae with thirteen segments, the flagellar pubescence short, semierect. Maxillary palpi with six segments, labial with four. Median elevation of clypeus not

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extending up the lower front as a polished ridge. Mandibles short, massive, usually with small preapical denticles in the male. Mouth opening about as wide as long; palpi large, maxillary palpus much longer than basal joint of maxilla. Moderately emarginate eyes with short hairs; ocelli not enlarged, occipital carina complete.

Pronotum short, bilobed; posterolateral cornes lobuliform and reaching to the tegulae. Mesoscutum very long, with median longitudinal groove in anterior half; metanotum not well developed; propodeum with transverse carina margining the disc behind. Fore wing with costal, subcostal, submedian, two marginal and two cubital cells present; discoidal cell almost indicated; radial vein long, radial cell divides and enclosed; outer part of wing membrane with veins also indicated. Hind wing with two closed cells; anal lobe distinct, large. Legs rather slender, short erect setae very sparse; coxae contiguous; trochanters one-segmented; tibial spurs 1—2—2; middle and hind tibiae with two rows of spines beneath. Claws simple.

Abdomen sessile, relatively broad and as long as the thorax; the venter convex, with seven visible segments, without constriction between first and second sternum. Subgenital plate bilobed at apex, with long median basal stalk. Genitalia broad; parameres short, lobed and with inner prominence; cuspides in the form of simple curved rods; digitus arched; aedoeagus consisting of a pair of simple, long ventral valves which are lobed apically. Female unknown.

Genus *Heterogyna* new genus

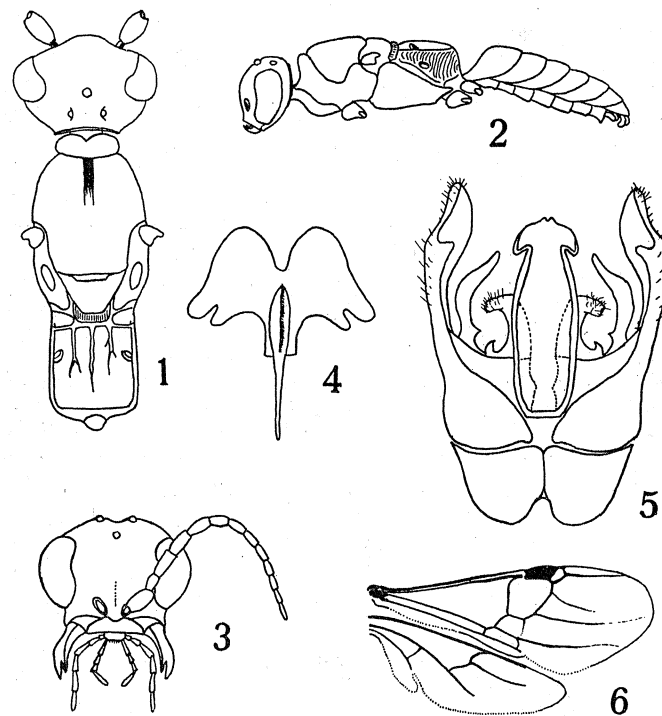
Genotype: *Heterogyna protea*, new species. Monotypic and by present designation. The generic characters from above description. Presumably their characters will also be found in the female sex.

Heterogyna protea new species

Holotype: ♂ GREECE: Rhodos, locality Ixia, 1.—4. Sept. 1962 (leg. P. M. F. VERHOEFF), type deposited in the author's collection.

Description of type male. Length about 4 mm; length of fore wing 2.5 mm. Body shining, head and thorax black, abdomen dark castaneous, slightly paler apically; palpi straw-colored; mandibles testaceous; antennae dark rufo-castaneous; tegulae pale castaneous; legs bright testaceous, except all coxae strongly infuscated; fore wing weakly infuscated, somewhat more distinctly infuscated in and below marginal cell; hind wings subhyaline. Apical teeth of mandibles sharp, basal tooth acute. Median lobe of clypeus angular. First four antennal segments in a ratio of about 1.4:1:1.5:1.3, segment three very slightly longer than wide, segment eleven 1.8 times as long as thick. Front strongly shining, weakly alutaceous, punctures small but well defined, separated by two to four

time their own diameters. Ocelli moderately large, arranged in a equilateral triangle; postocellar distance as long as the ocelloocular distance.



Figs. 1—6 *Heterogyna protea*, holotype male. Fig. 1— Head and thorax dorsal view; Fig. 2— Body, lateral view; Fig. 3— Head frontal view; Fig. 4— Subgenital plate; Fig. 5— Genitalia; Fig. 6— Wings.

Vertex broadly rounded off a considerable distance above eye tops. Posterior ocelli removed from the sharp vertex crest by less than the distance between them.

Pronotum three time as wide as long, weakly bisected medially. Disc of mesoscutum somewhat shining, alutaceous, with coarse but shallow punctures. Notauli absent, the median impression not deeply indicated. Scutellum with a transverse, undivided groove basally; postscutellum with longitudinal striae. Propodeum with three discal carinae, all of them incomplete; disc reticulated, side obliquely striate; declivous with transverse striae, without median carina. Abdomen densely punctate and finely haired with short, semierect setae. Wings and genitalia as shown in figure. Female unknown.

Remarks: No other specimens examined than the type. The family Heterogynidae is one of the most sharply and distinctly isolated of

the families of Aculeata. The nervation of wings place it near Plumariidae, Trigonalidae and Cretavidae. It differs at once from all other families in that the pronotum short, posterior cornes elevated, mesoscutum without notauli; the form of the subgenital plate and genitalia is also diagnostic, resemble nearly to the genitalia of Bethyloidea and Mutillidae combined. The form of head as in Scolioidea; the first cubital cell similar to the Sclerogibbidae, some Dryinidae, Embolemidae and Cleptidae. The genus *Myrmecopterinia* BISCHOFF belongs probably also here.

This minute wasps may be related, on the one hand, to the Bethyloidea (genus *Palaeobethylus* BRUES and other genera) and, on the other hand, to the Scolioidea (genus *Brachycistis* FOX) and same in Ampulicidae (genus *Dolichurus* LATREILLE). These two superfamilies contain all the primitive aculeate Hymenoptera. In view of the close relationship demonstrated by earlier and recent investigators (MOCSÁRY 1881, ASHMEAD 1902, CEBALLOS 1927, BRADLEY 1958, EVANS 1963, 1964, 1966) the separation of the superfamilies Bethyloidea and Scolioidea proved inadequate and consequently they are referred to under the common designation which gained a widespread acceptance. From these considerations we included under same heading the family of Ampulicidae — nearly related to Dryinidae and Cleptidae, but not with Sphecidae — in new superfamily Heterogynoidea using as base the LATREILLE's name.

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