Updated Checklist of Arthropods from Azores (Portugal)

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Universidade dos Açores. Dataset/Checklist. http://ipt.gbif.pt/ipt/resource?r=checklist_arthropoda_azores&v=1.5

Abstract

The data we present consists in an updated checklist of the Azorean arthropods. The checklist compile known records based on published literature, unpublished data, and new records at archipelago and island levels. This publication represents the most recent information about distribution of introduced, native and endemic arthropods in the Azores archipelago.
Currently the total number of terrestrial arthropod taxa (species and subspecies) in the Azores is estimated of about 2417 belonging to 14 classes, 53 orders, 438 families, 1554 genera and 2397 species and 149 individual subspecies.
The most diverse orders of Azorean arthropods are: Coleoptera (585 taxa), Diptera (422 taxa), Hemiptera (338 taxa), Hymenoptera (162 taxa), Lepidoptera (159 taxa) and Araneae (132 taxa).
A total of 275 endemic taxa are currently known (231 species and 44 subspecies), belonging to 8 classes and 22 orders. São Miguel, Terceira and Pico are the islands with higher number of endemic species and subspecies. Compared to the other nearest Macaronesian archipelagos (Madeira and Canaries), the Azorean arthropod fauna is characterized by a lower percentage of endemism and a high proportion of exotic introduced species.

Keywords: Checklist, Arthropods, Azorean fauna, Biodiversity, Dataset, Inventory, Linnean, and Wallacean shortfalls, Inventoryregional

Project details

Project title: AZORESBIOPORTAL-PORBIOTA- Updated Checklist of Arthropods from Azores (Portugal)

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Study area descriptions/descriptor: The Azores archipelago located in the North Atlantic Ocean (37-40 °N, 25-31 °W), about 1600 km of distance to southern Europe and 2200 km to the northern America. The archipelago, which extends for 615 km, is formed by nine main islands and some small islets, all of volcanic origin. The islands are divided into three main groups: the western group (Corvo and Flores), the central group (Faial, Pico, Graciosa, São Jorge and Terceira), and the eastern group (São Miguel and Santa Maria). The climate is

mainly temperate oceanic, with regular and abundant rainfall, high levels of relative humidity, above 95% on average on high forest, and persistent winds, mainly during the winter and autumn seasons. In XV century, the Azores was settled by Portuguese, and since then, the landscape was dramatically transformed, by replacing of pristine forests to exotic tree plantations, agricultural areas, pastures to cattle grazing and urban areas. Currently the original native forests comprise about 5% of the total surface of the archipelago, and remains in the most elevation and inaccessible areas of the islands (Gaspar et al 2008).
Design description: For taxonomic consistency we evaluated specific literature for spiders (http://wsc.nmbe.ch) and Lepidoptera (expert revision). For the remaining groups we compared the nomenclature available in four main taxonomic databases: i) the last Azorean Checklist (Borges et al. 2010b); ii) the project Fauna Europaea (https://fauna-eu.org/); iii) the project BIOTA Canarias (https://www.biodiversidadcanarias.es/), iv) the GBIF database (https://www.gbif.org/), and when data available v) the project Fauna Iberica (http://www.fauna-iberica.mncn.csic.es/english/). In general, we looked for consistency in the nomenclature and when in doubt we followed the GBIF nomenclature.
When no information concerning island occurrence was available only archipelago occurrence is given (AZ). In most cases it corresponds to old records, as well as to references to the Azores, as found in "Fauna Europaea", with no indication to any literature supporting these findings (e.g., Crustacea).

Data published through GBIF: http://ipt.gbif.pt/ipt/resource?r=checklist_arthropoda_azores

Taxonomic coverage

General taxonomic coverage description: All Azorean Terrestrial Arthropods
Taxonomic ranks
Phylum: Arthropoda
Common names: Arthropods

Spatial coverage

General spatial coverage: The Azores archipelago located in the North Atlantic Ocean (37-40 °N, 25-31 °W), about 1600 km of distance to southern Europe and 2200 km to the northern America
Coordinates: 36°46'26.4"N and 39°57'36"N Latitude; 31°23'56.4"W and 24°51'3.6"W Longitude

Temporal coverage: November 9, 2022

Methods

Method step description: When no information concerning island occurrence was available only archipelago occurrence is given. In most cases it corresponds to old records, as well as

to references to the Azores, as found in “Fauna Europaea”, with no indication to any literature supporting these

Study extent description: The checklist comprised all islands of the Azores archipelago, providing information of the arthropod species distribution at island level when available.

Sampling description: The data collection consists on compilation of known records based on published literature and the last checklist of Azorean biota in Borges et al. 2010), unpublished data; and new records at archipelago and island levels from recent publications.

Quality control description: For taxonomic consistency we evaluated specific literature for spiders (http://wsc.nmbe.ch) and Lepidoptera (expert revision). For the remaining groups we compared the nomenclature available in five main taxonomic databases: i) the last Azorean Checklist (Borges et al. 2010b); ii) the project Fauna Europaea (https://fauna-eu.org/); iii) the project BIOTA Canarias (https://www.biodiversidadcanarias.es/), iv) the GBIF database (https://www.gbif.org/), and when data available v) the project Fauna Iberica (http://www.fauna-iberica.mncn.csic.es/english/). In general, we looked for consistency in the nomenclature and when in doubt we followed the GBIF nomenclature. The new records were revised by expert taxonomists.

Datasets

Dataset description

Object name: Darwin Core Archive Updated Checklist of Arthropods from Azores (Portugal)

Character encoding: UTF-8

Format name: Darwin Core Archive format

Format version: 1.0

Distribution: http://ipt.gbif.pt/ipt/archive.do?r=checklist_arthropoda_azores

Publication date of data: 2022-11-17

Language: English

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Metadata language: English

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Hierarchy level: Dataset

References

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