

## NEW RECORDS OF THE COLEOPTEROUS FAUNA (INSECTA, COLEOPTERA) FROM THE AZORES

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With 2 maps

**ABSTRACT.** The authors present an account on Coleoptera collected during an Expedition (Summer 1987) to three islands of the Azores (Terceira, S. Jorge and Graciosa). Two new records for the Azores (*Philonthus rectangulus* Sharp and *Phloeopora testacea* Mannerheim) are given. The number of records new to individual islands are : St. Maria 1, S. Miguel 1, Terceira 22, S. Jorge 28 and Graciosa 59.

**RESUMO.** Os autores apresentam neste trabalho os resultados do estudo duma colecção de coleópteros (Insecta, Coleoptera) capturados durante uma Expedição (Verão 1987) às ilhas da Terceira, S. Jorge e Graciosa (Arquipélago dos Açores). Da lista elaborada resultam duas novidades para o arquipélago: *Philonthus rectangulus* Sharp e *Phloeopora testacea* Mannerheim. São ainda referidas pela primeira vez: 1 espécie para Sta. Maria, 1 para S. Miguel, 22 para a Terceira, 28 para S. Jorge e 59 para a Graciosa.

### 1. INTRODUCTION

The object of this account, as other previous ones (Serrano, 1982 ; Serrano & Borges, 1987), is to contribute to the knowledge of Coleoptera from the archipelago of the Azores.

It further attempts to draw future conclusions concerning the distribution and origin of Coleoptera from Macaronesian Islands, particularly the Azores.

Below, we present the results of the study of part of the material collected during an Expedition to Terceira, S. Jorge and Graciosa (Summer

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1987) (3). Maps 1 and 2 present the stations visited at the islands of S. Jorge and Graciosa.

This Expedition was carried out by one of the authors (Paulo Borges) (4) escorted by Mr. J. Palmeiro. Some specimens from St. Maria collected by Dalberto Pombo were also studied.

As in a previous account (Serrano & Borges, *op. cit.*), we only report species new to the whole archipelago (\*) or individual islands. The method of doing this with regard to the list of species is also the same. The amount of new records for each island is as follows : St. Maria (1), Terceira (22), S. Jorge (28) and Graciosa (59).

Some specimens belonging to the Staphylinidae were examined by G. Israelson and A. Smetana.

Some corrections or confirmations of doubtful determinations, were also made.

The specimens of the Scolytidae were captured in a trap with alcohol and the majority of the Nitidulidae were captured in a trap with rotten banana.

## 2. LIST OF SPECIES

### CARABIDAE

- 2.1. *Ophonus* (*s. str.*) *ardosiacus* Lutshnik (= *rotundicollis* Fairmaire & Laboulbigne ; = *stictus* Stephens).

GRACIOSA : Quitadouro, 5 exs., 18.VIII.1987, 20.VIII.1987.

Under stones.

Madeira, Salvages, Baleares, northern Africa, Portugal, Spain, southern and west Europe and British Isles.

- 2.2. *Agonum marginatum* (Linnaeus).

S. JORGE : Pico da Esperança, 2 exs., 24.VIII.1987.

Under stones near the strand of a lake.

Madeira, Canary Islands, Portugal, Spain, west Europe and British Isles.

### HYDROPHILIDAE

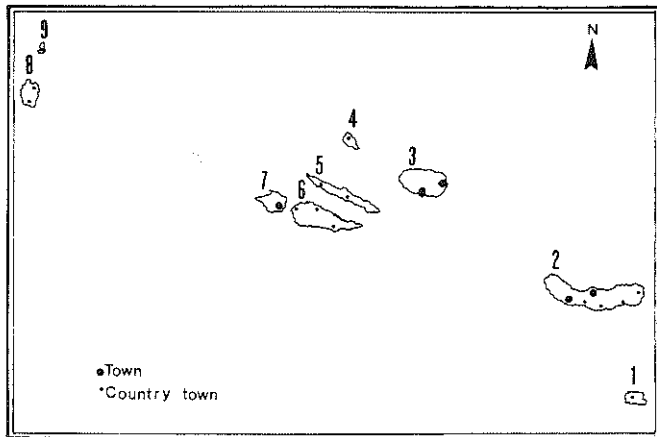
- 2.3. *Sphaeridium bipustulatum* Fabricius.

GRACIOSA : Pedras Brancas, 90 exs., 17.VIII.1987 ; Pico Timão, 88 exs., 17.VIII.1987, 20.VIII.1987 ; Vila de St. Cruz, 8 exs., 18.VIII.1987 ; Quitadouro, 569 exs., 18.VIII.1987.

In cow dung.

(3) The Expedition was supported by a grant of the Junta Nacional de Investigação Científica e Tecnológica (JNICT).

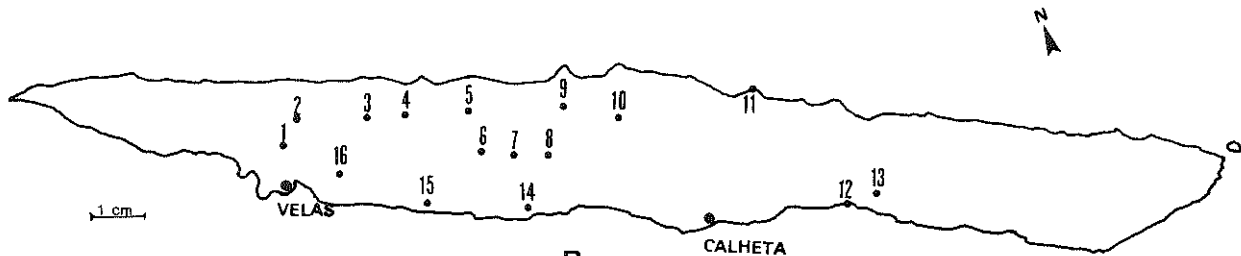
(4) Holder of scholarship granted by the JNICT.



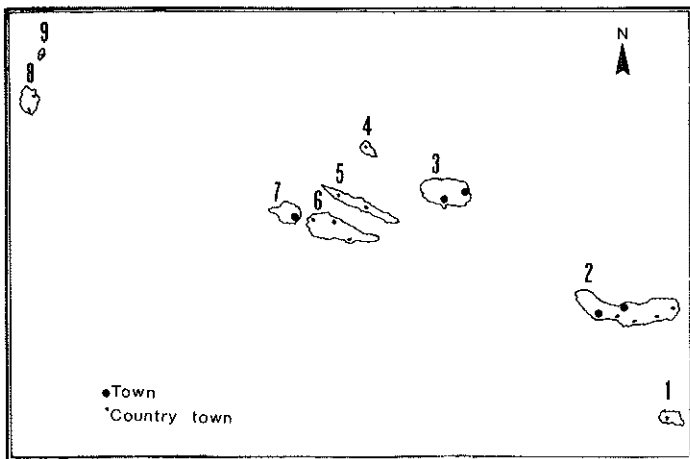
A

MAPA 1- A) Azores: 1-St<sup>a</sup> Maria, 2-S. Miguel, 3-Terceira, 4-Graciosa, 5-S. Jorge, 6-Pico, 7-Faial, 8-Flores, 9-Corvo.

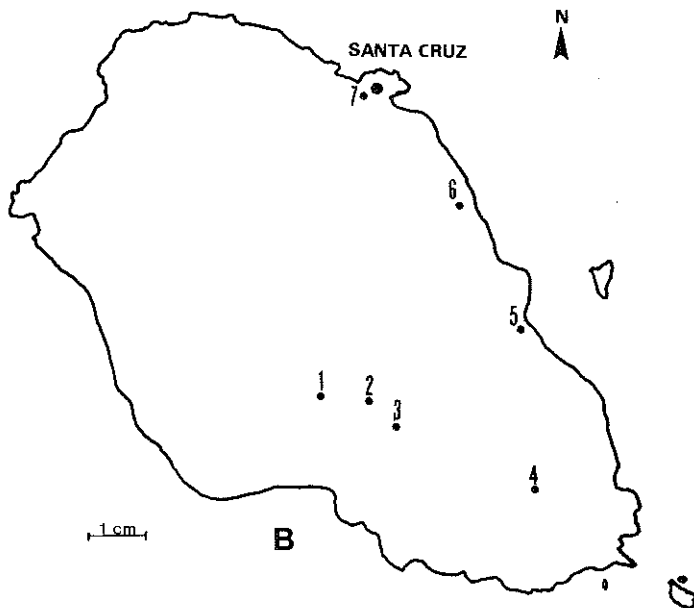
B) S. Jorge (Scale 1/231 000): 1-Barroca, 2-Terreiro da Macela, 3-Ribeira do Toledo, 4-Ribeira do Ouriques, 5-Cooperativa de St. António, 6-Pico Carvao, 7-Pico Verde, 8-Pico da Esperança, 9-Norte Grande, 10-Ribeira da Areia, 11-Fajã dos Cubres, 12-Ribeira dos Vimes, 13-Mata dos Lacticíneos, 14-Manadas, 15-Caminho Novo, 16-St. Amaro.



B



A



MAPA 2- A) Azores: 1-Stª Maria, 2-S. Miguel, 3-Terceira, 4- Graciosa, 5-S. Jorge, 6-Pico, 7-Faial, 8-Flores, 9-Corvo; B) Graciosa (Scale 1/95 000): 1-Pico Timão, 2-Caminho Grutão, 3-Pedras Brancas, 4-Caldeira, 5-Praia, 6-Quitadouro, 7-Santa Cruz.

Madeira, Porto Santo, Salvages, Canary Islands, northern Africa and Palearctic region.

2.4. *Cercyon lugubris* (Olivier) (= *obsoletus* Gyllenhal).

S. JORGE : Pico Carvão, 16 exs., 24.VIII.1987 ; St. Amaro, 6 exs., 25.VIII.1987.

GRACIOSA : Quitadouro, 2 exs., 19.VIII.1987.

In cow dung.

Algeria, southern and central Europe and Sweden.

2.5. *Cercyon nigriceps* (Marsham).

GRACIOSA : Pedras Brancas, 19 exs., 17.VIII.1987 ; Pico Timão, 6 exs., 17.VIII.1987 ; Quitadouro, 2 exs., 19.VIII.1987.

In cow dung.

Madeira, Salvages, Canary Islands, Holarctic region. Almost cosmopolitan.

2.6. *Cercyon haemorrhoidalis* (Fabricius).

S. JORGE : Pico da Esperança, 1 ex., 24.VIII.1987 ; Pico Carvão, 241 exs., 24.VIII.1987 ; Pico Verde, 6 exs., 24.VIII.1987 ; St. Amaro, 7 exs., 25.VIII.1987 ; Norte Grande, 7 exs., 27.VIII.1987.

GRACIOSA : Pico Timão, 16 exs., 17.VIII.1987, 20.VIII.1987 ; Pedras Brancas, 27 exs., 17.VIII.1987 ; Quitadouro, 150 exs., 19.VIII.1987.

In cow dung, decaying vegetables and in a pasture.

Holarctic.

2.7. *Cercyon quisquilius* Linnaeus.

S. JORGE : Pico Carvão, 13 exs., 24.VIII.1987 ; St. Amaro, 4 exs., 25.VIII.1987.

GRACIOSA : Quitadouro, 5 exs., 19.VIII.1987.

In cow dung.

Madeira, Porto Santo, Canary Islands, Palearctic.

#### ORTHOPERIDAE

2.8. *Sericoderus lateralis* (Gyllenhal).

S. JORGE : St. Amaro, 1 ex., 25.VIII.1987.

GRACIOSA : Quitadouro, 8 exs., 18.VIII.1987.

Fruit remains, decaying vegetables and cow dung.

Atlantic islands (Madeira, Desertas, Canaries, Cape Verde), northern Africa and Palearctic region.

#### STAPHYLINIDAE

2.9. *Phloeonomus punctipennis* Thompson.

S. JORGE : Terreiro da Macela, 1 ex., 24.VIII.1987 ; Manadas, 27

- exs., 27.VIII.1987 ; Caminho Novo, 2 exs., 27.VIII.1987 ;  
Barroca, 1 ex., 27.VIII.1987.
- GRACIOSA : Caminho Grutão, 9 exs., 19.VIII.1987.  
In fruit remains (banana, tomato).  
Madeira, W. Palearctic.
- 2.10. *Carpelimus (Trogophloeus) corticinus* (Gravenhorst) (det. G. Israelson).  
TERCEIRA : Lagoa do Ginjal, 3 exs., 30.VIII.1986.  
Near the strand of a lake.  
Madeira, Canary Islands, Santa Helena, British Isles, northern Africa, Europe and northern America.
- 2.11. *Anotylus sculptus* (Gravenhorst).  
S. JORGE : St. Amaro, 2 exs., 24.VIII.1987, 25.VIII.1987.  
In decaying vegetables.  
Madeira, Porto Santo, Canary Islands. Almost cosmopolitan.
- 2.12. *Anotylus complanatus* (Erichson).  
GRACIOSA : Praia, 1 ex., 20.VIII.1987.  
In fruit remains.  
Madeira, Porto Santo, Canary Islands, British Isles, northern Africa, mediterranean region and Europe.
- 2.13. *Rugilus orbiculatus* (Paykull).  
GRACIOSA : Caminho Grutão, 1 ex., 19.VIII.1987 ; Caldeira, 1 ex., 20.VIII.1987.  
In fruit remains (tomato).  
Madeira, Canary Islands, British Isles, Europe, Asia Minor, Caucasus and Australia.
- 2.14. *Gyrophypnus fracticornis* (Muller).  
GRACIOSA : Pedras Brancas, 1 ex., 17.VIII.1987 ; Pico Timão, 20 exs., 17.VIII.1987 ; Quitadouro, 6 exs., 19.VIII.1987.  
In cow dung.  
Madeira, Canary Islands. Widely distributed throughout both the Palearctic and Nearctic regions, and Chile (Smetana, 1982).
- 2.15. *Xantholinus longiventris* Heer.  
S. JORGE : Mata dos Lacticíneos, 4 exs., 26.VIII.1987.  
GRACIOSA : Serra da Ajuda, 1 ex., 18.VIII.1987.  
Under stones in a pasture and in decaying vegetables.  
Madeira. Distributed in the western part of the Palearctic region and Pacific coastal area of the United States of America (Smetana, *op. cit.*).
- 2.16. *Philonthus ventralis proximus* Wollaston.  
GRACIOSA : Quitadouro, 1 ex., 19.VIII.1987.  
In cow dung.

Atlantic islands (Madeira, Canaries, Cape Verde), northern Africa, all Europe, British Isles, Scandinavia.

2.17. \* *Philonthus rectangulus* Sharp (det. A. Smetana).

S. JORGE : St. Amaro, 1 ex., 24.VIII.1987.

GRACIOSA : Quitadouro, 2 exs., 18.VIII.1987, 19.VIII.1987.

In decaying vegetables.

Madeira, Canary Islands. Widely distributed throughout the Palearctic and Nearctic regions and North America.

2.18. *Spatulonthus longicornis* (Stephens).

GRACIOSA : Pico Timão, 1 ex., 17.VIII.1987 ; Quitadouro, 25 exs., 19.VIII.1987.

In cow dung.

Madeira, Canary Islands. Cosmopolitan.

2.19. *Pseudocypus aethiops* (Waltl).

GRACIOSA : Caminho Grutão, 1 ex., 19.VIII.1987.

Under stones.

Madeira, northern Africa and west mediterranean regions.

2.20. *Quedius simplicifrons* (Fairmaire).

S. JORGE : Mata dos Lacticíneos, 15 exs., 26.VIII.1987.

GRACIOSA : Quitadouro, 1 ex., 18.VIII.1987.

Under stones in a pasture.

Madeira, Canary Islands, western Europe.

In a previous paper (Serrano & Borges, 1987) this species was cited for S. Jorge without specific locality.

2.21. *Coproporus pulchellus* (Erichson).

TERCEIRA : Terra Chã, 11 exs., 18.X.1983, 28.X.1983, 10.IX.1984, 17.IX.1984, 30.IX.1984, 3.VIII.1985, 1-2.IV.1986, 2.IV.1986, 5.IV.1986, 22.IV.1986, 31.VII.1986, -.VIII.1986, 7.IX.1987.

S. JORGE : Terreiro da Macela, 1 ex., 24.VIII.1987 ; Norte Grande, 1 ex., 24.VIII.1987 ; Manadas, 3 exs., 27.VIII.1987 ; Caminho Novo, 58 exs., 27.VIII.1987.

GRACIOSA : Praia, 8 exs., 20.VIII.1987.

In fruit remains.

Madeira, Canary Islands, United States of Americana, West Indies, Mexico, Central and South America.

2.22. *Cordalia obscura* (Gravenhorst).

S. JORGE : Barroca, 1 ex., 23.VIII.1987.

GRACIOSA : Pico Timão, 1 ex., 17.VIII.1987.

In cow dung and subcortical, *Cryptomeria japonica*.

Madeira, Canary Islands, Palearctic.

- 2.23. *Atheta (Microdota) amacula* (Stephens) (det. G. Israelson).  
TERCEIRA : Terra Chã, 13 exs., 1-2.IV.1986.  
In fruit remains.  
Canary Islands, northern Africa, Mediterranean region, Europe, Siberia, Iceland.
- 2.24. *Atheta (Mocyta) fungi* (Gravenhorst) (det. G. Israelson).  
TERCEIRA : Terra Chã, 1 ex., 5.VIII.1986.  
In fruit remains.  
Atlantic islands (Madeira, Canaries, Cape Verde), Mediterranean region, west Palearctic.
- 2.25. *Atheta dilutipennis* Motschulsky (det. G. Israelson).  
TERCEIRA : Terra Chã, 2 exs., 10.IX.1984 ; Lixeira (Angra do Heroísmo), 2 exs., 1.VIII.1986.  
Decaying vegetables.  
Canary Islands, Cape Verde, Paleotropical.
- 2.26. \* *Phloeopora testacea* Mannerheim (det. G. Israelson).  
TERCEIRA : Serreta, 1 ex., 10.VIII.1986.  
Subcortical, *Pinus* sp..  
Madeira (?), Caucasus, Europe.
- 2.27. *Aleochara bipustulata* (Linnaeus).  
GRACIOSA : Pico Timão, 10 exs., 17.VIII.1987 ; Pedras Brancas, 8 exs., 17.VIII.1987 ; Quitadouro, 53 exs., 19.VIII.1987, 20.VIII.1987.  
In cow dung and in bones.  
Madeira, Canary Islands. Palearctic.

## HISTERIDAE

- 2.28. *Saprinus semistriatus* (Scriba).  
GRACIOSA : Quitadouro, 6 exs., 18.VIII.1987.  
In bones.  
Atlantic islands (Madeira, Porto Santo, Desertas, Canaries), northern Africa and Holarctic region.
- 2.29. *Saprinus subnitescens* Bickhardt.  
TERCEIRA : Lixeira (Angra do Heroísmo), 1 ex., 16.VIII.1986.  
In fish remains.  
Canary Islands, Hungary, Irak, Iran and North America.
- 2.30. *Saprinus planiusculus* Motschulsky.  
TERCEIRA : Lixeira (Angra do Heroísmo), 3 exs., 16.VIII.1986.  
GRACIOSA : Quitadouro, 1 ex., 18.VIII.1987.  
In fish remains and in bones.  
Palearctic.



## CLERIDAE

- 2.31. *Necrobia ruficollis* (Fabricius).  
 GRACIOSA : Quitadouro, 17 exs., 18.VIII.1987.  
 In bones.  
 Madeira, Canary Islands. Cosmopolitan.  
 This species was cited for Terceira and Pico by Guimarães (1974) and was found associated with stored products.

## ELATERIDAE

- 2.32. *Heteroderes melliculus moreleti* Tarnier.  
 GRACIOSA : Caminho Grutão, 3 exs., 19.VIII.1987.  
 Under stones.  
 Endemic.
- 2.33. *Melanotus dichrous* Erichson.  
 GRACIOSA : Quitadouro, 1 ex., 18.VIII.1987 ; Pico Timão, 1 ex., 20.VIII.1987.  
 Under stones.  
 Canary Islands, Portugal, Algeria, West Mediterranean, North America.
- 2.34. *Athous obsoletus* (Illiger).  
 GRACIOSA : Caminho Grutão, 1 ex., 19.VIII.1987.  
 Under stones.

## DERMESTIDAE

- 2.35. *Dermestes frischi* Kugelann.  
 GRACIOSA : Quitadouro, 8 exs., 18.VIII.1987.  
 In bones.  
 Madeira, Canary Islands, Palearctic region and North America.

## NITIDULIDAE

- 2.36. *Carpophilus hemipterus* (Linnaeus).  
 S. JORGE : Terreiro da Macela, 2 exs., 24.VIII.1987 ; Norte Grande, 2 exs., 24.VIII.1987, 27.VIII.1987 ; St. Amaro, 28 exs., 25.VIII.1987 ; Manadas, 2 exs., 27.VIII.1987 ; Fajã dos Cubres, 6 exs., 27.VIII.1987.  
 GRACIOSA : Quitadouro, 112 exs., 18.VIII.1987, 20.VIII.1987 ; Vila de St. Cruz, 3 exs., 18.VIII.1987, 20.VIII.1987 ; Serra da Ajuda, 1 ex., 18.VIII.1987.  
 In fruit remains (banana, tomato) and decaying vegetables.  
 Atlantic islands (Madeira, Canaries, Cape Verde). Cosmopolitan.

2.37. *Carpophilus quadrisignatus* Erichson.

S. JORGE : Terreiro da Macela, 1 ex., 24.VIII.1987 ; St. Amaro, 11 exs., 25.VIII.1987 ; Fajã dos Cubres, 2 exs., 27.VIII.1987.

GRACIOSA : Quitadouro, 16 exs., 17.VIII.1987, 18.VIII.1987, 20.VIII.1987 ; Vila de St. Cruz, 2 exs., 18.VIII.1987, 20.VIII.1987.

In fruit remains and decaying vegetables.

Madeira, Mediterranean region, southern Europe, Asia Minor, western Africa and eastern Asia.

2.38. *Carpophilus fumatus* Boheman.

S. JORGE : Manadas, 1 ex., 27.VIII.1987 ; Caminho Novo, 1 ex., 27.VIII.1987.

GRACIOSA : Vila de St. Cruz, 53 exs., 18.VIII.1987, 20.VIII.1987 ; Serra da Ajuda, 3 exs., 18.VIII.1987 ; Pico Timão, 17 exs., 20.VIII.1987 ; Praia, 1 ex., 20.VIII.1987.

In fruit remains.

Originally afrotropical.

2.39. *Carpophilus freemani* Dobson.

S. JORGE : Norte Grande, 1 ex., 24.VIII.1987.

GRACIOSA : Vila de St. Cruz, 39 exs., 18.VIII.1987, 20.VIII.1987 ; Serra da Ajuda, 4 exs., 18.VIII.1987 ; Quitadouro, 1 ex., 20.VIII.1987.

In fruit remains and in bones.

Madeira, Canary Islands. Widely distributed through the warmer parts of the world.

2.40. *Carpophilus marginellus* Motschulsky.

S. JORGE : Barroca, 24 exs., 24.VIII.1987, 27.VIII.1987 ; Terreiro da Macela, 41 exs., 24.VIII.1987, 27.VIII.1987 ; Norte Grande, 1 ex., 24.VIII.1987 ; St. Amaro, 5 exs., 25.VIII.1987 ; Ribeira do Ouriques, 1 ex., 27.VIII.1987.

GRACIOSA : Quitadouro, 10 exs., 17.VIII.1987, 18.VIII.1987, 20.VIII.1987 ; Vila de St. Cruz, 4 exs., 20.VIII.1987.

In fruit remains and in bones.

Madeira, Canary Islands. Widely distributed throughout warm and warm-temperate zones of the world, towards the north of U. S. A., Japan and Central Europe.

2.41. *Brachypeplus pudicus* Kirejtshuk & Gillerfors.

TERCEIRA : Terra Chã, 5 exs., 28.X.1983, 22.IV.1986, 2.VIII.1986, 7.IX.1987 ; Aguialva, 7 exs., 9.VIII.1986.

In fruit remains and subcortical on *Cryptomeria japonica*.

Endemic.

The first *Brachypeplus* recorded from the archipelago (Serrano & Borges, 1987) had no name. Our specimens were compared with the recent description of *B. pudicus* (Kirejtshuk & Gillerfors, 1987) and we confirm the supposition of these authors that our specimens belong to this species.

2.42. *Meligethes aeneus* (Fabricius).

S. JORGE : St. Amaro, 27 exs., 24.VIII.1987 ; Norte Grande, 1 ex., 24.VIII.1987.

In Compositae.

Palaearctic and Nearctic regions.

2.43. *Nitidula carnaria* (Shaller).

GRACIOSA : Quitadouro, 39 exs., 18.VIII.1987, 20.VIII.1987.

In bones.

Madeira, Canary Islands, northern Africa, Palearctic region.

2.44. *Omosita colon* (Linnaeus).

GRACIOSA : Quitadouro, 43 exs., 18.VIII.1987, 20.VIII.1987 ; Vila de St. Cruz, 1 ex., 18.VIII.1987.

In fruit remains and in bones.

Madeira. Holarctic.

2.45. *Epuraea unicolor* (Olivier).

S. JORGE : Barroca, 8 exs., 24.VIII.1987, 27.VIII.1987 ; Terreiro da Macela, 2 exs., 24.VIII.1987 ; Norte Grande, 45 exs., 24.VIII.1987, 27.VIII.1987 ; Manadas, 24 exs., 27.VIII.1987 ; Caminho Novo, 17 exs., 27.VIII.1987.

GRACIOSA : Caminho Grutão, 17 exs., 19.VIII.1987, 20.VIII.1987 ; Pico Timão, 4 exs., 20.VIII.1987 ; Pedras Brancas, 14 exs., 20.VIII.1987.

In fruit remains (banana, tomato).

Madeira, Canary Islands, northern Africa, Palearctic region.

#### CUCUJIDAE

2.46. *Monotoma spinicollis* Aubé.

GRACIOSA : Vila de St. Cruz, 1 ex., 18.VIII.1987.

In fruit remains (tomato).

Atlantic islands (Madeira, Canaries, Cape Verde), northern Africa, Europe, Caucasus.

2.47. *Monotoma picipes* Herbst.

TERCEIRA : Terra Chã, 1 ex., 9.VIII.1983.

Madeira, Canary Islands, Mediterranean region.

2.48. *Cryptamorpha desjardinsi* (Guérin).

S. JORGE : St. Amaro, 5 exs., 25.VIII.1987 ; Fajã dos Cubres, 11 exs., 27.VIII.1987 ; Manadas, 2 exs., 27.VIII.1987 ; Ri-

beira da Areia, 1 ex., 27.VIII.1987 ; Caminho Novo, 2 exs., 27.VIII.1987.

GRACIOSA : Quitadouro, 6 exs., 17.VIII.1987, 18.VIII.1987 ; Caminho Grutão, 2 exs., 19.VIII.1987 ; Pedras Brancas, 2 exs., 20.VIII.1987 ; Praia, 1 ex., 20.VIII.1987 ; Caldeira, 8 exs., 20.VIII.1987.

In fruit remains and decaying vegetables.

Madeira, Canary Islands. Cosmopolitan.

2.49. *Silvanus lateritius* (Broun).

[ *S. unidentatus* (Fabricius) ; Serrano & Borges, 1987 ]

TERCEIRA : Terra Chã, 1 ex., 25.III.1986.

Under a trunk of *Eucalyptus globulus*.

Madeira, Australia, New Zealand and probably introduced in South Africa, Hawaiian Islands, Madeira and Azores.

Gillerfors (*pers. comm.*) tells us that the *S. unidentatus* of Gillerfors (1986) should be *S. lateritius*. We studied our specimen of *Silvanus* and concluded that it really is *S. lateritius*. It may be possible that the specimens of *S. unidentatus* recorded from the Azores are to be referred to *lateritius*.

#### CRYPTOPHAGIDAE

2.50. *Cryptophagus laticollis* Lucas (= *affinis* Sturm).

GRACIOSA : Praia, 1 ex., 20.VIII.1987.

In fruit remains.

Madeira, Canary Islands, northern America and Palearctic region.

#### PHALACRIDAE

2.51. *Stilbus testaceus* (Panzer).

GRACIOSA : Quitadouro, 2 exs., 19.VIII.1987 ; Caminho Grutão, 1 ex., 19.VIII.1987 ; Pico Timão, 1 ex., 20.VIII.1987.

In decaying vegetables.

Madeira, Canary Islands, Mediterranean region, Central and northern Europe.

#### LATHRIDIIDAE

2.52. *Corticaria elongata* (Gyllenhal).

TERCEIRA : Terra Chã, 1 ex., 23.VIII.1985 ; Serreta, 1 ex., 10.VIII.1986.

GRACIOSA : Quitadouro, 1 ex., 18.VIII.1987.

Among decaying leaves and subcortically on *Pinus* sp..

Palearctic.

## MYCETOPHAGIDAE

- 2.53. *Lithargus pilosus* Wollaston.  
 S. JORGE : Caminho Novo, 2 exs., 27.VIII.1987 ; Fajã dos Cubres, 1 ex., 27.VIII.1987.  
 GRACIOSA : Quitadouro, 20 exs., 17.VIII.1987, 18.VIII.1987 ; Pico Timão, 1 ex., 20.VIII.1987 ; Pedras Brancas, 1 ex., 20.VIII.1987.  
 In fruit remains and among wet debris.  
 Madeira and Canary Islands.
- 2.54. *Typhaea stercorea* (Linnaeus).  
 GRACIOSA : Quitadouro, 29 exs., 17.VIII.1987, 18.VIII.1987, 20.VIII.1987 ; Vila de St. Cruz, 6 exs., 18.VIII.1987 ; Serra da Ajuda, 1 ex., 18.VIII.1987.  
 In fruit remains, decaying vegetables and bones.  
 Madeira, Canary Islands. Cosmopolitan.

## COCCINELLIDAE

- 2.55. *Rhizobius litura* (Fabricius).  
 GRACIOSA : Pico Timão, 1 ex., 20.VIII.1987.  
 Madeira, Porto Santo, Desertas, Canary Islands, northern Africa, Europe.
- 2.56. *Scymnus* (s. str.) *interruptus* (Goeze).  
 TERCEIRA : Terra Chã, 7 exs., 15.VIII.1982, 17.IX.1984, 8.VIII.1985, 9.VIII.1986 ; Angra do Heroísmo, 2 exs., 30.VII.1986.  
 S. JORGE : St. Amaro, 1 ex., 24.VIII.1987.  
 Madeira, northern Africa and Palearctic region.
- 2.57. *Scymnus* (s. str.) *levaillanti* Mulsant.  
 TERCEIRA : Terra Chã, 1 ex., 28.IV.1984 ; Angra do Heroísmo, 1 ex., 30.VII.1986.  
 GRACIOSA : Vila de St. Cruz, 1 ex., 18.VIII.1987 ; Quitadouro, 6 exs., 19.VIII.1987, 20.VIII.1987.  
 Madeira, Cape Verde Islands, Iberian Peninsula, Sicily, Syria and Morocco.
- 2.58. *Scymnus* (*Pullus*) *subvillosus* (Goeze).  
 TERCEIRA : Terra Chã, 3 exs., 25.III.1983, 3.VIII.1985, 7.VIII.1985.  
 Madeira, northern Africa, Central and southern Europe, Asia Minor, Syria, Caucasus and Siberia.  
 Gillerfors (1986) commented that *S. levaillanti* was probably confused with *subvillosus* by earlier authors. We now confirm the presence of the latter species in the Azores.

## ANTHICIDAE

- 2.59. *Omonadus floralis* (Linnaeus).  
 S. JORGE : St. Amaro, 2 exs., 25.VIII.1987.  
 GRACIOSA : Quitadouro, 3 exs., 18.VIII.1987.  
 Among decaying vegetables.  
 Madeira, Canary Islands. Cosmopolitan.
- 2.60. *Hirticomus quadriguttatus* (Rossi).  
 GRACIOSA : Quitadouro, 8 exs., 17.VII.1987, 18.VIII.1987, 20.VIII.1987.  
 In decaying vegetables, bones and fish remains.  
 Canary Islands, southern Europe and northern Africa.

## TENEBRIONIDAE

- 2.61. *Blaps gigas* (Linnaeus).  
 GRACIOSA : Vila de St. Cruz, 1 ex., 20.VIII.1987.  
 Madeira, Salvages, Canary Islands and Mediterranean region.

## SCARABAEIDAE

- 2.62. *Onthophagus vacca* (Linnaeus).  
 GRACIOSA : Pico Timão, 4 exs., 17.VIII.1987, 20.VIII.1987 ; Quitadouro, 1 ex., 19.VIII.1987.  
 In cow dung.  
 Morocco, Syria, Europe.
- 2.63. *Aphodius lividus* (Olivier).  
 GRACIOSA : Pedras Brancas, 2 exs., 17.VIII.1987 ; Quitadouro, 1 ex., 19.VIII.1987.  
 In cow dung.  
 Atlantic islands (Madeira, Canaries, Cape Verde), British Isles, Belgium, France, Iberian Peninsula, Italy.

## CERAMBYIDAE

- 2.64. *Arhopalus syriacus* (Reitter).  
 [ *A. rusticus* (Linnaeus) ; Serrano, 1982 ; Serrano & Borges, 1987 ]  
 TERCEIRA : Terra Chã, 1 ex., 11.VIII.1982.  
 PICO : Madalena, 1 ex., 4.VII.1981. (Col. P. Carvalho).  
 In *Pinus* sp..  
 Madeira (Serrano, *pers. comm.*), Canary Islands. S. W. Palearctic.

## CHRYSOMELIDAE

- 2.65. *Epithrix cucumeris* Harris.

S. JORGE : St. Amaro, 1 ex., 24.VIII.1987 ; Pico Verde, 47 exs., 24.VIII.1987.

GRACIOSA : Caminho Grutão, 13 exs., 19.VIII.1987 ; Quitadouro, 2 exs., 19.VIII.1987.

In *Physalis peruviana* (Solanaceae).

America (U. S. A.).

2.66. *Epithrix hirtipennis* Melsham.

GRACIOSA : Caminho Grutão, 29 exs., 19.VIII.1987 ; Pico Timão, 1 ex., 20.VIII.1987.

In *Physalis peruviana* (Solanaceae).

America (U. S. A.).

#### CURCULIONIDAE

2.67. *Laparocerus (Droueticus) azoricus* Drouet.

GRACIOSA : Pico Timão, 10 exs., 17.VIII.1987, 20.VIII.1987.

Under stones.

Endemic.

2.68. *Sitona lineatus* (Linnaeus).

GRACIOSA : Caminho Grutão, 1 ex., 19.VIII.1987 ; Quitadouro, 1 ex., 20.VIII.1987.

Under a dead trunk of a deciduous forest.

Madeira, Porto Santo, Canary Islands, Santa Helena, Mediterranean region, Central Europe.

2.69. *Sitona puberulus* Reitter.

GRACIOSA : Pico Timão, 2 exs., 20.VIII.1987.

Under stones.

Madeira, Canary Islands, west Mediterranean region.

2.70. *Hypera postica* (Gyllenhal).

GRACIOSA : Quitadouro, 2 exs., 19.VIII.1987.

Madeira, Desertas, Porto Santo, Canary Islands, Central Europe, Mediterranean region, northern America.

2.71. *Sitophilus oryzae* (Linnaeus).

GRACIOSA : Quitadouro, 1 ex., 18.VIII.1987.

In stored cereals.

Atlantic islands (Madeira, Canaries, Cape Verde). Cosmopolitan.

2.72. *Sphenophilus abbreviata* (Fabricius).

GRACIOSA : Vila de St. Cruz, 4 exs., 18.VIII.1987 ; Pico Timão, 3 exs., 20.VIII.1987.

Under stones.

Southern and Central Europe, northern Africa.

- 2.73. *Pseudophloeophagus aenopiceus* (Boheman).  
S. JORGE : Cooperativa de St. António, 1 ex., 23.VIII.1987 ; Barroca,  
6 exs., 20.VIII.1987.  
Subcortical, *Cryptomeria japonica*.  
Madeira, western Europe.
- 2.74. *Pseudophloeophagus tenax* (Wollaston).  
TERCEIRA : Serreta, 1 ex., 10.VIII.1986 ; Fonte Faneca, 22 exs., 5.  
IV.1986, 5.VIII.1986, 3.IX.1987 ; Pico Alto, 1 ex., 24.  
VIII.1987.  
S. JORGE : Norte Grande, 7 exs., 24.VIII.1987 ; Mata dos Lacti-  
cineos, 29 exs., 26.VIII.1987 ; Ribeira dos Vimes, 14  
exs., 27.VIII.1987.  
GRACIOSA : Pedras Brancas, 1 ex., 20.VIII.1987.  
Subcortical, *Juniperus brevifolia*, *Pittosporum undulatum*, *Erica sco-  
paria azorica*, *Cryptomeria japonica*.  
Madeira.

## SCOLYTIDAE

- 2.75. *Hylurgus ligniperda* (Fabricius).  
TERCEIRA : Serreta, 1 ex., 10.VIII.1986.  
Under the bark of a trunk of *Eucalyptus globulus*.  
Madeira, Desertas, Canary Islands, Santa Helena, northern Africa,  
Mediterranean region, Central Europe.
- 2.76. *Liparthrum curtum* Wollaston.  
TERCEIRA : Terra Chã, 3 exs., 9.IX.1987.  
S. JORGE : Fajã dos Cubres, 4 exs., 27.VIII.1987.  
In *Ficus carica*, *Eucalyptus globulus* and *Acacia* sp..  
Madeira.
- 2.77. *Hypothenemus crudiae* (Panzer).  
TERCEIRA : Terra Chã, 15 exs., 9.IX.1987.  
S. JORGE : Fajã dos Cubres, 1 ex., 27.VIII.1987.  
In *Ficus carica*, *Eucalyptus globulus* and *Acacia* sp..  
Neotropical, United States of America, some Pacific islands, Tro-  
pical Africa.
- 2.78. *Coccotrypes carpophagus* (Hornung).  
S. MIGUEL : Ponta Delgada, 1 ex., 13.XI.1985.  
TERCEIRA : Terra Chã, 1 ex., 27.III.1986.  
Madeira, Canary Islands. Cosmopolitan.
- 2.79. *Xyleborus saxeseni* (Ratzeburg).  
ST. MARIA : Florestal, 1 ex., 30.VIII.1985.  
TERCEIRA : Terra Chã, 560 exs., 15.VIII.1981, 12.VIII.1986, 7.IX.  
1987, 9.IX.1987.



GRACIOSA : Caminho Grutão, 9 exs., 19.VIII.1987, 20.VIII.1987.

In *Pittosporum undulatum*, *Persea indica*, *Ficus carica*, *Cryptomeria japonica*, *Eucalyptus globulus*, *Acacia* sp. and a Palm tree.

Madeira, Canary Islands, northern Africa, Central Europe, Mediterranean region, Caucasus, Siberia, Japan, North America.

### 3. SUMMARY AND DISCUSSION

The faunistic study of the Azorean Islands has increased in recent years. Serrano (1982) listed 367 species and subspecies of Coleoptera from the Azores so that now this number has grown to approximately 505. This confirms the insufficient exploration claimed by several authors (e. g., Serrano, *op. cit.* ; Israelson, 1984 and 1985 ; Gillerfors, 1986 and Serrano & Borges, 1987) as one of the possible reasons for the paucity of Coleoptera on these islands.

In fact, some islands have been more thoroughly explored than others, and the actual status of distribution of the Azorean coleopterous fauna should be seen as provisional only. Other reasons for this paucity lie in two main factors : a) geographical isolation, b) climatic conditions (Lindroth, 1960).

Nearly a third of the species listed are more or less cosmopolitan and probably are recent unintentional introductions into the archipelago.

Only three species are endemics : *Heteroderes melliculus moreleti* Tarnier, *Brachypeplus pudicus* Kirejtshuk & Gillerfors and *Laparocerus (Droueticus) azoricus* Drouet.

Two species (*Philonthus rectangulus* Sharp and *Phloeopora testacea* Mannerheim) were recorded for the first time for the Archipelago of the Azores. *P. rectangulus* is widely distributed throughout the Palearctic and Nearctic regions. *P. testacea* is not confirmed from Madeira (Lundblad, 1958) and is probably new to Macaronesia.

The additions for individual islands are : St. Maria 1, S. Miguel 1, Terceira 22, S. Jorge 28, and Graciosa 59. The numbers for Terceira, S. Jorge and Graciosa represent respectively an increase of 8.9%, 35.9% and 236%.

The actual number of species known from these islands is more or less : St. Maria 239, S. Miguel 323, Terceira 221, S. Jorge 106 and Graciosa 84.

We are well aware of the fact that the present survey is by no means final, and that much work on the distribution of Azorean Coleoptera needs to be done in the future.

### ACKNOWLEDGEMENTS

Thanks are due to Mr. J. Palmeiro for his help while capturing material during our stay on the Azores.

We would like to extend special thanks to Dr. A. Smetana, Biosystematics Research Center- Ontario- Canada, and Dr. G. Israelson, Lund- Sweden, for their help with the determination of some specimens of the Staphylinidae.

The study of the material has been aided by grants from Departamento de Zoologia e Antropologia, Faculdade de Ciências de Lisboa.

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Received 29.9.88

#### ADDENDA

*Omonadus formicarius* (Goeze) (det. D. S. Chandler).

S. JORGE : St. Amaro, 1 ex., 25.VIII.1987.

Cosmopolitan.

A new species to the Azores and probably also new to Macaronesia.