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The Arthropoda fauna of Corvo island (Azores): new records and updated list of species

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VIEIRA, V., P.A.V. BORGES, O. KARSHOLT & J. WUNDERLICH. La fauna de artrópodos de la isla de Corvo (Azores): lista actualizada de las especies incluyendo nuevos registros. *VIERAEA* 31: 1-7.

RESUMEN: Se exponen los resultados de artrópodos (phylum Arthropoda) colectados y observados en la isla de Corvo, archipiélago de las Azores, durante los días 26.VII.1999 y 11-13.IX.2002. Con la inclusión de la literatura disponible, se citan 175 especies y subespecies (11.43% son comunes a las otras islas de las Azores), repartidas per 16 órdenes y 83 familias, de las que 32 son nuevas citas para la isla de Corvo. *Phaneroptera nana* Fieber (Orthoptera: Tettigonidae) se cita por primera vez para las Azores.

Palabras clave: Arthropoda, Isla de Corvo, Azores.

ABSTRACT: The arthropod fauna (phylum Arthropoda) from the island of Corvo, Azores archipelago, was surveyed during four sampling days (26 July 1999; 11-13 September 2002). In the present contribution 32 species and subspecies of arthropods are listed as new records. *Phaneroptera nana* Fieber (Orthoptera: Tettigonidae) is also new to Azores. The preliminary checklist for Corvo island includes a total of 175 species and subspecies (11.43% are common endemics to the Azores), belonging to 16 orders and 83 families. Key words: Arthropoda, Corvo island, Azores.

INTRODUCTION

The literature records on arthropod fauna from Corvo island are restricted almost to a few early Azorean works, mainly included into faunistic general lists or single records. Vieira (1994) and Vieira & Tavares (1995) are the most recent papers dedicated to the arthropod fauna of this island.

The volcanic origin of Corvo and its geographical position in North Atlantic Ocean (39° 40' - 43' N and 31° 5' - 8' W), the maximum altitude (718 m at Estreitinho), the harsh environment (e.g. sometimes influenced by winter strong winds) in comparison to other Azorean islands, and the comparatively small percentage of the total surface covered with crop fields and natural forestry, may have some influence in the species richness of arthropod species, including parasites and predators, and their host plants.

The entomological work on Corvo is still scarce, when compared to other Azorean islands. Therefore, the first author visited the island during three days (11-13 September 2002) in order to complete the earlier lists (Vieira, 1994; Vieira & Tavares, 1995), and contribute to the ecological knowledge of Corvo biotopes. The last author (J. Wunderlich) also visited the island in company of L. Schmidt during one day in the summer of 1999. This paper lists the new records followed by some ecological notes. A preliminary checklist of the arthropod fauna from Corvo is also given.

MATERIAL AND METHODS

Fieldwork was conducted on Corvo during a short sampling period (26 July 1999; 11-13 September 2002). Following Vieira (1994) and Vieira & Tavares (1995), several techniques were used to collect arthropod specimens: (i) an adapted Pennsylvania light trap, with a TLD 15 W/05 lamp, fed by a 12V battery coupled with a transformer, for the noctuids; (ii) an entomological net for moths and butterflies; (iii) the direct observation of various host plants (exotic and endemic) for larval instars; (iv) the direct observation or/and capture of natural enemies (predator and parasite) that was found associated with their entomological hosts (other insects).

The most recently arthropod fauna survey from Corvo was published by Vieira (1994) and Vieira & Tavares (1995). Those early lists are here complemented with new records and some corrections. Only the results concerning Macrolepidoptera (Lepidoptera) species were prepared to publish elsewhere (Vieira, in press), with exception to *Gymnoscelis rufifasciata* (Haworth) that is referred here. All the new species for this island were identified by the authors, namely: J. Wunderlich (Araneae), P. Borges (Hemiptera-Heteroptera and Coleoptera), V. Vieira (Odonata, Blattaria, Orthoptera and Macrolepidoptera) and O. Karsholt (Microlepidoptera).

Several lists of species were used as reference in terms of the nomenclature of the species and their distribution on the island: Araneae (Wunderlich, 1991); Collembola (Gama, 1982); Orthoptera (Fernandes, 1982); Dermaptera (Sousa, 1997); Hemiptera (Cicadellidae) (Quartau, 1982); Thysanoptera (Zur Strassen, 1984); Neuroptera (Aspöck *et al.*, 2001; Ventura *et al.*, in press); Coleoptera (Borges, 1990); Diptera (Frey, 1945; Freeman, 1957; Gomes, 1982; Hughes *et al.*, 1998; Kehlmaier, 1998; Báez, 2002); Lepidoptera

(Sousa, 1985; Vieira & Tavares, 1995; Vieira, 1997; Tennent & Sousa, 2003; Vieira, in press); Hymenoptera (Yarrow, 1967; Vieira, 1994).

The present paper is divided in two parts, entitled New Records and Checklist. For each new record the following data is given: locality, date, number of specimens, cultural area, hostplant, and/or their arthropod natural enemies (parasite or predator), and zoogeographical distribution (=Distrib.). The arthropod checklist results from both literature cited in this contribution (see also Izquierdo *et al.*, 2001; Hjorth-Andersen, 2002) and the new records listed. Taxa endemic to the Azorean archipelago are marked with an asterisk (*).

RESULTS

1. New records

ARANEAE (Arachnida)

Family Segestriidae

Segestria florentina (Rossi, 1790)

Caldeira, 26.VII.1999 (1 f) J. Wunderlich & L. Schmidt leg.

Caminho da Grota, Vila Nova do Corvo: 12.IX.02 Vieira leg. - one adult male captured with an entomological net, which was suspended on roadside wall rocks, catching the insects (e.g., Diptera and microlepidoptera species).

Distrib.: Europe, Azores (new to Corvo).

Family Oecobiidae

Oecobius similes Kulczynski, 1909

Caldeira, 26.VII.1999 (1 f) J. Wunderlich & L. Schmidt leg.

Distrib.: St. Helena, Canaries, Madeira, Azores (new to Corvo).

Family Tetragnathidae

Tetragnatha extensa (Linnaeus, 1758)

Caldeira, 26.VII.1999 (1 subad. m, 2 subad. f, 2 juv.) J. Wunderlich & L. Schmidt leg.

Distrib.: Holarctic, Azores (new to Corvo).

Family Linyphiidae

Lepthyphantes tenuis (Blackwall, 1852)

Caldeira, 26.VII.1999 (1 subad. m, 3 m, 6 f) J. Wunderlich & L. Schmidt leg.

Distrib.: Palearctic, Azores (new to Corvo).

Erigone atra (Blackwall, 1841)

Caldeira, 26.VII.1999 (1 m) J. Wunderlich & L. Schmidt leg.

Distrib.: Holarctic, Canaries, Azores (new to Corvo).

Family Mimetidae

Ero ?? flammeola Simon, 1881

Caldeira, 26.VII.1999 (1 juv.) J. Wunderlich & L. Schmidt leg.

Distrib.: West Mediterranean, Canaries, Azores (new to Corvo).

Family Theridiidae

Steatoda grossa (C.L. Koch, 1838)

Caldeira, 26.VII.1999 (1 f) J. Wunderlich & L. Schmidt leg.

Distrib.: Cosmopolitan, Macaronesia, Azores (new to Corvo).

Achaearanea acoreensis (Berland, 1932)

Caldeira, 26.VII.1999 (1 f) J. Wunderlich & L. Schmidt leg.

Distrib.: California, Portugal, Madeira, Açores (new to Corvo).

Theridion musivivum Schmidt, 1956

Caldeira, 26.VII.1999 (1 m) J. Wunderlich & L. Schmidt leg.

Distrib.: ?Madeira, Canary Islands, Azores (new to Corvo).

Family Agelenidae

Tegenaria ? domestica (Clerck, 1757)

Caldeira, 26.VII.1999 (1 juv.) J. Wunderlich & L. Schmidt leg.

Distrib.: Cosmopolitan, Azores (new to Corvo).

Family Lycosidae

Pardosa acoreensis Simon, 1883*

Caldeira, 26.VII.1999 (1 f) J. Wunderlich & L. Schmidt leg.

Distrib.: Endemic to the Azores (new to Corvo).

Family Thomisidae

Xysticus cor Canestrini, 1873

Caldeira, 26.VII.1999 (1 m.; 4 f; 3 juv.) J. Wunderlich & L. Schmidt leg.

Distrib.: Southern Europe, Azores (new to Corvo).

Family Salticidae

Macaroeris ? catus (Blackwall, 1867)

Caldeira, 26.VII.1999 (2 juv.) J. Wunderlich & L. Schmidt leg.

Distrib.: Madeira, Azores (new to Corvo).

HEMIPTERA

Family Nabiiidae

Nabis pseudoferus ibericus Remane, 1962

Vila Nova do Corvo: 11-12.IX.02 - An adult; it is considered a predator.

Distrib.: Iberian Peninsula, Sicily, Sardinia, Magreb, Canary Islands, Azores (new to Corvo).

COLEOPTERA

Family Nitidulidae

Carpophilus fumatus Boheman, 1851

Vila Nova do Corvo: 11-12.IX.02 - Various adults on both field and house maize cobs (*Zea mays* L., Poaceae).

Distrib.: Cosmopolitan (originally Afrotropical), Azores (new to Corvo).

Family Curculionidae

Sitona ? flavescens (Marshall, 1802)

Vila Nova do Corvo, Cascalho: 11-12.IX.02 - An adult in the legume field. It is considered a legume-feeder.

Distrib.: Cosmopolitan, Azores (new to Corvo).

ODONATA

Family Aeschnidae

Anax imperator Leach, 1815

Vila Nova do Corvo: 12.IX.02 - One specimen on *Tetragonia tetragonioides* (Pallas) Kuntze (Tetragoniaceae) and flying at Porto da Casa. Another one specimen has been observed flying at Pico João de Moura.

Distrib.: Palearctic, Azores (new to Corvo).

BLATTARIA

Family Blattidae

Periplaneta americana (Linnaeus, 1758)

Vila Nova do Corvo: 12.IX.02 - One specimen dead on roadside stone wall close to the church of Vila Nova do Corvo.

Distrib.: Cosmopolitan, Azores (new to Corvo).

ORTHOPTERA

Family Tettigonidae

Ruspolia nitidula (Scopoli, 1786)

(= *Homocoryphus nitidulus* (Scopoli))

Vila Nova do Corvo: 12.IX.02 - The species can be captured in a light trap and it is commonly found on humid places with low vegetation, namely Juncaceae (*Juncus* spp.) and Poaceae plants (e.g. *Zea mays*), from low to medium altitudes.

Distrib.: Cosmopolitan, specially in tropical countries, Canary islands, Azores (new to Corvo).

Phaneroptera nana Fieber, 1843

Vila Nova do Corvo: 12.IX.02 - "Four-spot bush-cricket" is found on "Chagas", *Tropaeolum majus* L. (Tropaeolaceae), but due to their grass green colouration difficult to detect.

Distrib.: Africa, Spain, Canary islands, Madeira; it is new to Corvo and Azores.

LEPIDOPTERA

Family Tineidae

Praecedes atomosella (Walker, 1863)
(*thecophora* (Walsingham, 1908))

Vila do Nova do Corvo: 12.IX.02 - One case on the wall of the Residencial of Vila do Nova do Corvo.

Distrib.: Azores (new to Corvo). Pan-tropical. Palaearctic region, including Madeira and Canary Islands (Gaedike & Karsholt, 2001).

Opogona sacchari (Bojer, 1856)

Pico João de Moura: 12.IX.02 - 2 ex. captured in a light trap.

Distrib.: Azores (new to Corvo). Coastal areas of Africa, South and Central America, oceanic island of the Atlantic and Indian Ocean, including Madeira and Canary Islands (Gaedike & Karsholt, 2001).

Family Gelechiidae

Phthorimaea operculella (Zeller, 1873)

Pico João de Moura: 12.IX.02 - 2 ex. captured in a light trap; 11-13.IX.02 - adults and larvae attacking both field and stored potatoes *Solanum tuberosum* (Solanaceae) at Vila do Nova do Corvo.

Distrib.: Azores (new to Corvo). Neotropical species which has been introduced to many countries. In Europe restricted to the southern parts. Madeira and Canary Islands.

Sitotroga cerealella (Olivier, 1789)

Vila do Nova do Corvo: 12.IX.02 - Larvae attacking corn of the *Zea mays* in both field and stored *Z. mays* at Vila do Nova do Corvo (Matriz).

Distrib.: Azores (new to Corvo). Pan-tropical/subtropical. In colder climates only indoors. Madeira and Canary Islands.

Family Tortricidae

Crociosema plebejana Zeller, 1847

Pico João de Moura: 12.IX.02 - 8 ex. captured in a light trap.

Distrib.: Azores (new to Corvo). Pan-tropical / subtropical. Madeira and Canary Islands.

Family Pyralidae

Phycitodes albatella (Ragonot, 1887)

Pico João de Moura: 12.IX.02 - 80 ex. captured in a light trap.

Distrib.: Azores (new to Corvo). Holarctic, Neotropical (Meyer *et al.*, 1997)

The population occurring in the Azores belongs to subspecies *pseudonimbella* (Bentinck, 1937), which occurs in Europe and North Africa.

Ephestia kuehniella (Zeller, 1879)

Vila do Nova do Corvo: 12.IX.02 - One adult captured in *Z. mays* field at Cascalho. Meyer *et al.* (1997) saw no material of *kuehniella* from the Azores.

Distrib.: Azores (new to Corvo). Cosmopolitan. Madeira and Canary Islands (Meyer *et al.*, 1997).

Scoparia aequipennalis Warren, 1905*

Pico João de Moura: 12.IX.02 - One adult captured in a light trap.

Distrib.: Azores (new to Corvo).

Eudonia interlinealis (Warren, 1905)*

Pico João de Moura: 12.IX.02 - Two adults captured in a light trap.

Distrib.: Azores (new to Corvo).

Nomophila noctuella (Denis & Schiffermüller, 1775)

Corvo: 11.IX.02 - Adults were common in pasture grasses, namely *Mentha suaveolens* (Lamiaceae) and *Cyperus* spp. (Cyperaceae) at Forno Velho, in which 2 adults were captured with an entomological net; 12.IX.02 - Pico João de Moura: 14 adults captured in a light trap.

Distrib.: Azores (new to Corvo). Palaearctic and Afrotropical regions. Madeira and Canary Islands (Meyer *et al.*, 1997).

Family Geometridae

Gymnoscelis rufifasciata (Haworth, 1809)
Pico João de Moura: 12.IX.02 - Two adults captured in a light trap.

Distrib.: Azores (new to Corvo). Palaearctic region. The macaronesian species of *Eupitheciini* group need a global revision (Meyer, 1991); it could eventually change both nomenclature and distribution of this species.

HYMENOPTERA

Family Braconidae

Meteorus sp.

Vila Nova do Corvo: 11-12.IX.02 - A pupa observed on *Brassica oleracea* at Cascalho, which being an adult in laboratory conditions at Department of Biology of the University of the Azores. A parasite of *P. brassicae azorensis* subspecies.

Distrib.: Unknown.

2. Checklist of Arthropoda fauna

ISOPODA

Family Porcellionidae

Porcellio sp.

AMPHIPODA

Family Talitridae

Orchestia chevreuxi De Guerne, 1887

SYMPHYLA

Family Scutigereidae

Scutigera immaculata (Newport, 1845)

DIPLOPODA

Family Blaniulidae

Blaniulus guttulatus (Fabricius, 1798)
(=*Blaniulus guttulatus* Bosc.)

ARANEAE (Arachnida)

Family Dysderidae

Dysdera crocata C.L. Koch, 1839

Family Segestriidae

Segestria florentina (Rossi, 1790)

Family Pholcidae

Pholcus phalangioides (Fuesslin, 1755)

Family Oecobiidae

Oecobius similes Kulczynski, 1909

Family Tetragnathidae

Tetragnatha extensa (Linnaeus, 1758)

Family Araneidae

Argiope bruennichi (Scopoli, 1772)

Family Zygiellidae

Zygiella x-notata (Clerck 1757)

Family Linyphiidae

Lepthyphantes tenuis (Blackwall, 1852)

Agyneta fuscipalpis (C.L. Koch, 1836)

Erigone atra (Blackwall, 1841)

Family Mimetidae

Ero ?? flammeola Simon, 1881

Family Tetheridiidae

Steatoda grossa (C.L. Koch, 1838)

Achaearana corensis (Berland, 1932)

Achaearana tepidariorum (C.L. Koch, 1841)

Theridion musivivum Schmidt, 1956

Family Agelenidae

Tegenaria ? domestica (Clerck, 1757)

Family Lycosidae

Pardosa corensis Simon, 1883*

Family Thomisidae

Xysticus cor Canestrini, 1873

Family Salticidae

Macaroeris ? catus (Blackwall, 1867)

HEXAPODA (=INSECTA)

COLLEMBOLA

Family Entomobryidae

Entomobrya multifasciata (Tullberg, 1871)

ODONATA

Family Aeschnidae

Anax imperator Leach, 1815

Family Libellulidae

Sympetrum fonscolombei (Sélys, 1840)

DERMAPTERA

Family Anisolabididae

Euborellia annulipes (Lucas, 1847)

Family Forficulidae

Forficula auricularia Linnaeus, 1758

ORTHOPTERA

Family Gryllidae

Gryllus bimaculatus (De Geer, 1773)

Family Acrididae

Locusta danica (Linnaeus, 1758)

Family Tettigonidae

Rospolia nitidula (Scopoli, 1786)*Phaneroptera nana* Fieber, 1843

HEMIPTERA

Family Miridae

Lygocoris (Tayloriligus) pallidulus
Blanchard, 1852

Family Pentatomidae

Nezara viridula (Linnaeus, 1758)

Family Nabidae

Nabis pseudoferus ibericus Remane, 1962

Family Cixiidae

Cixius azofloresi Remane & Asche, 1979

Family Cicadellidae

Eupteryx azorica Ribaut, 1941*Psammotettix striatus* (Linnaeus, 1758)

Family Margarodidae

Icerya purchasi Maskell, 1878

Family Diaspididae

Aspidiotus nerii (Bouché, 1833)

Family Coccidae

Coccus aff. hesperidum (Linnaeus, 1758)

THYSANOPTERA

Apterygothrips sp.

NEUROPTERA

Family Chrysopidae

Chrysoperla agilis Henry, Brooks, Duelli &
Johnson, in press
(=*Chrysoperla* sp.)

COLEOPTERA

Family Carabidae

Campalita olivieri (Dejean, 1831)*Ocys harpaloides* (Audinet-Serville, 1821)*Agonum marginatum* (Linnaeus, 1758)*Anchus ruficornis* (Goeze, 1777)*Amara aenea* (De Geer, 1774)*Anisodactylus binotatus* (Fabricius, 1787)*Stenolophus teutonius* (Schrank, 1780)*Pseudophonus rufipes* (De Geer, 1774)*Harpalus distinguendus* (Duftschmidt, 1812)

Family Dystiscidae

Hydroporus guernei Régimbart, 1891**Rhantus suturalis* (MacLeay, 1825)

Family Staphylinidae

Anotylus nitidulus (Gravenhorst, 1802)*Xantholinus linearis* (Olivier, 1794)*Ocypus olens* (Müller, 1764)*Atheta* (s. str.) *atramentaria* (Gyllenhal, 1810)

Family Scarabaeidae

Onthophagus taurus (Schreber, 1759)*Onthophagus vacca* (Linnaeus, 1767)

Family Elateridae

Heteroderes azoricus Tarnier, 1860*

Family Melyridae

Psilothrix viridicaeruleus (Fourcroy, 1785)

Family Nitidulidae

Carpophilus fumatus Boheman, 1851

Family Coccinellidae

Scymnus interruptus (Goeze, 1777)

Scymnus sp.

Rodolia cardinalis (Mulsant, 1850)

Coccinella undecimpunctata Linnaeus, 1758

Family Chrysomelidae

Chrysolina (Chrysomela) banksi (Fabricius, 1775)

Family Rhynchophoridae

Sitophilus zeamais Motschoulsky, 1855

Family Curculionidae

Otiorhynchus sp.

Laparocerus azoricus Drouet, 1859

DIPTERA

Family Tilupidae

Tipula macaronesica Savchenko, 1961*
(=*Tipula oleracea* L.); misidentification.

Family Chironomidae

Chaetocladius melaleucus (Meigen, 1818)

Microspectra junci (Meigen, 1818)

Psectrocladius sordidellus (Zetterstedt, 1838)

Smittia (Pseudsmittia) azorica Storå, 1945*
(Nomina dubia)

Thalassomyia frauenfeldi Schiner, 1856

Thalassosmittia atlantica (Stora in Frey, 1936)

Family Dolichopodidae

Aphrosylus calcarator Frey, 1945*

Aphrosylus argyreatus Frey, 1945*

Campsicnemus curvipes (Fallén, 1823)

Chrysotus elongatus Parent, 1934*

Dolichopus signifer Haliday, 1838*

Family Ephydriidae

Discocerina obscurella (Fallén, 1813)

Hecamede albicans (Meigen, 1830)

Hydrellia griseola (Fallén, 1813)

Hydrellia griseola (Fallén, 1813)

Parydra coarctata (Fallén, 1813)

Scatella tenuicosta Collin, 1930

Family Canacidae

Canace nasica (Haliday, 1839)

Family Sciaridae

Bradysia amoena (Winnertz, 1867)

Family Empididae

Clinocera (Kowarzia) azorica Wagner & Stauder, 1991*

Family Hybotidae

Crossopalpus aeneus (Walker, 1871)

Family Phoridae

Megaselia ardua Schmitz 1940

Family Syrphidae

Eumerus strigatus (Fallén, 1817)

Eupeodes corollae (Fabricius, 1794)

Sphaerophoria scripta (Linnaeus, 1758)

Family Tephritidae

Ensina azorica Frey, 1945*

Family Chamaemyiidae

Chamaemyia polystigma (Meigen, 1830)

Family Chloropidae

Oscinella frit (Linnaeus, 1758)

Thaumatomyia notata (Meigen, 1830)

Family Agromyzidae

Cerodontha bistrigata Frey, 1945*

Chromatomyia horticola (Goureau, 1851)

Phytomyza plantaginis Robineau-Desvoidy, 1851

Family Sphaeroceridae

Elachisoma aterrimum (Haliday, 1833)

Leptocera nigra Olivier, 1813

Lotophila atra (Meigen, 1830)

Minilimosina fungicola (Haliday, 1836)

Opacifrons coxata (Stenhammar, 1854)

Pullimosina heteroneura (Haliday, 1836)

Spelobia clunipes (Meigen, 1830)

Spinilimosina brevicostata (Duda, 1918)

Family Anrhomyiidae

Adia cinerella (Fallén, 1825)

Delia platyura (Meigen, 1826)

Family Muscidae

Haematobia irritans (Linnaeus, 1758)

Musca domestica Linnaeus, 1758

Muscina stabulans (Fallén, 1817)

Orchisia costata (Meigen, 1826)

Stomoxys calcitrans (Linnaeus, 1758)

Family Sarcophagidae

Sarcophaga africa (Wiedemann, 1824)

Family Chyromyidae

Aphaniosoma obscuratum Frey, 1945

Family Tethinidae

Culex pipiens Linnaeus, 1758

LEPIDOPTERA

Family Tineidae

Praecedes atomosella (Walker, 1863)

(=*thecophora* (Walsingham, 1908))

Opogona sacchari (Bojer, 1856)

Family Gracillariidae

Caloptilia aurantiaca (Wollaston, 1858)

(= *Caloptilia* aff. *bistrigella* (Rebel));
misidentification.

Family Hyponomeutidae

Argyresthia atlanticella Rebel, 1940*

Plutella xylostella Linnaeus, 1758

Family Chotreutidae

Tebenna bjerkandrella (Thunberg, 1874)

Family Gelechiidae

Phthorimaea operculella (Zeller, 1873)

Sitotroga cerealella (Olivier, 1789)

Family Tortricidae

Crocosema plebejana Zeller, 1847

Cydia molesta (Busck, 1916)

Selania leplastriana Curtis, 1831

Family Pyralidae

Phycitodes albatella (Ragonot, 1887)

Ephestia kuehniella (Zeller, 1879)

Scoparia aequipennalis Warren, 1905*

Eudonia interlinealis (Warren, 1905)*

Udea ferrugalis (Hübner, 1796)

Palpita unionalis (Hübner, 1796)

Nomophila noctuella (Denis &

Schifferrmüller, 1775)

Family Pieridae

Colias crocea (Fourcroy, 1785)

Pieris brassicae azorensis Rebel, 1917*

Family Nymphalidae

Hipparchia azorina occidentalis (Bivar de

Sousa, 1982)*

Vanessa atalanta (Linnaeus, 1758)

Family Geometridae

Cleora fortunata azorica Pinker, 1971*

Gymnoscelis rufifasciata (Haworth, 1809)

Family Sphingidae

Agrius convolvuli (Linnaeus, 1758)

Macroglossum stellatarum (Linnaeus, 1758)

Family Noctuidae

Hypena obsitalis (Hübner, [1813])

Autographa gamma (Linnaeus, 1758)

Thysanoplusia orichalcea (Fabricius, 1775)

Ctenoplusia limbirena (Guenée, 1852)

Chrysodeixis chalcites (Esper, 1789)

Helicoverpa armigera (Hübner, [1808])

Galgula partita Guenée, 1852

Sesamia nonagrioides (Levebvre, 1827)

Phlogophora meticulosa (Linnaeus, 1758)

Mesapamea storai (Rebel, 1940)*

Acantholeucania loreyi (Duponchel, 1827)

Pseudaletia unipuncta (Haworth, 1809)

Noctua pronuba (Linnaeus, 1758)

Noctua atlantica (Warren, 1905)*

Xestia c-nigrum (Linnaeus, 1758)

Peridroma saucia (Hübner, [1808])

Agrotis ipsilon (Hufnagel, 1766)

Agrotis segetum (Denis & Schifferrmüller,
1775)

HYMENOPTERA

Family Pteromalidae

Pteromalus puparum (Linnaeus, 1758)

Family Braconidae

Glyptapanteles (= *Apanteles*) *militaris* (Walsh, 1861)

Cotesia (= *Apanteles*) *glomerata* (Linnaeus, 1758)

Meteorus sp.

Family Formicidae

Monomorium carbonarium (Smith, 1858)

Tetramorium guineense (Bernard, 1953)

Family Apidae

Bombus ruderatus (Fabricius, 1775)

Apis mellifera (Linnaeus, 1758)

Family Vespidae

Vespa vulgaris (Linnaeus, 1758)

DISCUSSION

The arthropod fauna of Corvo was poorly known until recently, because no consistent entomological expeditions were performed. This sampling paucity is confirmed with this contribution, in which about 32 species belonging to several arthropod groups are added with only a small field effort. However, the list of species presented is still very disharmonic in taxonomic composition and only a standardized sampling survey that should include different habitats will solve this problem.

The available literature could be useful for getting some patterns on species richness between islands or protected areas (see Borges *et al.*, 2000), but only a well performed field survey will improve the lists of species. For instance, in spiders several species common in pastures and semi-natural grasslands, common habitats in the island, are not yet listed. The same applies to other taxa common in pastureland (see Borges, 1999; Borges & Brown, 2001).

The fauna of Corvo should be rich compared to the area of the island, the small island effect (Lomolino & Weiser, 2001), and highly influenced by the fauna of the nearest island, Flores. Therefore, the list of species here presented is still preliminary and we strongly support the idea that a well-planned entomological expedition to Corvo should occur soon.

In summary, the preliminary checklist for Corvo includes a total of 175 species (in which 20 or 11.43% are common endemics to Azores archipelago), 16 orders and 83 families.

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