

**NEW AND LITTLE KNOWN COLEOPTERA FROM MADEIRA.
RESULTS OF EXCURSIONS TO MADEIRA IN THE YEARS 1986-1990**

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ABSTRACT: Coleoptera collected by the author and others, especially on excursions in 1988, 1989 and 1990 on Madeira are listed. 11 species are new to the Madeira Archipelago, 14 to one of its islands; 10 are even new to Macaronesia. These and some species of special interest are discussed.

RESUMO: COLEÓPTEROS NOVOS E POUCO CONHECIDOS DA MADEIRA. RESULTADOS DE EXCURSÕES À MADEIRA NOS ANOS 1986 - 1990. Neste trabalho são listados os coleópteros colhidos pelo autor e outros, em excursões realizadas na Madeira em 1988, 1989 e 1990. Onze espécies são novas para o Arquipélago da Madeira, 14 para uma das ilhas e 10 para a Macaronésia. Estas e outras de interesse especial são discutidas em detalhe.

INTRODUCTION

I have recently obtained extensive material, collected by H. PIEPER, C. LANGE and myself during several visits to Madeira since 1985. In September 1988 all of us together organized some collecting trips to Madeira proper and Porto Santo even spending some days on Deserta Grande.

In the following account an annotated list of the species so far not recorded for Madeira is given. It also contains some species that for one reason or another are considered of special interest. The author would also mention that some specimens included were of the collection of the Museu Municipal do Funchal. Another list following the one above contains all further collected species. Records given without the name of the collector refer to material collected by the author.

The extensive material, which H. PIEPER collected over a span of several years from a window pane of his bungalow, will be published separately; only some species which are very rare or new to Madeira are included here.

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NOVELTIES AND SPECIES OF SPECIAL INTEREST

Fam.: Carabidae

Notiophilus quadripunctatus DEJEAN, 1826

New to the Desertas.

Deserta Grande: Northern part, 200-400 m., 24.IX.1988, 7 specimens under stones.

First records were given by ERBER & HINTERSEHER (1988), however SERRANO (1989) established that the records of *N. gemminatus* DEJEAN, (originally so designated by WOLLASTON (1854)), are probably all to be referred to *N. quadripunctatus*. He has proved this in the specimens collected by LINDBERG and in material from the Azores.

Distribution: Western Europe, North Africa, Azores, Madeira proper, Deserta Grande.

Trechus wollastoni JEANNEL, 1922

Very rare on Madeira.

Madeira: Ribeiro Frio, 780 m., 18.IX.1988, 1 specimen under bark of *Erica*, (FRANZ *det.*).

The species seems to be very rare. We have found only one record in the literature since the first in the description by JEANNEL (1922): SERRANO (1987) detected one specimen at Ribeiro Frio on 3.IV.1980 under a tree trunk.

Distribution: Madeira proper.

Thalassophilus pieperi ERBER, 1990

New to Macaronesia.

Madeira: Machico, Furnas do Cavalum, 100 m., 11.-16.IX.1988, collected by PIEPER and ERBER.

Description of this new endemic species is given separately (ERBER, 1990).

Paradromius linearis OLIVIER, 1792

New to Macaronesia.

Madeira: Ponta de São Lourenço, Casa do Sardinha, 100 m., 6.IV.1990, 2 specimens sifted from soil under leaf rosette of a Labiate (MATEU *det.*).

Obviously a newly imported species, possibly from the Mediterranean Region.

Since both specimens recorded here were immature, we can assume that the species is already established on Madeira.

Distribution: Western Asia, Europe, Mediterranean Region, Madeira proper.

Fam.: **Hydrophilidae**

Megasternum boletophagum MARSHAM, 1802

Syn.: *M.algericum* SAHLBERG, 1903

New to the Atlantic Islands.

Madeira: Caniço de Baixo, 80 m., 10.-16.IX.1985 (1), 4.-25.IX.1986 (1), both collected by H. PIEPER from window pane (HOFMANN *det.*).

Distribution: Europe, Mediterranean Region, North Africa (?), Madeira proper.

Fam.: **Scydmaenidae**

Euthia schaumii KIESENWETTER, 1858

New to Macaronesia.

Madeira: Caniço de Baixo, 80 m., 4.-25.IX.1986, 1 specimen, collected from a window pane by H. PIEPER.

Distribution: Europe from Greece to Central and Southern France, from Sweden to Sardinia, Madeira proper.

Fam.: **Staphylinidae**

Plathystethus cornutus (GRAVENHORST, 1802)

Very rare on the Archipelago.

Madeira: Caniço de Baixo, 80 m., 4.-25.IX.1986 (1, collected by H. PIEPER from window pane).

There are only two records in the literature: WOLLASTON (1862) obtained one female which ANDERSON had found near Funchal; LINDBERG collected one specimen in Porto Santo near Vila Baleira in V.1959.

Distribution: Palaearctic Region, Canary Islands, Madeira proper, Porto Santo.

Lithocharis vilis (KRAATZ, 1859)

New to Porto Santo.

Porto Santo: Cabeço do Dragoal, 30 m., 19.IX.1988, 1 specimen under dry cattle dung.

Madeira: Caniço de Baixo, 80 m., 4.-25.IX.1986, 1 specimen collected from window pane by H. PIEPER.

The species seems to be very rare on the Madeira Archipelago. It was first listed by FAUVEL (1897) but we can not find out where and by whom it had been recorded. LINDBERG collected 8 specimens at Funchal on 10.VI.1957 and 1 specimen at Serra de Água on 20.IV.1959 (SMETANA, 1963).

Distribution: Cosmopolite in the temperate and the warmer zones, Canary Islands, Madeira, Porto Santo.

Ocypus olens MÜLLER, 1764

Syn.: *Emus marosus* DEJEAN, 1837

New to Porto Santo.

Porto Santo: Cabeço do Zimbralinho, 180 m., 28.III.1990, several specimens under stones.

Madeira: Paul da Serra, Estanquinhos, 1500 m., 21.IX.1988, 2 specimens under stones.

First recorded from Madeira proper by ISRAELSON (1981), from Deserta Grande by ERBER & HINTERSEHER (1988).

Distribution: Western Palaearctic Region, North Africa, Canary Islands, Azores, Madeira proper, Deserta Grande, Porto Santo.

Phacophallus trigonocephalus (ERICHSON, 1859)

New to the Madeira Archipelago.

Madeira: Caniço de Baixo, 80 m., IX.1986, 5 specimens collected from window pane by H. PIEPER.

To date only the related taxon *Phacophallus (Leptacinus) parumpunctatus* (GYLLENHAL, 1827) has been known from the Canaries, the Azores and Madeira.

Distribution: India, Europe, North Africa (Morocco), Canaries, Azores, Madeira proper.

Mycetoporus longicornis MÄKLIN, 1847

New to the Madeira Archipelago.

Madeira: Caniço de Baixo, 80 m., IX.1986, 2 specimens collected from window pane by H. PIEPER.

Distribution: Palaearctic Region: Europe, Mediterranean Region, North Africa (Algeria, Kabyliya), Asia Minor, Caucasus, Turkestan, East Siberia (HORION, 1967).

Oligota canariensis WILLIAMS, 1972 ¹

New to the Madeira Archipelago.

Madeira: Caniço de Baixo, 80 m., 10.-16.IX.1985 (7), 4.-25.IX.1986 (1), 9.-29.IX.1988 (26), all collected by PIEPER from window pane (WILLIAMS *det.*).

First detected by T. PALM on Tenerife, Santa Cruz, 16.VI.1964 (1) and again at Puerto de la Cruz, 21-23.I.1971 (in numbers), in mixed garden refuse (WILLIAMS, 1972).

Distribution: Canary Islands (Tenerife), Madeira proper.

Stenomastax immigrator ISRAELSON *in litt.*

New genus to Macaronesia.

Madeira: Caniço de Baixo, 80 m., 16.IX.1985 (4), 4.-25.IX.1986 (1), 29.IX.1988 (1). All specimens have been collected from window pane by H. PIEPER.

The identification of the species is still in progress; Mr. G. ISRAELSON is studying the material. All *Stenomastax* species are distributed in the Oriental Region.

Amischa decipiens (SHARP, 1869)

New to the Madeira Archipelago.

Madeira: Paul da Serra, Estanquinhos, 1500 m., 21.IX.1988, 1 specimen under stone (VOGEL *vid.*).

Distribution: Western and Central Europe, Canary Islands.

Aleochara lindbergi LIKOVSKY, 1963

New to Porto Santo.

Porto Santo: Rocha de Nossa Senhora, 19.IX.1988 (1 in soil cleft).

Madeira: Fajã da Nogueira, 600 m., 28.IX.1988 (1 in colour trap).

The species has been collected by LINDBERG in VI/VII.1957 at different points of Madeira proper (LIKOVSKY, 1963). Our record from Porto Santo on 5.VIII.1985

¹ Erroneously recorded as *O. granaria* ER. by ERBER & HINTERSEHER (1988) (see correction in ERBER & HINTERSEHER, 1990).

(ERBER & HINTERSEHER, 1988) must be corrected and changed to *A. bipustulata* (L.).
(see also ERBER & HINTERSEHER (1990))

Distribution: Madeira proper, Porto Santo.

Fam.: **Buprestidae.**

Melanophila acuminata DE GEER, 1774

New to Macaronesia.

Madeira: Pico do Areeiro, 1700 m., 16.IX.1989, 1 specimen collected by H. PIEPER
(NIEHUIS *det.*).

Probably a single specimen, so that the species will not become established on the island.

The beetles attack trees injured by fire, especially conifers, but also oak, beech and birch. The larvae bore galleries between bark and wood. (HORION, 1955)

Distribution: Holarctic Region: Europe from North Italy to North Scandinavia, Greenland, from the Iberian Peninsula to Siberia, China, Mongolia, North America, Alaska, Cuba, Haiti (HORION, 1955).

Fam.: **Dermestidae**

Dermestes maculatus DE GEER, 1774

Syn.: *Dermestes vulpinus* FABRICIUS, 1781

New to the Desertas.

Deserta Grande: Northern part, 200 m., 25.IX.1988, 6 specimens and many larvae in carcass of a shearwater.

Distribution: Cosmopolite, Cape Verdes, Canaries, Azores, Selvages, Madeira proper, Deserta Grande.

Fam.: **Cucujidae**

Silvanoprus scuticollis WALKER, 1859

Syn.: *Silvanus triangulus* REITTER, 1876

New to the Atlantic Islands ?

Madeira: Caniço de Baixo, 80 m., IX.1986, 1 specimen, collected from window

pane by H. PIEPER (ISRAELSON *det.*).

We could not find any record in the literature, neither for the Madeira Archipelago nor for one of the other Atlantic Islands. HALSTEAD (*in litt.*), however, told us, that he had previously seen specimens from Madeira but does not know if there is a published record. This tropicopolitan species has occasionally been found in imported foodstuffs.

Distribution: Ethiopic Region: Ivory Coast, Ghana, Nigeria, Cameroons, Zaire, Congo, Sudan, Uganda, Tanzania, Madagascar (HALSTEAD *in litt.*).

Fam.: Erotylidae

Cryptophilus integer (HEER, 1838)

New to the Madeira Archipelago.

Madeira: Caniço de Baixo, 80 m., IX.1986, 9 specimens collected by H. PIEPER (7 specimens caught in light trap, 2 specimens on window pane).

Distribution: Caucasus, Turkestan, Asia Minor, Mediterranean Region (Egypt, Algeria, South Europe from Greece to Spain) from where the mycetophagous species may have immigrated to Madeira. Also known from the Azores.

Fam.: Lathridiidae

Lathridius australicus (BELON, 1887)

New to the Madeira Archipelago.

Madeira: Caniço de Baixo, 80 m., IX.1986, 1 specimen collected from window pane by H. PIEPER (RÜCKER *vid.*).

Distribution: Australia; immigrated to California, Norway, Great Britain, Germany (Hamburg), St. Helena, Azores, Madeira proper.

Fam.: Colydiidae

Tarphius excisus WOLLASTON, 1857

Very rare on Porto Santo.

Porto Santo: Pico do Castelo, 430 m., 29.III.1990, 2 specimens sifted from bark of *Pinus*, which was found in a thick layer at the top of the peak. Both specimens were

not yet in full colour.

Only two specimens were recorded by WOLLASTON (1857), collected at Pico Branco on 9.V.1855.

Distribution: Porto Santo.

Fam.: **Coccinellidae**

Lindorus lophantae BLAISDELL, 1892

New to Porto Santo.

Porto Santo: Cabeço do Zimbralinho, 180 m., 20.IX.1988, 20 specimens beaten off a pine tree; Espigão, 250 m., 28.III.1990, 16 specimens beaten off a *Cupressus*, together with other Coccinellidae.

Madeira: Garajau, 17.-24.IV.1978 (2, leg. PALM); Porto Moniz, 23.III.1983 (1, leg. WALDÉN); Caniço de Baixo, IX.1985 (2), IX.1986 (4) and IX.1988 (2), all leg. PIEPER.²

The species was first recorded from Madeira by LINDBERG in VI.1957 (BIELAWSKI, 1963). Since its immigration to Madeira proper it has spread widely over the Archipelago.

Distribution: North America, North Africa (Morocco), Canary Islands, Madeira proper, Porto Santo.

Rodolia cardinalis MULSANT, 1950

New to Porto Santo.

Porto Santo: Espigão, 250 m., 28.III.1990, 1 specimen beaten off a *Cupressus*, together with other Coccinellidae.

This species which stems from Australia was first found on Madeira by LINDBERG in VII.1959 (BIELAWSKI, 1963). It seems to be still very rare on the Archipelago.

Distribution: Australia, Palaearctic Region, Japan, Formosa, Canary Islands, Azores, Madeira proper, Porto Santo.

Scymnus suturalis (THUNBERG, 1795)

New to Porto Santo.

Porto Santo: Cabeço do Zimbralinho, 180 m., 28.III.1990, 1 specimen beaten off *Pinus* in a young afforestation.

² See also ERBER & HINTERSEHER (1988), where the species was erroneously recorded as *Scymnus rubromaculatus* GOEZE.

The species seems to be very rare on the Archipelago. A first record was given by LIEBMANN (1939), who found it near Funchal. Later UYTENBOOGAART (1947) collected one specimen at Funchal and two at Ribeira Brava and LINDBERG found one at Serra de Água in VII.1957 (BIELAWSKI, 1963).

Distribution: Palaearctic Region, Azores, Madeira proper, Porto Santo.

Scymnus interruptus (GOEZE, 1777)

Syn.: *S. marginalis* MULSANT, 1846; *Coccinella morio* FABRICIUS, 1801

New to Porto Santo.

Porto Santo: Cabeço do Zimbralinho, 180 m., 20.IX.1988, 5 beaten off conifers (*Pinus* and *Cupressus*) in a young afforestation, together with other Coccinellidae.

Distribution: Palaearctic Region, Mediterranean Region with North Africa, Azores, Madeira proper, Desertas (Ilhéu Chão), Porto Santo.

Nephus flavopictus (WOLLASTON, 1854)

Syn.: *Scymnus flavopictus* WOLLASTON, 1854; *S. oblongior* WOLLASTON, 1864
S. maculosus WOLLASTON, 1864.

New to Deserta Grande.

Deserta Grande: Southern part, 400 m., 26.IX.1988, 1 specimen sifted from soil under grass.

Madeira: Northern coast, Boca do Risco, (north of Machico), 430 m., 31.III.1990 (1); Seixal, Rocha de Gaspar Nunes, 200 m., 5.IV.1990 (8).

Distribution: Canary Islands, Azores, Selvages, Madeira proper, all Deserta Islands, Porto Santo.

Nephus (Sidis) depressiusculus (WOLLASTON, 1867)

New to the Madeira Archipelago.

Madeira: Caniço de Baixo, 80 m., IX.1986, 1 specimen collected from window pane by H. PIEPER (FÜRSCH det.).

Distribution: Canary Islands, Cape Verdes, Madeira proper.

Pharoscymnus decemplagiatus (WOLLASTON, 1857)

New to Porto Santo.

Porto Santo: Cabeço do Zimbralinho, 180 m., 20.IX.1988 and 28. III.1990, each 1 specimen caught from conifers (mostly *Pinus*) in a young afforestation together with other Coccinellidae.

Obviously a very rare species: WOLLASTON (1857) collected 2 specimens at S. António da Serra and 1 specimen at Lombo dos Pessegueiros in summer 1855; UYTENBOOGAART (1947) found 1 specimen at Rabaçal in May 1946.

Distribution: Canary Islands, Madeira proper, Porto Santo.

Fam.: **Bostrychidae**

Scobicia barbata (WOLLASTON, 1860)

Syn.: *Enneadesmus barbatus* WOLLASTON, 1860; *Xylopertha barbata* WOLLASTON, 1862.

At the end of 1988 G. E. MAUL sent me 5 specimens which had been collected in vineyards near Estreito de Câmara de Lobos in October 1988. Two further specimens, preserved in the collection of the Museu Municipal do Funchal, had been collected by TH. PALM at Garajau in the second half of April 1978, and two specimens had been picked from a window pane at Caniço de Baixo in November 1986 by H. Pieper.

The beetles from Câmara de Lobos were suspected to damage vine-trees. From the literature *Scobicia barbata* does not seem to be abundant. Originally endemic to the Madeira Archipelago, it was first detected by E. LEACOCK at the Quinta de São João near Funchal and shortly after "by BEWICKE amongst old logs of wood in a small shed or out-house at Praia Formosa" (WOLLASTON, 1860:360). LIEBMANN (1939) caught one specimen on the wing in Funchal. LINDBERG (1963) collected one specimen at Vila Baleira in Porto Santo in April 1959. In July 1981 it was for the first time found in the Azores (Terceira and Pico) by SERRANO (1982) and then in August 1983 in S. Maria "in dead twigs of *Vitis vinifera*" by ISRAELSON (1984:151).

One should suppose that the species has recently emigrated from Madeira to the Azores. But FISHER (1950:114) recorded that "one specimen was intercepted in Boston in December 1925 with tomato seeds from the Azores. So far as known, it has not become established in the United States". Accordingly we must suppose that also in previous times *Scobicia barbata* had emigrated to the Azores, probably without becoming established.

As regards obnoxiousness we could find nothing in the literature. Though the larvae of the genus *Scobicia* are feared because sometimes they penetrate even metallic objects (such as pipes of lead), they seem however, only to develop in dead wood (CYMOREK, 1974).

Fam.: Anthicidae

Stricticomus tobias (MARSEUL, 1879)

New to the Atlantic Islands.

Madeira: Caniço de Baixo, 80 m., IX.1986, 1 specimen collected from window pane by H. PIEPER (ÜHMANN *det.*).

Distribution: Europe, Asia Minor, Central Africa (Sudan, Ghana), North America, South America (Venezuela), Madeira proper.

Fam.: Tenebrionidae

Nesotes subdepressus (WOLLASTON, 1857)

Very rare in Madeira.

Madeira: Ribeiro Frio, at the small path to Fajã da Nogueira, 810 m., 7.V.1989, 1 specimen found by C. LANGE in a collar of corrugated paper, he had fastened round the stem of a tree.

An obviously rare species; first recorded by WOLLASTON (1857), who had obtained three specimens captured at São Vicente by Mason; later 1 specimen collected by COLAS at Monte in IV.1957 and 11 specimens collected by COLAS and MATEU at Ribeira da Janela in IV.1959 (ARDOIN, 1960); finally one specimen found by LINDBERG at Portela in V.1959 (ARDOIN, 1963).

Distribution: Madeira proper.

Belopus elongatus (HERBST, 1797)

Syn.: *Trogosita calcar* FABRICIUS, 1801

Very rare in the Archipelago.

Porto Santo: Near Casinhas, 60 m., 19.IX.1988, five specimens under dry cattle dung.

Though WOLLASTON (1854) held the species to be common in Madeira, we found only two later records in the literature: CAMERON (1901) collected it west of Funchal in February 1901, LIEBMANN (1939) captured it between Machico and St.Cruz in February 1939. WOLLASTON cited a record of FABRICIUS in Madeira from 1801 and found himself the species repeatedly in the region of Funchal; in 1857 he recorded the

species from Porto Santo, where BEWICKE had collected it in December 1856; in 1865 he cited also Ilhéu Bugio as locality of *Belopus elongatus*.

Distribution: Mediterranean Region (Southern Europe, North Africa), Madeira proper, Porto Santo, Ilhéu Bugio.

Fam.: Scarabaeidae

Aphodius (Nialus) sturmi HAROLD, 1870

Syn.: *Aphodius rufus* ILLIG, 1803

New to Porto Santo.

Porto Santo: Cabeço do Dragoal, 30 m., 19.IX.1988, 19 specimens in cattle dung.

The species had been recorded already by WOLLASTON (1854) from the north and the south of Madeira proper. There had been no further records in the literature until ERBER & HINTERSEHER (1988).

Distribution: Southern Russia, Caucasus, Asia Minor, Southeast Europe, Mediterranean Region (Southern Europe and North Africa), Iberian Peninsula, Madeira proper, Porto Santo.

Fam.: Cerambycidae

Phoracantha semipunctata (FABRICIUS, 1775)

Syn.: *Phoracantha inscripta* GERMAN, 1848

New to the Madeira Archipelago.

First detected by H. PIEPER at Caniço de Baixo on window-ledge of a bungalow on 19.IX.1988 (1) and on 27.IX.1988 (2); later by M. BISCOITO at Garajau on 18.X.1988 (1) and by C. NEVES at Funchal-Nazaré near the stadium.

Distribution: *Phoracantha semipunctata* originates from Australia; from there it has become distributed over Israel (1945), Egypt (1950), Turkey (1959), Tunisia (1962), Sicilia (1973), Italy (1976). On the Iberian Peninsula it has been registered since 1980; Spain: Huelva, Sevilla, Badajoz and Cadiz 1981, San Roque 1982, Alicante 1983, Jumilla 1984 (VIVES, 1984); Portugal: Peninsula de Setúbal 1980, Parque Florestal de Monsanto 1981, then rapid distribution over South Portugal (ARAÚJO, 1984/85).

Phoracantha semipunctata attacks weakened and freshly cut *Eucalyptus* trees. The larvae depreciate the value of the wood by boring galleries (biology and forestal importance see ARAÚJO, 1984/85).

Cordylomera spinicornis (FABRICIUS, 1775)

New to Macaronesia.

Madeira: Funchal: Sta. Luzia, Qta. Glycínia, 29.III.1990, 1 specimen found by T. R. MAUL (BENSE *det.*).

This African species develops in different tropical trees, especially in mahoganies (*Khaya*) and *Acacia*. It is often transported with exported timber, also to European harbours; *e.g.* in 1975 it was detected at Barcelona. (DUFFY, 1957, VIVES, 1984).

The specimen collected in Funchal may also have been imported by ship. It is unlikely that the species will become established in Madeira.

Distribution: Ethiopian Region.

Fam.: Chrysomelidae

Longitarsus ordinatus (FOUDRAS, 1860)

Scarcely known from the Madeira Archipelago.

Madeira: Northern coast between Boca do Risco (north of Machico) and Porto da Cruz, 430 m., 31.III.1990, 2 males and 2 females swept from low vegetation.

LEONARDI (1973) mentioned Madeira as a locality, where 5 specimens (2 males and 3 females) of *L. ordinatus* had been collected by SCHATZMAYR on 4.III.1930, but without any other data.

Since *L. ordinatus* is very similar to *L. lycopi* FOU DR., possibly the latter also belongs to *L. ordinatus*. This can not be decided now; study of *lycopi*-material from Madeira would be necessary (DÖBERL, *in litt.*).

Distribution: Italy, France, Spain, Portugal, Madeira proper.

Longitarsus parvulus PAYKULL, 1799

Very rare in the Madeira Archipelago.

Madeira: Salgados (south of Camacha), 400 m., 3.IV.1990 (1).

First mentioned by FAUVEL (1897), but not clear from what source. LINDBERG found one specimen at Monte in VI.1957 and two specimens at Prazeres in IV.1959 (MADAR, 1963).

Distribution: Turkestan, Japan, Europe, North Africa, Mauritania, Canary Islands (Tenerife), Madeira proper.

Chaetocnema hortensis GEOFFREY, 1785

New to the Madeira Archipelago.

Madeira: Fajã da Nogueira, 600 m., 28.IX.1985 (1 on *Clavaria lauri*; 1 in a colour trap.)

The first specimen was found in 1985 (ERBER, 1986) but could not be determined with certainty. Now after having found two further specimens, the identification as *Chaetocnema hortensis* is assured (DÖBERL *det.*).

It is still not clear, whether *C. tarsalis* WOLL. from the Canaries is identical with *C. hortensis*.

Distribution: Europe, Mediterranean Region, North Africa, Asia Minor, Caucasus, Central Asia, Siberia, Azores, Madeira proper.

Sphaeroderma rubidum GRAÉLLS, 1858

New to the Atlantic Islands.

Madeira: Ponta de São Lourenço, vicinity of Casa do Sardinha, 80-150 m., 6.IV.1990, (5 on thistles); Levada dos Tornos, near Romeiros, 500 m., 13.IV.1990 (2); northern coast between Boca do Risco (north of Machico) and Porto da Cruz, 430 m., 31.III.1990 (24 on thistles); Rocha de Gaspar Nunes (east of Seixal), 200 m., 5.IV.1990 (1); Ponta do Pargo, 300 m., 4.IV.1990 (9 on thistles).

Porto Santo: Espigão, 270 m., 28.III.1990 (1 on *Cupressus*).

Since this species is distributed on Madeira proper from east to west and from north to south and even present on Porto Santo, we may assume that it had reached the Archipelago already some years ago. The reason why it was not detected may be its early spring activity. The species has not yet been recorded from any other Atlantic Island. It obviously may have migrated to Madeira from Western Europe.

Distribution: Central Europe, Mediterranean Region, Madeira proper, Porto Santo.

Fam.: **Bruchidae***Bruchidius foveolatus* (GYLLENHAL, 1833)

New to the Madeira Archipelago.

Madeira: Ponta do Pargo, 300 m., 4.IV.1990, 3 specimens swept from low vegetation (ANTON *det.*).

Distribution: South Europe, Mediterranean Region, North Africa, Asia Minor, Azores, Madeira proper.

Fam.: Curculionidae

Anillobius porto-santoi FRANZ, 1970

Porto Santo: Pico Branco, 14.VIII.1985, 2 specimens collected by GERBER, GROH and HEMMEN (OSELLA *det.*).

Only two specimens had been known to date. Pico Branco is the type locality, where on 13.IV.1968 FRANZ sifted specimens from soil from under a rotten pine trunk. He sifted out a second specimen on 10.IV.1970 from coniferous litter (FRANZ, 1970).

Distribution. Porto Santo.

Smicronyx albosquamosus (WOLLASTON, 1854)

Syn.: *Smicronyx angustus* FAIRMAIRE, 1875

New to Porto Santo.

Porto Santo: Cabeço do Zimbralinho, 60 m., 20.IX.1988, 2 specimens swept from grass (DIECKMANN *det.*).

Only one specimen had been recorded, detected by WOLLASTON (1854) on Deserta Grande under a stone at the end of May 1850.

Distribution: Canary Islands, Deserta Grande, Porto Santo.

Ceutorhynchus assimilis (PAYKULL, 1792)

New to the Madeira Archipelago.

Madeira: Ponta do Pargo, 300 m., 4.IV.1990, 1 specimen swept from low vegetation.

Though *C. assimilis* is a very common species with wide distribution, it had hitherto not been known from the Atlantic Islands, except the Azores (see check list of BORGES (1990)).

Distribution: Western Asia, Europe, Mediterranean Region, North Africa, North America, Azores, Madeira proper.

Ceutorhynchus quadridens PANZER, 1795

New to Porto Santo.

Porto Santo: Pico do Castelo, 320 m., 29.III.1990 (1).

Madeira: Ponta do Pargo, 300 m., 34.IV.1990 (2).

There are a few records from Madeira proper and Deserta Grande by WOLLASTON (1854), CAMERON (1901) and ROUDIER (1963).

Distribution: Europe, Caucasus, North Africa, North America, Canary Islands,

Madeira proper, Deserta Grande, Porto Santo.

Fam.: Scolytidae

Coccotrypes dactyliperda FABRICIUS, 1801

Madeira: Caniço de Baixo, 80 m., 10.-19.IX.1985 (2), 4.-25.IX.1986 (7), 9.-26.IX.1988 (2), all collected by H. PIEPER from a window pane.

The species had been recorded only by SCHMITZ (1898), but without any data. ERBER obtained seven specimens, which hatched from seeds of a Palm tree collected in the Botanical Garden of Funchal in III.1981 (see ERBER & HINTERSEHER (1990)).

ADDITIONAL SPECIES COLLECTED IN 1988, 1989 AND 1990.

Fam.: Carabidae

Calosoma maderae (F.)

DG: Southern part, 26.IX.1988, 400 m. (1 elytra under stone).

Elliptosoma wollastoni (JAVET)

M: Ribeiro Frio, Balcões, 940 m., 9.X.1988 (5 in Barber traps, LANGE leg.).

Scarites abbreviatus DEJ.

M: Ribeiro Frio, gorge, 700 m., 18.IX.1988, (3 under stones).

Bembidion tethys NET.

M: Paul da Serra, Estanquinhos, 1500 m., 21.IX.1988 (10 under stones).- DG: Northern part, 200-400 m., 24.IX.1988 (4 under stones).- PS: Saddle between Pico do Facho and Lombo das Paredes, 380 m., 29.III.1990 (1 under thistle in soil).

Bembidion harpaloides SERV.

M: Seixal, Rocha de Gaspar Nunes, 200 m., 5.IV.1990 (1).

Trechus flavomarginatus WOLL.

M: Ribeiro Frio, 18.IX.1988 (3, PIEPER leg.).

Trechus maderae FRANZ

M: Ribeiro Frio, 18.IX.1988 (1, PIEPER leg.;FRANZ det.).

Trechus laurisilvae FRANZ

M: Ribeiro Frio, 780 m., 18.IX.1988 (1 under bark of *Erica*); Ribeiro Frio, gorge, 700 m., 18.IX.1988 (3 under bark of *Laurus*); Fajã da Nogueira, 700 m., 28.IX.1988 (2 under bark of *Laurus*); (all FRANZ det.).

Trechus dilutus WOLL.

M: Rabaçal, Levada 25 Fontes, 900 m., 16.IX.1987 (2, FRANZ det.).

Trechus custos WOLL.

M: Cabeço das Águas das Becas (NE of Poiso), 1450 m., 9.IX.1987 (1); Ribeiro Frio, 780 m., 18.IX.1988 (1 under bark of *Erica*); Ribeiro Frio, gorge, 700 m., 28.IX.1989 (5 under bark of *Laurus*); (all FRANZ det.).

Trechus cautus WOLL.

PS: Pico de Juliana, 23.IX.1989 (1, PIEPER leg.).

Trechus nigrocruciatus WOLL.

M: Ribeiro Frio, gorge, 700 m., 18.IX.1988 (2 under bark of *Laurus*); northern coast, Boca do Risco (north of Machico), 430 m., 31.III.1990 (5 under *Aeonium*).

Nesarpalus gregarius FAUV.

DG: Northern part, 200-400 m., 24.IX. 1988 (4 under stones); southern part, 400 m., 26.IX.1988 (3 under stones).

Nesarpalus sanctae-crucis WOLL.

PS.: Near Casinhas, 60 m., 19.IX.1988, (16 under dry cattle dung); Pico do Castelo, 170 m., 29.III 1990 (1 under stone).

Harpalus attenuatus STEPH.

PS: Pico do Castelo, 170 m., 29.III.1990, (2 under stones).

Amara aenea DEG.

M: Porto da Cruz, 170 m., 29.III.1990.

Pterostichus curtus (WOLL.)

M: Ribeiro Frio, 18.IX.1988 (3, PIEPER leg.); Ribeiro Frio, Balcões, 940 m., 9.X.1988 (6 in Barber traps, LANGE leg.).

Pterostichus gracilipes (WOLL.)

Ribeiro Frio, Balcões, 940 m., 9.X.1988 (1 in Barber trap, LANGE leg.).

Metabletus fuscomaculatus MOTSCH.

PS: Cabeço do Zimbralinho, 80 m., 20.IX.1988 (1 under dead thistle).

Metabletus lundbladi JEANN.

M: Paul da Serra, Estanquinhos, 1500 m., 21.IX.1988 (2 under stones).

Microlestes luctuosus HOLDH.

DG: Southern part, 400 m., 16.IX.1988 (1 in soil under grass). - PS: Espigão, 100 m., 28.III.1990 (1 under a stone); Pico do Castelo, 170 m., 29.III.1990 (1 under stone).

Fam.: **Hydraenidae***Ochthebius rugulosus* WOLL.

PS: Near Serra de Fora, 120 m., 19.IX.1988 (1 in small water pool).

Fam.: **Hydrophilidae***Cercyon quisquilis* L.

PS: Cabeço do Dragoal, 30 m., 19.IX.1988 (1 under dry cattle dung).

Enochrus politus (KÜST.)

PS: Near Serra de Fora, 120 m., 19.IX.1988 (2 in small water pool).

Fam.: **Orthoperidae***Arthrolips piceus* (COM.)

DG: Northern part, 300 m., 24.IX.1988 (1 at root of a dead thistle).

Sericoderus lateralis (GYLL.)

M: Northern coast near Boca do Risco (north of Machico), 430 m., 31.III.1990 (1); Seixal: Rocha de Gaspar Nunes, 200 m., 5.IV.1990 (2).

Fam.: **Staphylinidae***Oxytelus piceus* L.

M: Paul da Serra, Estanquinhos, 1500 m., 15.IX.1987 (1 in sheep dung); Rabaçal, Levada 25 Fontes, 900 m., 16.IX.1987 (2 on light trap). - PS: Cabeço do Dragoal, 30 m., 19.IX.1988 (6, under dry cattle dung).

Oxytelus complanatus ER.

M: Terreira da Luta, 700 m., 8.IV.1990 (1 beaten off *Hedera helix*).

Stenus cicindeloides SCHALL.

M: Rabaçal, Levada 25 Fontes, 990 m., 17.IX.1988 (1); Ribeiro Frio, gorge, 700 m., 18.IX.1988 (1, under bark of *Laurus*).

Stenus ossium STEPH.

M: Queimadas, Calderão Verde, 16.IX.1988 (1, PIEPER leg.); Rabaçal, Levada 25 Fontes, 990 m., 17.IX.1988 (1); Machico, Ribeira Seca, 350 m., 31.III.1990 (1).

Xantholinus longiventris HEER.

M: Paul da Serra, Estanquinhos, 1500 m., 21.IX.1988 (3 under stones).

Othius strigulosus WOLL.

M: Ribeiro Grande near Boaventura, 720 m., 4.V.1989 (2 under stones, LANGE leg.).

Philonthus longicornis STEPH.

M: Paul da Serra, Estanquinhos, 1500 m., 21.IX.1988 (2 under stones).

Philonthus fenestratus FAUV.

PS: Cabeço do Dragoal, 30 m., 19.IX.1988 (6 under dry cattle dung); near Serra de Fora, 120 m., 19.IX.1988 (1); Pico Ferreiro, 150 m., 28.III.1990 (1).

Philonthus ventralis STEPH.

PS: Cabeço do Dragoal, 30 m., 19.IX.1988 (1 under cattle dung).

Quediis tristis (GRAV.)

M: Ribeiro Frio, Balcões, 940 m., 9.X.1988 (1 in Barber trap, LANGE leg.); Porto da Cruz, near Portela, 700 m., 30.III.1990 (1).

Conosoma marshami STEPH.

M: Fajã da Nogueira, 700 m., 29.IX.1988 (10 under stones); Curral dos Romeiros, 500 m., 8.IV.1990 (1 under bark of *Laurus*).

Tachyporus nitidulus (F.)

DG: Southern part, 400 m., 26.IX.1988 (1 in soil under grass); - PS: Espigão, 250 m., 28.III.1990 (12 on *Cupressus*).

Cordalia obscura (GRAV.)

M: Caniço de Baixo, 80 m., 9.-22.IX.1988 (1 on window pane, PIEPER leg.). - PS: Ponta da Calheta, surf zone, 20.IX.1988 (1).

Aloconota gregaria (ER.)

PS: Espigão, 250 m., 18.III.1990 (1 on *Cupressus*).

Atheta longicornis (GRAV.)

M: Boca do Risco (north of Machico), 430 m., 31.III.1990 (2).

Atheta (Nehemitropia) sordida (MARSH.)

M: Boca do Risco (north of Machico), 430 m., 31.III.1990 (1). - PS: Cabeço do Dragoal, 30 m., 19.IX.1988 (1 under cattle dung,; VOGEL det.).

Atheta fungi GRAV.

M: Machico, Ribeira Seca, 350 m., 31.III.1990 (3, VOGEL vid.).

Aleochara moesta GRAV.

PS: Cabeço do Dragoal, 30 m., 19.IX.1988 (3 under dry cattle dung).

Aleochara bipustulata (L.)

PS: Espigão, 270 m., 28.III.1990 (1 on grass).

Fam.: **Histeridae***Saprinus chalcites* (ILL.)

PS: Cabeço do Dragoal, 30 m., 19.IX.1988 (1 under cattle dung).

Fam.: **Cantharidae***Malthinus scriptus* KIESENW.

M: Ribeiro Frio, 10.VII.1990 (1, BÁEZ leg.); Chão dos Louros, 13.VII.1990 (1, BÁEZ leg.); Levada da Serra do Faial, 14.VII.1990 (1, BÁEZ leg.); Ponta de São Lourenço, Pedras Brancas, 80-150 m., 6.IV.1990 (4). - PS: Espigão, 250 m., 29.III.1990 (2 on *Cupressus*).

Fam.: **Malachiidae***Attalus maderensis* (WOLL.)

M: Northern coast between Boca do Risco (north of Machico) and Porto da Cruz, 430 m., 31.III.1990 (2 under *Aeonium*, EVERS det.).

Fam.: **Dasytidae***Psilothrix illustris* (WOLL.)

M: Ponta do Pargo, 300 m., 4.IV.1990 (4); Ponta de São Lourenço, Pedras Brancas, 80-100 m., 6.IV.1990 (2). - DG: Northern part, 300 m., 24.IX.1988 (1 fragment under a stone). - PS: Espigão, 100-270 m., 28.III.1990 (5). - Everywhere in great numbers on divers violet and yellow flowers of Compositae.

Fam.: **Nitidulidae***Meligethes nigrescens* STEPH.

M: Levada dos Tornos, Quinta do Pomar, 500 m., 8.IV.1990 (1); Salgados (south of Camacha), 400 m., 9.IV.1990 (1); Levada do Caniço (south of Camacha), 370 m., 9.IV.1990 (1 on *Sarothamnus*).

Meligethes planiusculus HEER

M: Northern coast near Boca do Risco (north of Machico), 430 m., 31.III.1990 (5). - PS: Pico do Castelo, 320 m., 29.III.1990 (1).

Brachypeplus maui GARDNER

M: Tabua near Ribeira Brava, 17.IX.1988 and 4.IV.1990 (9 and 1, all under sheaths of banana leaves).

Xenostrogylus histrio WOLL.

M: Ponta do Pargo, 300 m., 4.IV.1990 (8); Ponta de São Lourenço, Casa do Sardinha, 100 m., 6.IV.1990 (1). - PS: Espigão, 270 m., 28.III.1990 (3 on *Cupressus*); Pico Ferreiro, 190 m., 28.III.1990 (4 on Compositae); Pico do Castelo, 320 m., 29.III.1990 (5); Pico do Facho, 360 m., 29.III.1990 (1).

Fam.: **Cucujidae***Cryptamorpha desjardinii* (GUER.)

M: Tabua near Ribeira Brava, 17.IX.1988 and 4.IV.1990 (14 and 8, all under sheaths of banana leaves).

Laemophloeus donacioides WOLL.

M: Fajã da Nogueira, 700 m., 28.IX.1988 (30 under bark of *Laurus*).

Laemophloeus stenoides WOLL.

M: Fajã da Nogueira, 700 m., 25.IX.1988 (1 under bark of *Laurus*).

Fam.: **Cryptophagidae***Leucohimatium arundinaceum* FORSK.

M: Ponta de São Lourenço, Pedras Brancas, 100 m., 6.IV.1990 (1).

Cryptophagus saginatus STURM

M: Rabaçal, Levada 25 Fontes, 990 m., 17.IX.1988 (1).

Atomaria scutellaris MOTSCH.

PS: Espigão, 270 m., 29.III.1990 (8 on *Cupressus*; JOHNSON det.).

Fam.: **Phalacridae***Olibrus affinis* STURM

M: Machico, Ribeira Seca, 350 m., 31.III.1990 (9); northern coast near Boca do Risco (north of Machico), 430 m., 31.III.1990 (10); Ponta do Pargo, 300 m., 4.IV.1990 (1); Romeiros, 500 m., 8.IV.1990 (3); Salgados (south of Camacha), 400 m., 9.IV.1990 (6); Levada do Caniço (south of Camacha), 370 m., 9.IV.1990 (1 on *Sarothamnus*); Chão dos Louros, 13.VII.1990 (2, BÁEZ leg.); Levada da Serra do Faial, 14.VII.1990 (2, BÁEZ leg.).

Fam.: **Lathridiidae***Lathridius nodifer* WESTW.

M: Rabaçal, Levada 25 Fontes, 990 m., 17.IX.1988 (1); Ribeiro Frio, 780 m., 18.IX.1988 (1 under bark of *Erica*); Fajã da Nogueira, 600 m., 28.IX.1988 (1 on *Clavaria lauri*); Levada dos Tornos, Quinta do Pomar, 500 m., 8.IV.1990 (1).

Corticarina fulvipes COM.

M: Ponta de São Lourenço, Pedras Brancas, 100 m., 6.IV.1990 (1). - DG: Northern part, 200-400 m., 24.IX.1988 (4 under stones and on root of dead thistles).

Fam.: Mycetophagidae

Litargops pictus WOLL.

M: Ribeiro Frio, 700-780 m., 18.IX.1988 (15 under bark of *Laurus* and *Erica*); Fajã da Nogueira, 600-700 m., (15 under bark of *Laurus*, 78 in dead *Clavaria lauri*).

Fam.: Colydiidae

Tarphius compactus WOLL.

M: Fanal, 12.IX.1986 (2, PIEPER leg.); Fajã da Nogueira, 700 m., 28.IX.1988 (2 under bark of *Laurus*).

Fam.: Coccinellidae

Rhizobius litura (F.)

M: Machico, Ribeira Seca, 350 m., 31.III.1990 (3); northern coast near Boca do Risco, 430 m., 31. III.1990 (16); Ponta do Pargo, 300 m., 4.IV.1990 (4); Ponta de São Lourenço, Casa do Sardinha, 100 m., and Pedras Brancas, 80-150 m., (3), each 6.IV.1990; Romeiros, 500 m., 8.IV.1990 (1 on *Sarothamnus*); São Vicente, coast, 20 m., 11.IV.1990 (4). - DG: Northern part, 400 m., 25.IX.1988 (4 under stones). - PS: Espigão, 270 m., 28.III.1990 (1 on grass); Pico Ferreiro, 150 m., 28.III.1990 (1); Pico do Castelo, 320 m., 29.III.1990 (3).

Scymnus interruptus GOEZE

M: Rabaçal, Levada 25 Fontes, 900 m., 17.IX.1988 (1); - PS: Cabeço do Zimbralinho, 180 m., 20.IX.1988 (5 on *Pinus*).

Scymnus levaillanti MULS.

M: Ponta do Pargo, 300 m., 4.IV.1990 (2); Romeiros, 500 m., 8.IV.1990 (1); São Vicente, coast, 20 m., 11.IV.1990 (6). - PS: Cabeço do Zimbralinho, 60 m., 28.III.1990 (1 swept from grass).

Adonia variegata GOEZE

M: Caniço de Baixo, 80 m., 9.-29.IX.1988 (1 on window pane, PIEPER leg.); Ponta do Pargo, 300 m., 4.IV.1990 (3). - DG: Northern part, 200-400 m., 24.IX.1988 (numerous individuals beaten off *Ulex*, 9 under stones). - PS: Near Casinhas, 60 m., 19.IX.1988 (3 on *Tamarix*); near Serra de Fora, 120 m., 19.IX.1988 (1); Cabeço do Zimbralinho, 180 m., 20.IX.1988 and 28.III.1990 (each 1); Espigão, 100-270 m., 28.III.1990 (2).

Myrrha octodecimguttata L.

PS: Cabeço do Zimbralinho, 180 m., 20.IX.1988 (2 on *Pinus*).

Coccinella algerica KOWAR

DG: Northern part, 300 m., 24.IX.1988 (1 under a stone). - PS: Near Serra de Fora, 120 m., 19.IX.1988 (1).

Fam.: **Cisidae**

Cis lauri WOLL.

M: Fajã da Nogueira, 700 m., 28.IX.1988 (4 under bark of *Laurus*).

Fam.: **Anobiidae**

Ptilinus cylindripennis WOLL.

M: Fajã da Nogueira, 700 m., 28.IX.1988 (1 under bark of *Laurus*).

Fam.: **Oedemeridae**

Oedemerella lowei (WOLL.)

M: Fajã da Nogueira, 600 m., 28.IX.1988 (1 in colour trap).

Fam.: **Anthicidae**

Cordicomus instabilis SCHM.

M: Northern coast, Boca do Risco, 31.III.1990 (1). - DG: Northern part, 200-300 m., 23.-25.IX.1988 (12 under stones and on root of dead thistles). - PS: Saddle between Pico do Facho and Lombo das Paredes, 380 m., 29.III.1990 (1 under thistle in soil).

Fam.: **Meloidae**

Euzonitis quadripunctata F.

M: Ponta de São Lourenço, Casa do Sardinha, 100 m., 6.IV.1990 (1 on flower of thistle).

Fam.: **Mordellidae**

Anaspis proteus WOLL.

M: Fajã da Nogueira, 600 m., 28.IX.1988 (1 in colour trap); Machico, Ribeira Seca,

350 m., 31.III.1990 (1); Terreira da Luta, 700 m., 8.IV.1990 (1 on flower of *Acacia*); Ponta do Pargo, 300 m., 4.IV.1990 (6); Rabaçal, 10.VII.1990 (3, BÁEZ *leg.*); Ribeiro Frio, 12.VII.1990 (1, BÁEZ *leg.*); Levada da Serra do Faial, 14.VII.1990 (1, BÁEZ *leg.*). - PS: Saddle between Cabeço do Zimbralinho and Espigão, 120 m., 28.III.1990 (9). - Everywhere in large numbers on flowers.

Fam.: **Tenebrionidae**

Hegeter tristis (F.)

PS: Ponta da Calheta, beach, 20.IX.1988 (2, LANGE *leg.*).

Blaps gigas L.

PS: Ponta da Calheta, beach, 20.IX.1988 (1, LANGE *leg.*).

Hadrus carbonarius QUENS.

DG: Northern part, 200-400 m., 24.IX. 1988 (1 under a stone).

Hadrus illotus WOLL.

PS: Near Casinhas, 60 m., 19.IX.1988 (2 in dry cattle dung); Cabeço do Zimbralinho, 160 m., 19.IX.1988 (2 in dead *Opuntia*).

Opatropis hispida BRULLÉ

PS: Near Casinhas, 60 m., 19.IX.1988 (2 under dry cattle dung).

Ellipsodes glabrata F.

M: Rabaçal, Levada 25 Fontes, 900 m., 12.IV.1990 (6 under stones).

Boromorphus tagenioides LUCAS

M: Ponta do Pargo, 300 m., 4.IV.1990 (1).

Nesotes asper (KÜST.)

DG: Southern part, 400 m., 26.IX.1988 (2 under stones).

Nesotes confertus (WOLL.)

M: Levada do Norte, 1030 m., 29.IV.1989 (6 in collar of corrugated paper round a stem of tree, LANGE *leg.*); Porto da Cruz, 470 m., 30.III.1990 (1 in pine forest); Machico, Ribeira Seca, 350 m., 31.III.1990 (3 under bark of *Pinus*); Canhas, 12.IV.1990 (3 under bark of *Pinus*, in burnt forest); Camacha, Levada da Serra do Faial, 800 m., 10.IV.1990 (2 under bark of *Pinus*).

Nesotes portosanctanus (WOLL.)

PS: Near Casinhas, 60 m., 19.IX.1988 (3 under dry cattle dung); Cabeço do Zimbralinho, 160 m., 19.IX.1988 (2 in dead *Opuntia*).

Nesotes lucifugus (WOLL.)

PS: Porto Santo, 28.III.1990 (1 dead in hotel); Pico do Castelo, 270 m., 29.III.1990 (2 under bark of *Pinus*).

Nesotes futilis (WOLL.)

PS: Pico do Castelo, 170 m., 29.III.1990 (3 under stones).

Fam.: **Scarabaeidae***Aphodius hydrochaeris* F.

PS: Pico do Facho, southern slope, 290 m., 29.III.1990 (6 in horse dung).

Aphodius fimetarius L.

M: Paul da Serra, Estanquinhos, 1500 m., 21.IX.1988 (1 under a stone); Machico, 26.III.1990 (1); Boca do Risco (north of Machico), 430 m., 31.III.1990 (2 in cattle dung).

Aphodius ghardimaouensis BALTH.

PS: Cabeço do Zimbralinho, 30m., 19.IX.1988 (1 under dry cattle dung).

Aphodius sturmi HAR.

PS: Cabeço do Dragoal, 30 m., 19.IX.1988 (19 under cattle dung).

Fam.: **Cerambycidae***Criocephalus fesus* MULS.

M: Machico, 16.IX.1988 (1 on white wall).

Blabinotus spinicollis WOLL.

M: Ribeiro Frio, 700 m., 26.IV.1989 (1, LANGE leg.).

Fam.: **Chrysomelidae***Lema melanopus* (L.)

PS: Rocha de Nossa Senhora, 100 m., 19.IX.1988 (fragments of elytra in leaf axil of palm-tree); Pico Ferreiro, 150 m., 28.III.1990 (2).

Cryptocephalus crenatus WOLL.

M: Terreiro da Luta, 800 m., 8.IV.1990 (13 on flowers of *Acacia*); Salgados (south of Camacha), 380 m., 9.IV.1990 (3 on flowers of *Acacia*); Seixal, Rocha de Gaspar Nunes, 200 m., 11.IV.1990 (1 on *Bystropogon*).

Chrysomela banksi (F.)

M: Ribeiro Frio, 750 m., 18.IX.1988 (1); Boca do Risco (north of Machico), 430 m., 31.III.1990 (1); Ponta do Pargo, 300 m., 4.IV.1990 (1 on a thistle). - DG: Northern part, 200-400 m., 24.IX.1988 (11 under stones); southern part, 400 m., 26.IX.1988 (3 under stones). - PS: Near Serra de Fora, 120 m., 19.IX.1988 (1); Espigão, southern slope, 100 m., 28.III.1990 (1 under a stone); Espigão, southern slope, 170 m., 28.III.1990 (1 on thistle).

Longitarsus ochroleucus lindbergi MADAR

M: Ponta do Pargo, 300 m., 4.IV.1990 (1). - PS: Espigão, 270 m., 28.III.1990 (22 on *Cupressus*); Pico Ferreiro, 190 m., 28.III.1990 (5 on Compositae).

Longitarsus nervosus WOLL.

M: Northern coast near Boca do Risco (north of Machico), 430 m., 31.III.1990 (5); Ponta do Pargo, 300 m., 4.IV.1990 (4); Ponta de São Lourenço, Pedras Brancas, 80-150 m., 6.IV.1990 (3). - PS: Espigão, 270 m., 28.III.1990 (36 on *Cupressus*, 12 on grass); Pico Ferreiro, 190 m., 28.III.1990 (1); Pico do Castelo, 320 m., 29.III.1990 (1).

Longitarsus cinerariae WOLL.

M: Ribeiro Frio, Balcões, 800 m., 12.IX.1988 (1, PIEPER leg.); Rabaçal, 10.VII.1990 (2, BÁEZ leg.).

Psylliodes vehemens WOLL.

M: Rabaçal, Levada 25 Fontes, 990 m., 17.IX.1988 (1); Ponta do Pargo, 300 m., 4.IV.1990 (1); Ponta de São Lourenço, Casa do Sardinha, 100 m., 6.IV.1990 (1); Levada da Serra do Faial, 14.VII.1990 (3, BÁEZ leg.).

Psylliodes laticollis KUTSCH.

M: Rabaçal, Levada 25 Fontes, 990 m., 17.IX.1988 (6).

Psylliodes hospes WOLL.

M: Ponta de São Lourenço, Pedras Brancas, 100 m., 6.IV.1990 (2).

Ochrosis ventralis (ILL.)

PS: Cabeço do Zimbralinho, 60 m., 20.IX.1988 (1 male and 1 female swept from dry grass), 180 m., 20.IX.1988 (37 on *Pinus*), 28.III.1990 (2 on *Pinus*); Espigão, 250-270 m., 28.III.1990 (20 on *Cupressus*, 2 on grass); Pico Ferreiro, 150-190 m., 28.III.1990 (8, most of them on Compositae); Pico do Castelo, 320 m., 29.III.1990 (1).

Fam.: **Bruchidae***Bruchidius lividimanus* GYLL.

M: Levada dos Tornos, near Romeiros, 500 m., 8.IV.1990 (4); Levada do Caniço (south of Camacha), 370 m., 9.IV.1990 (4); (18 on *Sarothamnus*).

Fam.: **Curculionidae***Auletobius maderensis* WOLL.

M: Ribeiro Frio, 780 m., 18.IX.1988 (1 under bark of *Erica*; 1 swept from grass).

Apion radiolus ssp. *chalybeipenne* WOLL.

M: Ponta de São Lourenço, Pedras Brancas, 80-150 m., 6.IV.1990 (8). - PS: Espigão, 170 m., 28.III.1990 (6 on *Malva*), 250 m., 28.III.1990 (3 on *Cupressus*); Pico Ferreiro, 150 m., 28.III.1990 (3 on *Malva*).

Apion semivittatum ssp. *sagittiferum* WOLL.

M: Funchal, Terreiro da Luta, 28.IV.1989 (1 on dead pine-tree, LANGE leg.); northern coast near Boca do Risco (north of Machico), 430 m., 31.III.1990 (1); Levada dos Tornos, near Romeiros, 500 m., 8.IV.1990

Apion semivittatum ssp. *semivittatum* GYLL.

PS.: Cabeço do Zimbralinho, 180 m., 28.III.1990 (1 on *Pinus*); Espigão, 250 m., 28.III.1990 (35 on *Cupressus*); Pico Ferreiro, 190 m., 28.III.1990 (7 on Compositae).

Apion rotundipenne WOLL.

M: Machico, Ribeira Seca, 350 m., 31.III.1990 (7); northern coast near Boca do Risco (north of Machico), 430 m., 31.III.1990 (1); Levada dos Tornos, near Romeiros, 500 m., 8.IV.1990 (1); Salgados (south of Camacha), 400 m., 9.IV.1990 (1). - PS: Pico do Facho, 360 m., 29.III.1990 (1); Pico do Castelo, 320 m., 29.III.1990 (7).

Laparocerus morio morio BOH.

PS: Near Casinhas, 60 m., 19.IX.1988 (5 under dry cattle dung); Cabeço do Zim-

bralinho, 160 m., 19.IX.1988 (2 in dead *Opuntia*).

Laparocerus lamellipes WOLL.

M: Ribeiro Frio, 750 m., 18.IX.1988 (1), 780 m., 18.IX.1988 (3 under bark of *Erica*), 900 m., 27.IX.1988 (2 beaten from shrubs), 12.VII.1990 (1, BÁEZ leg.); Ribeiro Frio, Balcões, 900 m., 12.IX.1988 (1, PIEPER leg.); Queimadas, 900 m., 16.IX.1988 (7, PIEPER leg.).

Laparocerus noctivagans (WOLL.)

M: Rabaçal, Levada 25 Fontes, 900 m., 17.IX.1988 (2 swept from *Pteridium aquilinum*); Encumeada, 1030 m., 29.IV.1989 (9 in collar of corrugated paper round stems of trees, LANGE leg.).

Laparocerus vespertinus WOLL.

M: Pico Ruivo, 1600 m., 10.IX.1987 (1 in *Erica*-forest); Paul da Serra, Bica da Cana, 1530 m., 21.IX.1988 (1 in moss on *Erica arborea*).

Strophosomus melanogrammus FÖRST.

M: Ribeiro Frio, 900 m., 27.IX.1988 (1).

Pantomorus cervinus BOH.

M: Fajã da Nogueira, 700 m., 28.IX.1988 (1 under stone, PIEPER leg.); Ribeira do Inferno, 18.IX.1989 (1, PIEPER leg.).

Sitona puberulus REITT.

M: Ponta de São Lourenço, near Casa do Sardinha, 80-150 m., 6.IV.1990 (16).- PS: Cabeço do Dragoal, 30 m., 19.IX.1989 (26 under dry cattle dung); Pico Ferreiro, 150 m., 28.III.1990 (1).

Sitona latipennis GYLL.

M: Calheta (saddle between Pico Areeiro and Pico das Torres), 1580 m., 9.IX.1987 (1); Ribeiro Frio, 900 m., 27.IX.1988 (1); Levada do Caniço (south of Camacha), 370 m., 9.IV.1990 (1 on *Sarothamnus*).

Sitona lineatus (L.)

M: Ponta do Pargo, 300 m., 4.IV.1990 (1); Romeiros, 500 m., 8.IV.1990 (1); Salgados (south of Camacha), 400 m., 9.IV.1990 (1).

Sitona discoideus GYLL.

M: Ponta de São Lourenço, Casa do Sardinha, 100 m., 6.IV.1990 (1); Romeiros, 500m., 8.IV.1990 (1).

Lixus algirus L.

M: Caniço de Baixo, 80 m., 8.IX.1989 (4), 15.IX.1989 (1), all PIEPER leg; northern coast between Boca do Risco (north of Machico) and Porto da Cruz, 430 m., 31.III.1990 (1).

Lixus cheiranthii WOLL.

M: Caniço de Baixo, 80 m., 8.IX.1989 (1), 15.IX.1989 (2), 26.IX.1989 (1), all PIEPER leg.

Lixus elongatus GOEZE

M: Northern coast between Boca do Risco (north of Machico) and Porto da Cruz, 430 m., 31.III.1990 (4); Ponta de São Lourenço, Pedras Brancas, 80-150 m., 6.IV.1990 (2).

Rhopalomesites euphorbiae (Woll.)

M: Ribeiro Frio, 900 m., 27.IX.1988 (1).

Barretonus desertae ROUD.

DG: Northern part, 200 m., 24.IX.1988 (1, on root of dead thistle).

Caulotrupis impius WOLL.

DG: Northern part, 200-400 m., 24./25.IX.1988 (29 beaten off *Ulex*; 3 beaten off *Sonchus*; 1 on root of dead thistle). - PS: Pico de Juliana, 23.IX.1989 (2, PIEPER leg.).

Caulotrupis lucifugus WOLL.

DG: Northern part, 300 m., 24.IX.1988 (2, one of them in dead stem of *Agave*).

Caulotrupis conicollis WOLL.

M: Machico, Furna do Cavalum, 16.IX.1988 (16, dead and partly injured in twigs of *Erica arborea*, which were used for fire), 2.IV.1990 (1 under stone).

Pseudophloeophagus tenax (WOLL.)

M: Ribeiro Frio, gorge, 700 m., 18.IX.1988 (36 under bark of *Laurus*); Fajã da Nogueira, 600- 700 m., 28.IX.1988 (26 under bark of *Laurus*).

Pachytychius robustus WOLL.

PS: Cabeço do Zimbralinho, 160 m., 19.IX.1988 (3 in dead *Opuntia*).

Hypera postica (GYLL.)

M: Paul da Serra, Estanquinhos, 1500 m., 21.IX.1988 (2 under stones); Ponta do Pargo, 300 m., 4.IV.1990 (1). - DG: Northern part, 300 m., 24.IX.1988 (1 under stone). - PS: Cabeço do Zimbralinho, 160 m., 19.IX.1988 (13 in dead *Opuntia*); Cabeço do Dragoal, 30 m., 19.IX.1988 (1 under dry cattle dung); Pico Ferreiro, 150 m., 28.III.1990 (1); Pico do Facho, 360 m., 29.III.1990 (4); Pico do Castelo, 210 m., 29.III.1990 (9 in dead wood), 320 m., 29.III.1990 (3).

Cionus alauda HERBST

M: Ribeiro Frio, 900 m., 27.IX.1988 (1).

Ceutorhynchus geographicus GOEZE - M: Northern coast near Boca do Risco (north of Machico), 430 m., 31.III.1990 (5); Ponta de São Lourenço, Pedras Brancas, 80-150 m., 6.IV.1990 (4). - PS: Pico do Facho, SE slope, 360 m., 29.III.1990 (2).

Fam.: Scolytidae

Blastophagus piniperda (L.)

M: Machico, Ribeira Seca, 350 m., 31.III.1990 (1 on top of grass).

Liparthrum curtum Woll.

M: São Vicente, coast, 20 m., 11.IV.1990 (1).

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