MADEIRA INSECTS, MAINLY HYMENOPTERA PROCTOTRUPOIDEA, CERAPHRONOIDEA, AND BETHYLOIDEA.

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With 2 figures

ABSTRACT. This paper contains a list of species new to the Madeiran list, belonging to several groups of Hymenoptera. It includes 44 species of Proctotrupoidea, 13 Ceraphronoidea, 5 Bethyloidea, 20 Cynipoidea. One species of Proctotrupoidea new to science, *Trimorus wollastonae,* is described. Notes upon a number of Proctotrupoidea and Ceraphronoidea already recorded from Madeira are given, with additional records. *Oxylabis wollastoni* Dodd is recombined into the genus *Zygota. Teleas medon* Walker, 1836, is placed in synonymy with *Xenomerus ergenna* Walker. Notes on *Trimorus rotundus* (Dodd), with a description of the apparently unrecognized male, are included. Wollaston's Madeiran species of *Bethylus* are discussed, lectotypes are designated, and a key to females of Madeiran *Bethylus* is provided. New records of one species of Hymenoptera Braconidae, and one species of Lepidoptera, are added.

SUMÁRIO. Este trabalho contém uma lista de espécies novas para a Madeira pertencendo a vários grupos de Himenópteros. Inclui 44 espécies de Proctotrupoidea, 13 de Ceraphronoidea, 5 de Bethyloidea e 20 de Cynipoidea. É descrita uma espécie nova para a ciência de Proctotrupoidea, *Trimorus wollastonae.* São apresentadas notas sobre um número de Proctotrupoidea e Ceraphronoidea já assinalados para a Madeira, bem como apresentados novos assinalamentos. *Oxylabis wollastoni* Dodd é aqui recombinado no género *Zygota. Teleas medon* Walker, 1836, é colocada em sinonímia com *Xenomerus ergenna* Walker. São incluídas neste trabalho notas sobre *Trimorus rotundus* (Dodd), com a descrição do macho aparentemente não reconhecido. São discutidas as espécies madeirenses de Wollaston do género *Bethylus,* são designados lectótipos e uma chave para as fêmeas madeirenses de *Bethylus* é dada. São também adicionadas à lista das espécies da Madeira, uma espécie de Himenópteros da família Braconidae e uma espécie de Lepidópteros.

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INTRODUCTION

Material of the three superfamilies of Hymenoptera mentioned in the title was first taken in Madeira and the Desertas by T. V. Wollaston, chiefly during his visits of 1848, 1850 and 1855. He described some species from each superfamily in 1858, whilst a few others taken by him were later described by Dodd (1920). Since then little attention has been given to the Madeiran species of these groups.

Three visits to Madeira by my wife and me, in 1972, 1980 and 1982, were largely devoted to collecting Chalcidoidea (see Graham, 1983). However, several other groups of Hymenoptera were also collected, including a number of Proctotrupoidea, Ceraphronoidea and Bethyloidea, some of which had been first captured there by Wollaston. Research on these groups was long held up because of the lamentably backward state of their taxonomy. As a result of recent work, however, the situation has improved considerably. Although much still remains to be done, it seems useful to present a summary of our present knowledge of the above groups in Madeira, which it is hoped others will add to and improve. Records of some species from other groups are also included. The present list includes the following numbers of species new to Madeira: Proctotrupoidea, 44; Ceraphronoidea, 13; Bethyloidea, 5; Cynipoidea, 20. One species of Proctotrupoidea new to science, *Trimorus wollastonae*, is described. Material of the species we collected is being retained temporarily in the author's possession, though it is intended to deposit it eventually in the British Museum (Nat. Hist.) so as to be readily available for research. The holotype of the new species will be deposited there after publication.

The following abbreviations for depositories are used in the text: British Museum (Nat. Hist.), BMNH; National Museum of Ireland, Dublin, NMI. My name, and my wife's, are usually abbreviated as M. de V. G. and E. M. G. respectively.

Once again it is our pleasure to thank our friend Mr. G. E. Maul (Museu Municipal do Funchal) for his ready help both in facilitating collecting trips and in editorial matters. My thanks also to my wife (Mrs. E. M. Graham) the frequency of whose name in this paper show how considerably she has contributed to the list. I also wish to thank members of the staff of the British Museum (Nat. Hist.): Mr. J. Quinlan, Mr. N. D. M. Fergusson, and Mr. T. Huddleston, for identifying some species; Mr. J. D. Bradley, who identified the moth *Kessleria bakeri*.

The compilation of this small list has brought to mind many pleasant days spent in the wilder parts of the island which still merits the description by Castello de Paiva «A ilha da Madeira... é ainda hoje a mais saudável e grata flor do atlântico».

SPECIES NEW TO MADEIRA

Proctotrupoidea

Heloridae

Helorus ruficornis Förster.

Terreiro da Luta, 7.viii.1982, one ♀. This does not differ from European specimens in colour or structure.

Proctotrupidae

Codrus ? formicarius (Kieffer).

Queimadas, 14.v.1980, two ♀♀; Curral dos Romeiros, 15.v. 1980, one ♀.

Codrus curtigena Nixon

Curral dos Romeiros, 15.v.1980, one ♀; 20.vii.1982, five ♀♀.

Codrus confusus (Nixon)

Curral dos Romeiros, 15.v.1980, two ♀♀.

Cryptoserphus cumaeus Nixon.

Terreiro da Luta, 7.viii.1982, one ♀. The above Proctotrupidae were all taken in damp shady forest where fungi were noted in the flora.

Diapriidae

Zygota fuscata (Thomson).

Curral dos Romeiros, 11.v.1980, one ♀ (M. de V. G.), 15.v.1980, one ♂ (Mrs. E. M. G.), 20.vii.1982, two ♀♀ (M. de V. G.).

Entomacis platyptera (Hal.).

Queimadas, 11.viii.1982, one ♀. I believe this is correctly determined.

Psilus fuscipennis (Curtis).

Curral dos Romeiros, 11.v.1980, one ♂, one ♀, 15.v.1980, one ♂, one ♀; Casa do Rabaçal, 27.vii.1982, one ♂.

Aneurhyncus galesiformis Westw.

Curral dos Romeiros, 20.vii.1982, one ♂, two ♀♀.

Basalys sp. ? near *collaris* Kieff.

Fanal, in a wood, 28.vii.1982, one ♂.

Basalys sp.

Machico, Rocha Alta, 5.i.1973, one ♂.

Basalys ? tritoma Thomson.

Ribeira Brava near Serra de Água, 19.v.1980, one ♂. This has an extremely short malar space and may be *tritoma*.

Diapria conica (F.).

Curral dos Romeiros, 15.v.1980, one ♀ (Mrs. E. M. G.); near Lagoa of Santo da Serra. 1.viii.1982, a large swarm of both sexes amongst grasses at the side of a forest path, in company with Syrphid flies.

Trichopria crassifemur Nixon.

Fajã da Nogueira, on levada just east of Cabeço do Eirado do Lapão, ca. 950 m., 25.vii.1982, one ♂ (M. de V. G.). I compared this with the holotype of *crassifemur* and found that it differed only in having the vertex slightly more raised, almost conical.

Trichopria aequata (Thomson).

Curral dos Romeiros, 20.vii.1982, one ♂, three ♀♀.

Trichopria atricornis Kieffer.

Queimadas, 14.v.1980, one ♀.

Trichopria verticillata (Latr.).

Machico, 7.i.1973, one ♀ on a bole of *Platanus*.

Phaenopria miron Nixon.

Curral dos Romeiros, 23.vii.1982, one ♀; near Lagoa of Santo da Serra, 1.viii.1982, two ♀♀. I compared these with the holotype of Nixon's *miron* and could see no difference.

Aneuropria foersteri (Kieffer).

Curral dos Romeiros, 13.v.1980, one ♂ (Mrs. E. M. G.). Widely distributed in Europe. Masner (1959 : 167-168) mentioned that one male had been taken in Central Africa, and that the species would probably turn out to be more widely spread.

Scelionidae

Scelio walkeri Kieffer.

Fajã da Nogueira, 25.vii.1982, one ♀; Curral dos Romeiros, 28.vii. 1982, seven ♀♀, swept in a damp shady forest dell, amongst decaying, fungus-infested branches. Some of the specimens had immature mites on the body.

Baryconus europaeus (Kieffer) (= *Hoploteleia europaea* Kieffer, 1908).

São Martinho, 6.viii.1982, one ♀ (M. de V. G.). This appears to be the same as a species I have taken in southern France and which I believe to be *europaeus*, originally described from Italy.

Gryon sp.

Rabaçal, on levada leading to Vinte e Cinco Fontes, 24.v.1980, one ♀. This has the following characters: length 0.7 mm.; wings haltere-like, reaching only to hind edge of mesosoma; mesosoma slightly broader than long, mesoscutum twice as broad as long, scutellum about 2.5 times as broad as long; metasoma as long as head plus mesosoma, slightly longer than broad, only moderately shiny, entirely delicately alutaceous without any trace of striae, densely pubescent; sides of mesosoma testaceous. It seems to belong to the species-group of *misellum* Haliday, but I have not found a name for it. Possibly it is related to *Gryon micropterus* (Kieffer) which was described under *Hadronotus*.

Trimorus Forster.

The species of this genus are very numerous and much in need of revision even as regards those of Europe, some of which appear to occur in Madeira. No reliance can be placed upon the keys of Kieffer (1926) or Szabó (1966) both of which contain errors of identification and synonymy. I have examined the types of a number of European species, particularly those described at an early date by Walker. Where syntypic series of the latter exist (e.g., in the Walker and Haliday collections), they are sometimes mixed and until lectotypes have been designated, it is unwise in some cases to employ definitive names. I have been able

to identify two species; for the others, I have just indicated their affinities. The brachypterous species are most interesting and some of them may prove to be endemic. I shall hope to return to them at a later date if more information becomes available.

The following species are fully winged :

Trimorus sp. near *ephippium* (Walker).

Caldeirão Verde, 9.viii.1982, two ♀♀. These females are similar in some respects to the male of *ephippium*, but the female of that species has not yet been definitely recognized.

Trimorus sp. near *mermerus* (Walker).

Curral dos Romeiros, 11.v.1980, one ♀, 15.v.1980, two ♀♀ (E. M. and M. de V. G.). Tergite 3 of metasoma finely striate basally, the striae resolving themselves into alutaceous sculpture posteriorly; mesoscutum rather coarsely reticulate and dull, notauli hardly indicated. There are syntypes of *mermerus* in Haliday's collection (NMI) which fit the Madeiran specimens, but other syntypes represent a different species. The question will have to be resolved when a lectotype is selected.

Trimorus sp.

Balcões, 21.vii.1982, one ♀; Queimadas, 9.viii.1982, one ♀. Tergite 3 of metasoma alutaceous; very small, length ca. 1 mm.; mesoscutum rather shiny, alutaceous; stigmal vein very short, nearly sessile; metanotal spine short; first segment of flagellum equal in length to pedicellus and less than twice as long as broad, second segment similar. Resembles *chyllene* (Walker) but tergite 3 has no striae at the base, and the stigmal vein is shorter.

Trimorus sp.

Balcões, 21.vii.1982, two ♀♀. Resembles the preceding species but has the mesoscutum reticulate and dull, notauli indicated in hind half, first and second segments of flagellum hardly longer than broad. The following species are brachypterous with the forewings halterelike and reaching at most to the hind edge of the mesosoma (thorax) :

Trimorus timareta (Walker).

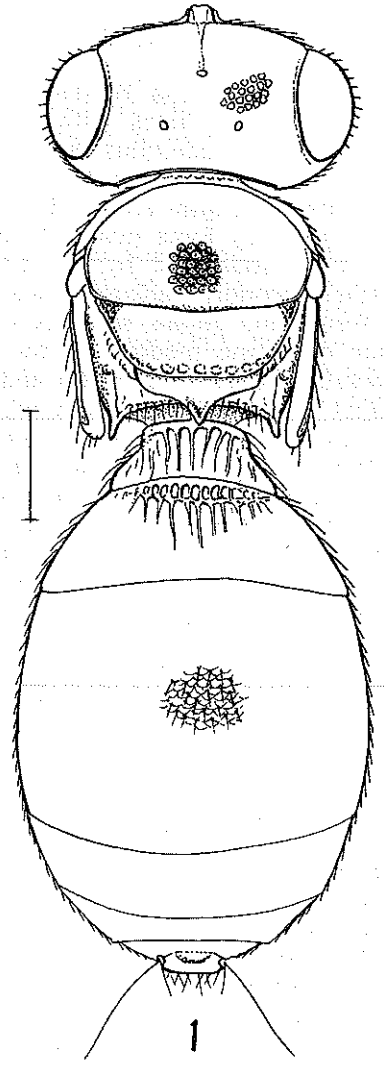
Queimadas, 11.viii.1982, one ♂ (Mrs. E. M. G.). This appears to agree with syntypes of *timareta* in the Walker (BMNH) and Haliday (NMI) collections. A ♀ from Vinte e Cinco Fontes, near Rabaçal, 27.vii.

1982, may also belong to this species. Both lack a spine on the metanotum and thus belong to the group earlier regarded as the genus *Paragryon* Kieffer; the legs are mainly black. The species which follow below have at least a small spine on the metanotum, and the legs are wholly or mainly reddish or testaceous.

Trimorus wollastonae sp. n. (Figs. 1, 2).

♀. Head black, mandibles reddish; mesosoma reddish-brown to black; metasoma brown to black; antennal scape black with basal part reddish, or reddish but becoming brown distally; pedicellus reddish at tip, or mainly so, flagellum black; legs reddish, hind coxae tending to be brownish at base; wing rudiments brownish. Length 1.1 - 1.6 mm. Body as in Fig. 1. Head nearly twice as broad as long. Eyes oval, 1.5 times as long as broad, with moderately long hairs, separated by 1.3 - 1.4 times their length, inner orbits diverging rather strongly ventrad. Malar space equal to breadth of eye. Face outside toruli, and genae, strongly radiately striate. Frons with at least some trace of a fine median carina running upwards from toruli but fading out towards the ocellus. Frons and vertex rather dull, with very small but distinct piliferous punctures which are separated on average by somewhat less than their diameter, the interspaces nearly smooth; lower part of frons broadly smooth in the middle. A strong crest between antennal toruli. Clypeus horizontal. Antennal toruli situated far below eyes and projecting strongly so as to be visible dorsally. Antenna (Fig. 2) with scape about 1.4 times as long as eye; pedicellus 1.7 - 2.0 times as long as broad and equal in length to first flagellar segment, the latter slightly stouter than the pedicellus and 1.5 - 1.8 times as long as broad, second segment slightly shorter and 1.0 - 1.5 times as long as broad, third and fourth very short and somewhat transverse; clava nearly or quite as long as pedicellus plus funicle, 3.2 - 3.5 times as long as broad. Mesosoma about as broad as long. Mesoscutum and scutellum dull, mesoscutum about twice as broad as long, with very small piliferous punctures which are nearly contiguous, giving the surface a coriaceous appearance. Scutellum 2.7 - 3.0 times as broad as long, with sculpture similar to that of mesoscutum but with the punctures rather less dense posteriorly, and with a row of foveae just in front of the narrowly shiny hind margin. Metanotum very finely rugulose-punctate, with a median tooth which is about 0.6 length of scutellum. Propodeum sculptured as metanotum, with a row of foveae along its hind margin; postero-lateral corners strongly toothed. Sides of pronotum shiny, with at least a few very fine transverse striae. Mesopleuron shiny, strongly transversely striate except a smooth lenticular area in the middle. Mesosternum dull, extremely finely granulate. Metapleuron and sides of propodeum shiny, with a few vague fine striae. Hind coxae shiny, virtually smooth, bare. Head and mesosoma densely pilose (sides of mesosoma

bare). Metasoma with proportions of segments as in Fig. 1. First tergite strongly longitudinally striate. Second tergite with a shiny transverse strip along the base, followed by a transverse row of foveae, then with a number of striae which are longest in the middle but become very short



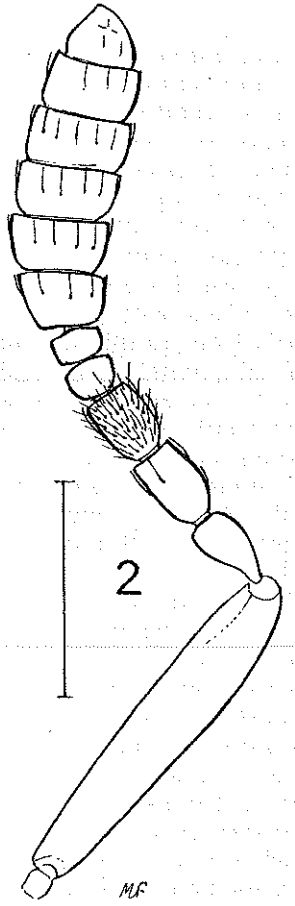


Fig. 1 — **Trimorus wollastonae** sp. n., female, body excluding appendages. Small circular areas on the head, mesoscutum and metasoma show the type of sculpture present on the whole surface of these parts. Fig. 2. — The same, left antenna. The scale lines indicate 0.2 mm.

towards the sides; rest of tergite extremely finely shagreened and dull, except the hind margin which is narrowly smooth. Third and following tergites rather dull, with excessively fine scaly-alutaceous sculpture. All the tergites are densely pilose with moderately long hairs.

♂. Unknown.

Very close to *rotundus* (Dodd) which differs as follows: frons and vertex nearly matt, with excessively fine but distinct engraved (alutaceous) reticulation, and with numerous minute piliferous punctures which are not conspicuous; clypeus inclined slightly relative to the horizontal plane; mesoscutum and scutellum with similar but smaller punctures, first tergite of metasoma rather less transverse, granulate and with shorter and weaker (sometimes vague) striae at base; second tergite with a row of foveae along its basal margin, otherwise excessively finely alutaceous and with very numerous minute tubercles from which the hairs arise; sides of pronotum extremely finely alutaceous, not very shiny; mesosoma and metasoma more extensively reddish (see notes on *rotundus* below).

Holotype ♀ in BMNH; paratypes in the author's collection.

Madeira: Fanal, swept from sparse carpet — vegetation in a Til — wood *(Ocotea foetens* (Ait.) Baill.), 28.vii.1982, one ♀ (the holotype) (M. de V. Graham); Caldeirão Verde, 9.viii.1982, two ♀♀ paratypes (M. de V. G.).

This species is named after Mrs. Edith Wollaston, wife of T. V. Wollaston. In the 1870s this lady collected numerous insects in Madeira, but her work received little publicity.

Trimorus sp.

Fajã da Nogueira, 27.vii.1982, one ♀. Differs from *rotundus* only in having the frons above antennal toruli more extensively smooth, vertex slightly shiny, mesoscutum, scutellum and metasoma rather more shiny. May be only a small weak form of *rotundus*.

Xenomerus ergenna Walker, 1836 : 356, ♂ (= *Teleas medon* Walker, 1836 : 364, ♀, ***syn. n.)***.

Curral dos Romeiros, 15.v.1980, one ♂ (Mrs. E. M. G.); Rabaçal, 29.vii.1982, one ♂ (M. de V. G.). There is one Walker specimen, a female, of *Teleas medon* in BMNH. When I indexed and numbered the Proctotrupoidea in Haliday's collection (NMI) some years ago, I found 4 females which certainly represent further syntypes of *medon*. They are all Walker specimens: two (my nos. 56 and 57) stand above a label «Medon». A third and fourth are nos. 596 and 597, of which no. 596 bears a label «medon». They are all conspecific with the male type of *Xenomerus ergenna* in BMNH. I mention this synonymy because Szabó (1966 : 85-87)

described a new genus *Niteogryon* with type species «*Trimorus medon* Walker, 1836». His supposed *medon* is clearly not Walker's, as should have been evident from the colour of the body and legs in Walker's description, which disagrees with Szabó's. The genus *Niteogryon*, based upon a misidentified type species, is probably only a subgenus of *Xenomerus*.

Xenomerus canariensis Huggert.

Curral dos Romeiros, 15.v.1980, two ♀ ♀ (Mrs. E. M. G.), 11.v.1980, one ♂ (M. de V. G.), 20.vii.1982, two ♂ ♂ (M. de V. G.); Vinte e Cinco Fontes, near Rabaçal, 27.vii.1982, one ♂; Rabaçal, 29.vii.1982 one ♂ (M. de V. G.). Described from a single female from Tenerife (Huggert, 1974). I am not aware that the male has been described. It differs from that of *ergenna* in having the stigmal vein of the forewing shorter and more oblique (thus resembling Huggert's figure (1974, fig. 13) of female *canariensis*.

Trissolcus sp. near *basalis* (Woll.).

Encumeada, near Pousada dos Vinháticos, 18.v.1980, one ♂. Differs from *basalis* in having the mesoscutum evenly reticulate, without any tendency towards striation, antennal flagellum wholly black, first segment of flagellum slightly shorter than the pedicellus. I cannot find a name for it at preesnt.

Trissolcus semistriatus (Nees) (= *Teleas semistriatus* Nees, 1834).

Curral dos Romeiros, 11.v.1980, one ♀, 13.v.1980, one ♀ (M. de V. G.), 23.vii.1982, one ♀ (Mrs. E. M. G.); near Poiso, 1.viii.1982, one ♀. Nixon (1939 : 134-136) and Masner (1958 : 376-378) recognized under this name a single variable species; Masner, who discussed its variation, considered *T. grandis* (Thomson) to be a synonym of *semistriatus*. Both authors regarded the nominotypical form to be that having mainly black tibiae. Delucchi (1961 : 45, 59-62) considered *semistriatus* and *grandis* to be sibling species in which the morphological distinctions are very slight and the colour of the legs variable. He pointed out that Nees had described the tibiae of his *semistriatus* as pale. The actual words in Nees' description (1834 : 290) are «tibiae et tarsi rufo-testacea». Delucchi diagnosed *semistriatus* as having the tibiae usually testaceous, the hind tibiae sometimes, the mid tibiae rarely, brownish in the middle; first segment of flagellum in female 3 times as long as broad. He diagnosed *grandis* as having tibiae dark except at bases and tips; first segment of flagellum in female 2.0-2.5 times as long as broad. The Madeiran females, as regards the colour of their tibiae, agree better with his description of *semistriatus*; one has the tibiae only weakly brownish medially, the other three have them

broadly black medially (but one might expect Madeiran specimens to be rather darker than European). As regards the first segment of the flagellum, the measurements of the Madeiran females range from 2.0 to 3.0 times as long as broad, thus overlapping Delucchi's figures. In the latest key, that of Kozlov (*in* Trjapitzin, 1978 : 629-638) *semistriatus* and *grandis* are treated as distinct species on the basis of the colour of the tibiae; Kozlov's figures, plate 229, figs. 4-8, of the female antenna of *grandis* show considerable variation in the proportions of the first segment of the flagellum. Whether or not two species are involved, the Madeiran material seems best regarded as *semistriatus.*

The species is probably widely distributed in Europe, Asia and north Africa. It is an egg-parasite of a number of Hemiptera Pentatomidae.

Trissolcus ? ghorfii (Delucchi & Voegele).

Curral dos Romeiros, 23.vii.1982, two ♀♀. These appear to agree with the description of *ghorfii* (Delucchi & Voegele, 1961 : 37-39) described from Morocco. They also resemble specimens so determined by Delucchi, but have somewhat paler antennae. *T. ghorfii* is a parasite of *Aelia* spp. and *Eurygaster austriaca* (Schr.) (Hemiptera: Pentatomidae), on cereals.

Telenomus Haliday.

In view of the very large number of described species from all regions, identification is often difficult. Much work has been done on exotic species but the earliest-described species from Europe have been largely neglected. Even the type-species of the genus, *brachialis* Haliday, has not been redescribed, and it is not mentioned in the latest key to Palaearctic species, that of Kozlov (1978)! Because the Madeiran fauna of most insect groups contains a sizeable European element, I thought it likely that its *Telenomus* might do so. The earliest names are largely due to Walker who described a number of species in January 1836. They were included by Kieffer in his monograph of 1926 but it appears solely after Walker's inadequate descriptions, so that no reliance can usually be placed upon his interpretation. Therefore I considered it wise to examine the type specimens of Walker's species, which are contained partly in BMNH and partly in NMI, Dublin. As a result I included that two of the Madeiran species recorded below were first described by Walker from Britain. As the original descriptions do not convey much, I give short diagnoses of their characters.

Telenomus vinicius Walker (1836 : 350).

Queimadas, 14.v.1980, one ♂; Balcões, 21.vii.1982, one ♂; Vinte e Cinco Fontes, near Rabaçal, 27.vii.1982, one ♂; Cruzinhas do Fanal, 28.vii.

1982, one ♀; forest 3 km. east of Poiso, 7.viii.1982, one ♂, one ♀ (M. de V. G.). I have compared the two females with the two syntypes of *vinicius* in BMNH and see no difference except that the Madeiran specimens are slightly larger with more distinctly infumate wings. *T. cleostratus* Walker (1836 : 350) is very similar and may prove to be a synonym of *vinicius*. The ♀ of vinicius has the head 2.2-2.3 times as broad as long; frons smooth; vertex delicately alutaceous, without transverse ridge; mesosoma about 1.2 times as long as broad; mesoscutum moderately shiny, alutaceous, with very numerous hairs; scutellum polished, with scattered minute punctures; large tergite of metasoma slightly broader than long, with very short striae at base; legs mainly black; forewing slightly infumate, usually with a fuscous transverse streak midway between the wing-base and the stigmal vein; first flagellar segment about half as long as the pedicellus and twice or slightly less than as long as broad, second and third segments shorter, fourth quadrate, clava distinct and 5-segmented.

Telenomus othonia Walker (1836 : 350).

Machico, Rocha Alta, 8.i.1973, one ♀; (M. de V. G.); Curral dos Romeiros, 20.vii.1982, one ♀ (Mrs. E. M. G.). Three syntypes of this species exist: a female in BMNH; and a female and a male (numbered by me 100 and 101) in the Haliday collection (NMI). I believe that they are conspecific. I compared the above Madeiran females with the BMNH syntype of *othonia* and consider them to be the same. The ♀ has the head only about 1.5 times as broad as long; frons smooth; vertex with scattered minute punctures, also traces of alutaceous sculpture, without transverse ridge; mesosoma slightly longer than broad; mesoscutum only slightly broader than long, shiny, with numerous minute piliferous punctures, also traces of alutaceous sculpture; scutellum polished, with a few minute punctures; large tergite of metasoma (which is at most as long as the mesosoma) as long as broad, with short striae occupying about the basal quarter; femora fuscous, tibiae testaceous or weakly infuscate medially; wing slightly yellowish; antennae brownish, similar in structure to those of *vinicius*.

Telenomus sp. near *turesis* Walker (1836 : 353).

Near Lagoa of Santo da Serra, 5.viii.1982, two ♂♂. There are three syntypes of *turesis:* a female in BMNH; and a female and a male (numbered by me 115 and 116) in the Haliday collection (NMI, Dublin). I compared the Madeiran males with the female of *turesis* in BMNH; they seem to be near, but the large tergite of the metasoma in the males has relatively shorter striae. Therefore I place them tentatively near *turesis*.

Platygastridae

Amitus sp., possibly near *spiniferus* (Brèthes).

Curral dos Romeiros, 23.vii.1982, one ♂ (Mrs. E. M. G.). Differs from the description of *spiniferus* in having the antennae black with scape paler, legs mainly black, forewing distinctly clouded over its middle part.

Platygaster cyrsilus Walker.

Curral dos Romeiros, 13.vi1980, two ♀♀, 15.v.1980, two ♀♀; Balcões, 21.vii.1982, one ♀. I believe this is correctly determined as *cyrsilus*, of which I have seen the original material.

Platygaster sp. near *cochleatus* Walker.

Curral dos Romeiros, 20.vii.1982, one ♀, 23.vii.1982, one ♀; Lagoa do Fanal, 28.vii.1982, one ♀; Terreiro da Luta, 7.viii.1982, one ♀.

Platygaster sp.

Caldeirão Verde, 9..viii.1982, one ♀; Lagoa do Fanal, 28.vii.1982, one ♀. This belongs to a group near that of *cochleatus* and known to me in Europe.

Synopeas sp.

Curral dos Romeiros, 20.vii.1982, 23.vii.1982, ♀♀.

Leptacis sp. near *tipulae* (Kirby).

Curral dos Romeiros, 15.v.1980, 23.vii.1982, several ♂♂. and ♀♀. Very near to *tipulae* as redescribed by Huggert (1980; 107-109) but notauli present on hind half of mesoscutum, hind edge of mesoscutum (between the notauli) projecting very slightly over the base of the scutellum; legs darker, the mid and hind femora, and apical part of the tibiae, infuscate. I have also compared the Madeiran specimens with the neotype of *tipulae*. I cannot find a name for the Madeiran species.

Amblyaspis sp.

Montado dos Pecegueiros, 3.viii.1982, one ♂; Queimadas, 11.viii. 1982, one ♂. This may be near the European species *A. tritici* (Hal.).

Ceraphronoidea

Ceraphronidae

Ceraphron near *longipennis* Kieffer.

Curral dos Romeiros, 15.v.1980, one ♀, 23.vii.1982, four ♀♀ (E. M. and M. de V. G.); Balcões do Ribeiro Frio, 21.vii.1982, three ♀♀ (M. de V. G.). The scutellum has a large smooth shiny area posteriorly, but the hind coxae lack the fringe of long hairs on their posterior edge, as described by Dessart (1965 : 143) for *longipennis*. There seem to be at least three species in Europe with partly shiny scutellum.

Ceraphron trissacantha Kieffer.

São Martinho, 8.v.1980, one ♀; Curral dos Romeiros, 23.vii.1982, one ♀. Agrees with Dessart's (1965 : 146) redescription of *trissacantha*, in particular the middle of the large tergite has the area of extremely fine and delicate striation; the smooth posterior portion of the scutellum is variable, in one ♀ hardly developed. *C. invreae* Masi, 1933, *Mem. Soc. ent. Ital.*, 12 : 16-18, described from Capri, must be near this species. The following species are retained in *Aphanogmus* although this genus is not very satisfactorily delimited from *Ceraphron:*

Aphanogmus claviger (Kieffer).

Curral dos Romeiros, 23.vii.1982, one ♂ (Mrs. E. M. G.); Caldeirão Verde, 9.viii.1982, one ♂ (M. de V. G.). From the shape of the head and other features I think this must be *claviger,* although the males of *Aphanogmus* are poorly known.

Aphanogmus fumipennis Thomson.

Balcões do Ribeiro Frio, 21.vii.1982, one ♂, one ♀.

Aphanogmus vicinus Förster.

Terreiro da Luta, 7.viii.1982, one ♂ and several ♀♀. Very like European specimens but the legs are slightly darker.

Aphanogmus clavicornis Thomson

Caldeirão Verde, 9.viii.1982, one ♀; Queimadas, 14.v.1980, one ♀; Curral dos Romeiros, 15.v.1980, one ♀ (E. M. and M. de V. G.).

Aphanogmus ? nigrofornicatus Pschorn-Walcher.

Curral dos Romeiros, 23.vii.1982, two ♀♀; Terreiro da Luta, 7.viii. 1982, one ♀. Agrees fairly well with the description of *nigrofornicatus*.

Aphanogmus microneurus Kieffer.

Curral dos Romeiros, 13.v.1980, one ♀, somewhat damaged but one forewing remains showing the characteristic venation.

Megaspilidae

Dendrocerus aphidum (Rondani).

Curral dos Romeiros, 11.v.1980, two ♂♂, 13.v.1980, one ♂ and one ♀, 20.vii.1982, one ♀, 23.vii.1982, one ♂, two ♀♀ (E. M. and M. de V. G.); Terreiro da Luta, 7.viii.1982, one ♂. The genitalia of two males were examined and the shape of the volsella was found to agree with Dessart's figure 22 (1972).

Dendrocerus sp. 2.

Curral dos Romeiros, 11.v.1980, one ♀, 15.v.1980, one ♀ (Mrs. E. M. G.). I have no name for this species, which has a rather long and slightly acuminate metasoma, red antennal scape and legs, and strongly clouded forewing. In some respects it resembles *breadalbimensis* (Kieffer).

Dendrocerus sp. 3.

Curral dos Romeiros, 15.v.1980, one ♂ (Mrs. E. M. G.).

Dendrocerus (Atritomellus) laevis (Ratzeburg).

Machico, on boles of *Platanus*, 7.i.1973, five ♂♂, one ♀.

Conostigmus sp.

Rabaçal, 29.vii.1982, one ♀. The wings are short and narrow, reaching only to the middle of the metasoma. This species might be near the European *brachypterus* (Thomson).

NOTES ON AND NEW RECORDS OF SPECIES ALREADY ON THE MADEIRAN LIST.

Proctotrupoidea

Diapriidae

Zygota wollastoni (Dodd), ***comb. nov.*** (= *Oxylabis wollastoni* Dodd, 1920 : 372).

Montado dos Pecegueiros, 3.viii.1982, one ♀, in native forest at about 1400 m. (M. de V. G.). When searching for a name for this specimen which was clearly a *Zygota*, I happened to look at the syntypic series of 4 females representing *Oxylabis wollastoni* in BMNH. I saw that these were the same as my Pecegueiros specimen but was surprised to find that Dodd's species belonged to *Zygota* and not to *Oxylabis*. Dodd's «Type» (= holotype) and «cotypes» (= paratypes) are all conspecific. The holotype (number 9.15 in the type collection) has Wollaston's serial number 1435 on the lower surface of its card. The 3 paratypes bear serial numbers 1435, 1125, and 1125 respectively, but at present there is no evidence as to which localities these numbers indicate. *Z. wollastoni* closely resembles the European species *hemiptera* (Thomson) but has no trace of a pronotal epomia, whilst the base of the large tergite is more thickly pilose at the sides.

Psilus (*Schizogalesus*) *fissus* (Wollaston) (= *Galesus fissus* Wollaston, 1858 : 25, ♀).

Forest east of Poiso, 7.viii.1982, one ♂ (M. de V. G.). I compared this male with the holotype female of *Galesus fissus* in BMNH and could find only sexual differences. Wollaston evidently had several specimens as he noted «S. António da Serra, Ribeira da Janela, Feijã de Córte, &c.» as localities.

Mantara bifurcata Dodd (1920 : 379-38°, ♂ ♀).

Queimadas, 14.v.1980, one ♂, 11.viii.1982, two ♂♂ (E. M. and M. de V. G.). Dodd described the genus and species from two females and one male labelled «Madeira. Wollaston». I have compared our specimens with the above syntypes. So far as I am aware, this genus has not been recorded outside Madeira.

Trichopria madeirae (Kieffer) (*Diapria madeirae* Kieffer, 1905 : 7, ♂ ♀).

Kieffer mentioned only that this species had been taken in Madeira by Ernest André. He stated that it was «Gast von *Monomorium carbona-*

rium Sm». (Formicoidea). I am unable to find the types and so cannot report further on the species.

Scelionidae

Probaryconus minor (Wollaston) (*Scelio minor* Wollaston, 1858 : 25, ♂ ♀).

Taken «in the chestnut-woods of Santa Anna, during the summer of 1850, — beneath stones, and crawling at the roots of grass on the dry ground». A female *Probaryconus* taken by my wife at Curral dos Romeiros, 13.v.1980, is very near the female type of *minor* in BMNH but has the forewing clouded, the horn of the basal tergite of the metasoma slightly longer, the convex anterior half of this sclerite more weakly striate. I am not sure whether it is within the range of variation of *minor*.

Gryon subfasciatum (Wollaston) (*Telenomus subfasciatus* Wollaston, 1858 : 25, ♀).

The type female of *subfasciatum* (BMNH), the head of which is now missing, belongs to a special group of *Gryon*. It will no doubt be dealt with by Dr. Mineo in his current revision of the genus. I took a single male at São Martinho, 18.vii.1982, which fits the remaining parts of the type and I believe it is conspecific.

Gryon misellum Haliday (= *Telenomus divisus* Wollaston, 1858 : 25, ♀).

Wollaston's type female of *Telenomus divisus* is a fully winged specimen of *Gryon misellum* which does not appear to differ appreciably from some European specimens. I have not seen any additional material form Madeira.

Idris diversus (Wollaston) (= *Telenomus diversus* Wollaston, 1858 : 26, ♀; *T. flavicornis* Wollaston, 1858 : 26, ♂).

New records are: Machico, Rocha Alta, 1.i.1973, one ♂, 8.i.1973, four ♀ ♀; Curral dos Romeiros, 23.vii.1982, one ♀ (M. de V. G.). Originally captured by Wollaston in the chestnut woods of Santana, in summer 1850. I have compared the above specimens with Wollaston's types. An excellent redescription of the species, however, has been published by Huggert (1979 : 26-28).

Wollaston took both *Idris diversus* and *Trissolcus basalis* at Santana. The chestnut woods where he took them would be those shown on Ziegler's map of 1856 as being situated around the village, with a belt extending south-west from it up Ribeira do Seisal. The chestnuts were largely destroyed in the latter part of the last century by fungal disease

and this area is now occupied by pinewood. Wollaston stayed for some time during summer 1850 at Senhor Acciaioly's hotel in Santana, a highly-recomended lodging made use of by many visitors of that period.

Trimorus rotundus (Dodd) (= *Hoplogryon rotundus* Dodd, 1920 : 358, ♀).

Machico, Rocha Alta, 9.i.1973, three ♀♀; Vinte e Cinco Fontes near Rabaçal, 27.vii.1982, one ♀; Rabaçal, 29.vii.1982, three ♀♀; Fanal (in a wood) 28.vii.1982, three ♀♀; Caldeirão Verde, 9.viii.1982, two ♂♂, one ♀; Queimadas, 11.viii.1982, two ♀♀. (M. de V. G.). These have been compared with the holotype of *rotundus* and found to be conspecific.

The male, which does not appear to have been described, differs from the female as follows: antennal flagellum longer, combined length of pedicellus and flagellum 2.1-2.2 times breadth of the head; flagellum stouter than the pedicellus with its first segment about 1.6 times as long as the pedicellus and 1.7-2.0 times as long as broad, second somewhat longer than the first and 2.5-3.0 times as long as broad, third about as long as second, thickest apically and constricted gradually in its proximal half, the following segments cylindrical, decreasing gradually in length with the ninth 1.5-1.7 times as long as broad, tenth subconical and about 1.5 times as long as the ninth; flagellum thickly clothed with hairs whose length is somewhat less than the breadth of the segments and which stand out at about 45°; metasoma slightly narrower, with its tergites less transverse, the seventh visible.

The female of *rotundus* varies from 0.8 to 1.6 mm. in length. Smaller females have relatively longer pedicellus but shorter flagellar segments; the pedicellus varies from 1.02 to 1.35 times as long as broad; the first funicular segment varies from 1.35 (small specimens) to 1.87 (large female) times as long as broad, the second segment from 1.18 to 1.83 times as long as broad; the third and fourth segments are slightly less transverse in small specimens, a little more transverse in large ones. The mesosoma is wholly red or has the posterior part more or less brown. The metasoma may be brown with the basal tergite and the disc of the second and third reddish; or with only disc of third reddish; or only first tergite reddish; or brown with the base hardly paler. The legs are usually wholly red, rarely the femora are slightly brownish. The antennal scape may be red with its dorsal edge infuscate, or have the basal half or less reddish.

Trissolcus basalis (Wollaston) (= *Telenomus basalis* Wollaston, 1858 : 25, ♀; *T. Maderensis* Wollaston, 1858 : 25, ♂♀).

São Martinho, 8.v.1980, three ♀♀, 9.v.1980, two ♀♀, 26.v.1980, one ♂, 21.v.1980, one ♂, two ♀♀, 26.v.1980, one ♀ (E. M. and M. de V. G.); Encumeada de São Vicente, 18.v.1980, one ♀; Curral dos Romei-

ros, 13.v.1980, one ♀, 23.vii.1982, one ♀; Vinte e Cinco Fontes near Rabaçal, 27.vii.1982, one ♀.

Wollaston took *basalis* on the main island (locality not stated) and *maderensis* «in the chestnut-woods of Santa Anna, during the summer of 1850». The species is now known from the U. S. A., West Indies, Africa, Europe, and the middle East. It is an egg-parasite of Hemiptera Pentatomidae which attack cereals and has been used in their biological control in Australia and the Pacific. I have compared our specimens with Wollaston's types in BMNH. Nixon (1935 : 100-102) gave a very good redescription (as *Microphanurus basalis*). The antenal flagellum of the female is variable in colour, sometimes reddish-bown proximally (Nixon stated «first 4 segments of the funicle brownish») sometimes with these segments red.

Ceraphronoidea

Dendrocerus punctipes (Boheman, 1832) (= *Ceraphron parvulum* Wollaston, 1858 : 26, ♀, Pl. 4, fig. 8).

Ceraphron parvulum was placed in synonymy with *Dendrocerus punctipes* by Dessart (1972 : 213). New records: Madeira, Curral dos Romeiros, 11.v.1980, two ♀♀; 23.vii.1982, one ♀ (Mrs. E. M. G.). I compared these with Wollaston's type and believe they are conspecific.

Conostigmus brunneipes Dodd (1920 : 367).

I have examined the syntypes of *brunneipes* in BMNH, a male and a female labelled «Madeira, Wollaston». No additional material has turned up in our collecting.

Chrysidoidea (Bethyloidea)

Dryinidae

Chelogynus ephippiger (Dalman).

Balcões de Ribeiro Frio, 21.vii.1982, one ♀.

Kieffer (1914a : 179) made a curious mistake in proposing a subspecific name for the dark form of *ephippiger*. He named it «Var. *similis* Walker», founding it upon Walker's description of his var. γ of *ephippiger* (Walker, 1837 : 415) which begins «Var. γ. Var. β similis». Here «similis» is simply a descriptive word and not a name.

Bethylidae

The Old World Bethylidae are still poorly known and badly need revision. Having collected a number of *Bethylus* in Madeira, and knowing

the taxonomic situation, I decided to examine the types of Wollaston's Madeiran species, which Kieffer had evidently not seen when writing his monograph (1914a). As two at least of Wollaston's species are valid, I include here a key to indicate how they differ from European species, at the same time designating lectotypes.

Bethylus latus Wollaston (1858 : 28, ♂ (recte ♀)).

Wollaston described this species from «Santana, Ribeiro Frio, &c.» He mistook the sex of his specimens. Two females stand under this name in BMNH and are conspecific. The first specimen is here designated LECTOTYPE; it has Wollaston's number 1171 written on the lower surface of its card, and bears a label «Madeira. Wollaston 55-7». The second specimen, designated paralectotype, bears the number 1229. The numbers on the cards refer to localities but as Wollaston's list of these numbers has not been found, one can only surmise what place they refer to. From a cross check of the localities recorded for the various species, it seems possible that 1229 might indicate Santana, 1171 Ribeiro Frio, and 1080 and 1089 either Lombo da Vaca or Fanal. New records. Curral dos Romeiros, 11.v.1980, one ♀ (M. de V. G.), 15.v.1980, one ♀ (Mrs. E. M. G.); Fajã da Nogueira, 25.vii.1982, one ♀; Rabaçal, towards Risco waterfall, 29.vii.1982, two ♀ ♀.

Bethylus tenuis Wollaston (1858 : 28, ♂ (recte ♀)).

Although Wollaston stated that he had «captured it abundantly» on Ilhéu Chão (the only locality mentioned) I can find only one specimen in BMNH which bears a yellow line at the bottom of its card, his method of indicating material from Ilhéu Chão. This specimen, a female, here designated LECTOTYPE, bears two labels (1) «Madeira. Wollaston. 55-7» (2) a blue label «*Bethylus tenuis* W.». The other three specimens standing under *tenuis*, all females, are not syntypes because they have numbers on their cards (1229, 1229 and 1080 respectively) and Wollaston put numbers only on specimens from the main island of Madeira. This seems to be the most common species on Madeira itself. We have taken it in the following places. Curral dos Romeiros, 11.v.1980, one ♂, six ♀ ♀, 13.v.1980, three ♀ ♀, 15.v.1980, three ♀ ♀, 20.vii.1982, three ♀ ♀, 22.vii. 1982, four ♀ ♀, 23.vii.1982, three ♀ ♀ (E. M. and M. de V. G.); Balcões do Ribeiro Frio, 21.vii.1982, one ♂, one ♀; the male from Balcões has rudimentary wings.

Bethylus linearis Wollaston (1858 : 27, ♂).

Originally recorded from «Santana, Lombo da Vaca, Fanal, & c.». Four males stand under this name in BMNH. They appear to be conspecific.

The fourth specimen, here designated LECTOTYPE, has the number 1080 on its card and bears two labels (1) «Madeira. Wollaston. 1855-7» (2) a blue label «*Bethylus linearis* W.». The other three specimens, designated paralectotypes, bear numbers 1089, 1229 and 1229 respectively. I am not quite sure whether *linearis* is specifically distinct from *tenuis*. The head of *linearis* appears to be slightly broader in proportion to its length than in *tenuis*, and the legs rather paler, but there is much variation in these respects. New records are as follows. Machico, Rocha Alta, 1.i.1973, one ♀; Curral dos Romeiros, 11.v.1980, four ♀♀ (E. M. and M. de V. G.); Ribeira Brava near Serra de Água, 19.v.1980, one ♀.

Bethylus fuscicornis (Jurine).

New to Madeira : Curral dos Romeiros, 23.vii.1982, one ♀. There is another female, collected by Wollaston, in BMNH; it bears his serial number 1162 and a label in Walker's handwriting «Bethylus concinnus» (nomen nudum). These specimens do not differ appreciably from European material.

Key to species of *Bethylus* Latreille found in Madeira (females) In this key the character POL denotes the distance between the inner edges of the lateral ocelli.

1 Lateral ocelli separated from edge of occiput by a distance fully equal to or even very slightly more than POL. Mandibles testaceous, fully 3 times as long as their apical breadth, their outer (lower) margin, as seen in dorsal view of head, moderately and evenly curved. Legs, except coxae more or less, testaceous. Large species, length 2.8-3.5 mm ... ... *latus* Wollaston

— Lateral ocelli separated from edge of occiput by a distance at least slightly less than POL. Mandibles black, often relatively shorter than in the above, their outer margin often more strongly curved. Legs sometimes relatively darker. Species sometimes smaller 2

2 Mandibles, when seen in dorsal view of head, with their outer margin nearly straight in their basal half, moderately curved in their distal half; with a nearly flat moderately broad smooth area at the base. Proximal segments of antennal flagellum nearly twice as long as broad, distal segments about 1.5 times as long as broad. Lateral ocelli separated from edge of occiput by about 0.5 POL. Femora mainly black, tibiae often infuscate ... ... *fuscicornis* (Jurine)

— Mandibles, seen in dorsal view of head, with outer margin sinuate in basal half, very strongly curved in distal half; with a relatively broad convex smooth area at base. Proximal segments of flagellum at most about 1.5 times as long as broad,

distal segments not or hardly longer than broad. Lateral ocelli sometimes relatively nearer to edge of occiput. Legs (apart from the coxae) sometimes mainly testaceous 3

3 Head in dorsal view 1.1-1.2 times as long as broad (measured from front of clypeus to edge of occiput). Average size greater, length 2.6-3.4 mm. Legs (apart from coxae) testaceous, or at most the hind femora slightly infuscate dorsally. Proximal segments of flagellum slightly longer than broad, sixth or seventh and following segments hardly longer than broad. Base and sides of ocellar triangle equal ... *linearis* Wollaston

— Head in dorsal view 1.25-1.30 times as long as broad. Femora nearly always at least slightly infuscate, often mainly or wholly fuscous to black; tibiae sometimes more or less infuscate. Third and following segments of flagellum submoniliform and not longer than broad. Base of ocellar triangle tending to be very slightly longer than the sides ... ... *tenuis* Wollaston

At present I am unable to provide a satisfactory key to males. I do not know the male of *latus* but it should have essentially the same characters as the female, particularly the long pale mandibles and pale legs. Males of *linearis* and *tenuis* have the same form of mandible as their females and in this respect differ from males of *fuscicornis,* but I cannot distinguish them very clearly from each other.

Anoxus ? *boops* Thomson.

This genus has not hitherto been recorded from Madeira. There are two Wollaston females in BMNH which may belong to *A. boops,* though I have not been able to compare them with the types of that species. One bears Wollaston's serial number 1303 and has two labels (1) «Madeira. Wollaston. 55-7» (2) Bethylus formicarius» in a handwriting which is possibly Haliday's. The other bears serial number 1162 and labels «Madeira. Wollaston 55-7» and «Bethylus acutus» (? nomen nudum) in Walker's handwriting. I have taken this species in the south of France.

Holepyris sp.

São Martinho, 8.v.1980, one ♀. This does not appear to belong to any of the described European species.

Epyris longicollis Kieffer.

São Martinho, 10.v.1980, one ♀.

This agrees rather well with Kieffer's description of *longicollis,* which was originally recorded from Spain, thus a species likely to occur in Madeira.

Cynipoidea

This superfamily is rather poorly represented in Madeira. The gallforming Cynipinae, so numerous in Europe and elsewhere, are few, in particular those associated with *Quercus* which is not native in Madeira. One might expect more species of Eucoilidae and Figitidae to occur, in addition to those recorded here.

SPECIES NEW TO MADEIRA

Cynipidae

Andricus sp.

Curral dos Romeiros, 11.v.1980, two ♀♀ (Mrs. E. M. G.), 13.v.1980, two ♀♀ (M. de V. G.).

Phaenoglyphis villosa Htg.

Curral dos Romeiros, 11.v.1980, one ♀ (Mrs. E. M G.), 13.v.1980, one ♀, 15.v.1980, 6 ♀♀ (M. de V. G.).

Alloxysta Forster.

Kieffer described two species of this genus from Tenerife but it has not hitherto been recorded from Madeira.

Alloxysta minuta Htg.

Curral dos Romeiros, 11.v.1980, four ♀♀, 15.v.1980, one ♀ (E. M. and M. de V. G.); Balcões, 21.vii.1982, two ♀♀; 3 km. east of Poiso, 1.viii. 1982, two ♀♀ (M. de V. G.).

Alloxysta pedestris (Curtis).

Curral dos Romeiros, 11.v.1980, one ♂, two ♀♀, 15.v.1980, one ♀.

Alloxysta victrix (Westwood).

São Martinho, 8.v.1980, one ♂ (Mrs. E. M. G.); Machico, Rocha Alta, 1.i.1973, two ♀♀; Curral dos Romeiros, 11.v.1980, one ♂, three ♀♀; 3 km. east of Poiso, 3.viii.1982, three ♀♀.

Alloxysta sp. indet. 1.

Curral dos Romeiros, 11.v.1980, one ♀ (Mrs. E. M. G.). Very like *victrix* but head fuscous with lower half yellowish, antennal flagellum rather more slender proximally, radial cell slightly shorter with third sector of radius more curved.

Alloxysta sp. indet. 2.

Curral dos Romeiros, 11.v.1980, one ♀ (Mrs. E. M. G.). Has radial cell open on costal margin and runs in Hellén's key (1963 : 12) to *piceomaculata,* but I am not sure if it is that species

Alloxysta sp. indet. 3.

Curral dos Romeiros, 13.v.1980, one ♀ (M. de V. G.). Runs in Hellén's key (1963 : 12) to *tscheki* and might be that species.

Eucoilidae

Psichacra ? longicornis (Htg.).

Machico, Rocha Alta, 1.i.1973, one ♂, three ♀♀, 5.i.1973, one ♂, two ♀♀, 8.i.1973, one ♀.

Kleidotoma nigra Htg.

Machico, Rocha Alta, 9.i.1973, one ♀.

Kleidotoma ? dolichocera Cam.

Queimadas, 14.v.1980, one ♀.

Kleidotoma sp. near *striata* Cam.

Curral dos Romeiros, 15.v.1980, one ♀ (Mrs. E. M. G.); Vinte e Cinco Fontes, near Rabaçal, 27.vii.1982, one ♀ (M. de V. G.). Near *striata* Cameron, but sides of pronotum smooth, without striae in the upper part, surface of wing with rather long cilia.

Ganaspis subnuda Kieffer.

Casa do Rabaçal, 28.vii.1982, several ♀♀ walking over window panes inside the house, about 6.30 a.m. (M. de V. G.). Originally described from Tenerife, now known to be widely distributed.

Ganaspis sp. indet.

Queimadas, 14.v.1980, one ♀, 11.viii.1982, one ♀; Machico, Rocha Alta, 1.i.1973, four ♀♀. These have the last tergite of the gaster smooth (not finely punctate as in *subnuda*) whilst the distal segments of the flagellum are longer, about twice as long as broad.

Cothonaspis gracilis Htg.

Lagoa do Fanal, 28.vii.1982, one ♀ (M. de V. G.).

Figitidae

Aegilips ? *rugicollis* Reinh.

Santa Cruz, Boaventura ravine, 5.i.1973, one ♂ (M. de V. G.).

Aegilips sp. indet.

Curral dos Romeiros, 13.v.1980, one ♂; Montado dos Pecegueiros, 3.viii.1982, one ♀; Caldeirão Verde, 9.viii.1982, one ♂; Queimadas, 11.viii. 1982, one ♂, one ♀ (M. de V. G.). This seems to be near *nitidula* (Dalman). Specimens have been given to Mr. N. Fergusson, who hopes to deal with them in a later revision of the group.

Melanips sp.

Near Pousada dos Vinháticos, below Encumeada de São Vicente, 18.v.1980, one ♂, 19.v.1980, one ♀. This seems to be near if not identical with *alienus* Giraud.

Lonchidia clavicornis Thomson.

Curral dos Romeiros, 15.v.1980, one ♀ (M. de V. G.).

Note on some species previously recorded from Madeira

Three species of oak Cynipinae have already been recorded: *Andricus anthracinus* (= *ostreus*) by Tavares; *Neuroterus aprilinus* (Giraud) also by Tavares; and *Synergus gallaepomiformis* (Fonsc.) by Graham (1983: 9). Mr. J. Quinlan has kindly confirmed that my earlier record of *A. anthracinus* from Curral dos Romeiros (13.v.1980) was correct.

Ichneumonoideo

Braconidae

Pseudopezomachus bituberculatus Marshall.

There is a female of this species from Porto Santo in BMNH, labelled «Porto Santo» and «Wollaston». It was apparently never recorded and the species should now be added to the Madeiran list. Females seem to be frequent at intermediate levels on the main island of Madeira. The following are new records; Machico, Rocha Alta, 1.i.1973, one ♀; near Pousada dos Vinháticos, 18.v.1980, one ♀; Curral dos Romeiros, 11.v.1980, two ♀♀, 13.v.1980, three ♀♀, 15.v.1980, six ♀♀ (E. M. and M. de V. G.). This species seems to be widely distributed in the Mediterranean area. A redescription was published by Nixon (1940, Proc. R. ent. Soc. Lond. (B), 9 : 101-104). It has been reared in Europe from a Dipterous leaf-miner on *Lepidium*.

Lepidoptera

Yponomeutidae

Kessleria bakeri (Wals.)

On 29.vii.1982 my wife drew my attention to a number of whitish cocoons on foliage of *Erica arborea* on the old disused levada at Rabaçal. We gathered some and reared three specimens of the moth from them. I am indebted to Mr. J. D. Bradley (BMNH) for kindly identifying the species.

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