

# CDF Checklist of Galapagos Sea spiders

Nathalia Tirado-Sanchez

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## Abstract

This Checklist of Galapagos Sea spiders includes a total of all 10 taxa reported from the Galapagos Islands.

For each name, detailed information is provided: its Galapagos distribution in islands groups or bioregions generated from the specimen records, comments about the taxonomy (especially synonyms), the origin (native and introduced), taxon status (accepted vs. rejected records) and relevant literature references.

## Introduction

This publication lists all species of Galapagos Sea spiders currently known.

**Pycnogonids** or “sea spiders” are a group of marine arthropods with small bodies and usually eight long legs that are found in benthic, intertidal and abyssal zones around the world.

Sea spiders are often seen slowly walking across the ocean bottom or clinging to their slow-moving prey which are often soft-bodied invertebrates: cnidarians, bryozoans, and sponges, as well as other invertebrate groups: mollusks, echinoderms, tunicates, and various worms. Some pycnogonids live off other materials such as algae and debris.

Most sea spiders are very small although there are some larger species whose legs may span half a meter. These large pycnogonids live in the cold waters of Earth’s polar regions or deep in the ocean.

Pycnogonids move clumsily while walking but are able to change directions quickly without turning their body, allowing them to move without loosening their grip with the ground (Pearse & Buschbaum 1987).

The evolutionary relationships of pycnogonids is currently in debate: it is generally agreed that pycnogonids are most closely related to horseshoe crabs and arachnids, however some biologists prefer to place them in a subphylum by themselves because of several traits that show no clear homolog in other taxa; ovigers, reduced abdomen, multiple genital pores on the legs, development of additional segments during each molt, and the protonymphon, all of which distinguish sea spiders from their possible relatives, the cherlicerate horseshoe crabs and arachnids (Pearse & Buschbaum 1987). Molecular evidence suggest they are a sister group to all other living arthropods (Regier, J.C. et al. 2010).

Not much is known about this group in the Galápagos Islands. The checklist presented here is based on a single study, and in this study eight Galápagos islands were identified as having pycnogonids: Española, Fernandina, Floreana, Isabela, Marchena, Santa Cruz, San Cristobal, and Santiago, as well as one species (*Asorhynchus laterospinum*) which is not littoral (Child & Hedgpeth 1971).

## Methods

This checklist of all known Galapagos Sea spiders is automatically generated using the online database of the Charles Darwin Foundation Galapagos Species Checklist.

All CDF Galapagos Species Checklists represent the synthesis of many different records: literature citations, data from previously unpublished reports (grey literature), specimen records of natural history collections located in Galapagos and all over the world. To the best of their knowledge authors of the individual checklists revised all available data. When new information becomes available, the taxonomy of a group changes or new species are discovered, the CDF online database and thus this publication becomes updated.

For many poorly known species groups the higher taxonomic classification still regularly changes according to how our knowledge about species being related changes. In many well known groups the phylogeny is somewhat stable, but to avoid confusion, in particular for groups where taxonomic changes are frequent, all checklists presented here are sorted alphabetical according to genus name and specific epithet. Please refer to the website for the currently accepted taxonomic hierarchy of each group.

Please be aware that the distribution presented here is automatically generated from specimen records and does not always accurately reflect the known distribution for all species.

For marine species, the distribution generally refers to the five main bioregions of the archipelago (Far Northern, Northern, Western, South Eastern and the Elisabeth Bay Bioregion). For the terrestrial species more than 120 islands, islets and small rocks have been aggregated into Islands Groups, thus, for example, the island group "Santa Cruz" includes smaller islands like Santa Fé, Plaza Norte, Plaza Sur, Baltra, Daphne Mayor, Daphne Minor, and others.

IUCN red-list assessments presented here may deviate from the global IUCN list for the following reasons:

- for well known species groups like vascular plants or vertebrates updates proposed to the IUCN are shown instead of the outdated, but currently accepted status;
- for poorly known species groups (e.g., lichenized fungi) a general assessment is currently not possible and the list presented here is a regional red-list list for Galapagos archipelago.

Numbers of the species included in this list are auto-generated. Adding up the number of species in each category will not always equal the total number indicated. Some species have insufficient data to be categorized while others (e.g., category eradicated) will not be included in the total.

## Results

**Names of taxa included in this checklist:** 10 (9 accepted, 1 unidentified taxon).

**Origin of the taxa included:** 3 endemic.

1. *Ammothella dawsoni* Child & Hedgpeth, 1971

**Taxon status:** Accepted name; taxon occurs in Galapagos.

Types: USNM 125154, USNM 125155, USNM 125156, USNM 125157, USNM 125158, USNM 125159

**Origin:** Native, Endemic.

**Galapagos Distribution:** Santa Cruz.

**References:** Appeltans, W. et al. (2010), Child, C.A. et al. (1971).

2. *Anoplodactylus robustus* (Dohrn, 1881)

**Taxon status:** Accepted name; taxon occurs in Galapagos.

**Origin:** No Data.

**Galapagos Distribution:** Santa Cruz.

**References:** Appeltans, W. et al. (2010), Child, C.A. et al. (1971).

3. *Anoplodactylus torus* Child & Hedgpeth, 1971

**Taxon status:** Accepted name; taxon occurs in Galapagos.

Paratype: USNM 125151, Pacific Ocean (N side of anchorage, Isla San Salvador, Sullivan Bay, Galapagos Islands)

**Origin:** Native, Endemic.

**Galapagos Distribution:** Santiago.

**References:** Appeltans, W. et al. (2010), Child, C.A. et al. (1971).

4. *Ascorhynchus laterospinus* Hilton, W.A., 1942

**Taxon status:** Accepted name; taxon occurs in Galapagos.

Syn.: *Ascorhynchus laterospinum* Hilton, 1942, fide Appeltans et al. (eds.) (2010); Holotype: USNM 81495, Pacific Ocean (N of Isla San Cristobal, Galapagos Is, Ecuador)

**Origin:** No Data.

**Galapagos Distribution:** Unknown.

**References:** Appeltans, W. et al. (2010), Child, C.A. et al. (1971).

5. *Eurycyde longisetosa* Hilton, 1942

**Taxon status:** Accepted name; taxon occurs in Galapagos.

Syn.: *Eurycyde encantada* Child & Hedgpeth, 1971, fide Appeltans et al. (eds) (2010)

**Origin:** No Data.

**Galapagos Distribution:** Santa Cruz.

**References:** Appeltans, W. et al. (2010), Child, C.A. et al. (1971).

6. *Phoxichilidium* sp.

**Taxon status:** Taxon not identified to species, subspecies, form or variety.

**Origin:** No Data.

**Galapagos Distribution:** Unknown.

**References:** Child, C.A. et al. (1971).

7. *Pycnogonum hancocki* Schmitt, 1934

**Taxon status:** Accepted name; taxon occurs in Galapagos.

**Origin:** No Data.

**Galapagos Distribution:** Fernandina, Marchena, Santa Cruz, Santiago.

**References:** Appeltans, W. et al. (2010), Child, C.A. et al. (1971).

8. *Rhynchothorax barnardi* Child & Hedgpeth, 1971

**Taxon status:** Accepted name; taxon occurs in Galapagos.

Holotype: USNM 125173, Pacific Ocean (Isla Santa Cruz, Academy Bay, Galapagos), USNM 125174, Pacific Ocean (Isla San Salvador, Sullivan Bay, Galapagos); Type: USNM 125172, Pacific Ocean (Isla Santa Cruz, Academy Bay, Galapagos)

**Origin:** No Data.

**Galapagos Distribution:** Santa Cruz.

**References:** Appeltans, W. et al. (2010), Child, C.A. et al. (1971).

9. *Tanystylum distinctum* Child & Hedgpeth, 1971

**Taxon status:** Accepted name; taxon occurs in Galapagos.

Type: USNM 125165, Pacific Ocean (Isla Espanola, Galapagos)

**Origin:** Native, Endemic.

**Galapagos Distribution:** Santa Cruz.

**References:** Appeltans, W. et al. (2010), Child, C.A. et al. (1971).

10. *Tanystylum duospinum* Hilton, 1939

**Taxon status:** Accepted name; taxon occurs in Galapagos.

Syn.: *Tanystylum oculospinosum* Hilton, 1939, fide Appeltans et al (eds.) (2010)

**Origin:** No Data.

**Galapagos Distribution:** Unknown.

**References:** Appeltans, W. et al. (2010), Child, C.A. et al. (1971).

### Acknowledgements

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This checklist would not be possible without adjunct and collaborating scientists, and volunteers of the Charles Darwin Foundation. The following scientists and volunteers have contributed to the CDF Checklist of Galapagos Sea spiders: Nathalia Tirado-Sanchez.

### References

1. Appeltans, W., Bouchet, P., Boxshall, G.A., Fauchald, K., Gordon, D.P., Hoeksema, B.W., Poore, G.C.B., van Soest, R.W.M., Stöhr, S., Walter, T.C., Costello, M.J. (eds.) (2010) *World Register of Marine Species (WoRMS)*. Available online at <http://www.marinespecies.org>.
2. Child, C.A., Hedgpeth, J.W. (1971) *Pycnogonida of the Galápagos Islands*. J. Natl. Hist., 5(6): 609-634.

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### Disclaimer

The Charles Darwin Foundation Galapagos Species Checklist is a continuously updated list of all species currently known from the Galapagos Islands and reflects up-to-date knowledge compiled by scientists of the Charles Darwin Foundation (CDF) in collaboration with experts from around the world. CDF shares this data publicly and invites comments, corrections and additions.

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