

Introduction to Ascension Island Invertebrates

Ascension Island is a young and extremely isolated volcanic island and therefore it has one of the least rich faunas in the world. A total of only 315 species of invertebrates have been recorded on the island. Of the 315 species, the majority have been introduced with human colonization of the island. There are 26 endemic invertebrates (only found on Ascension Island) and 49 species that are thought to be indigenous.

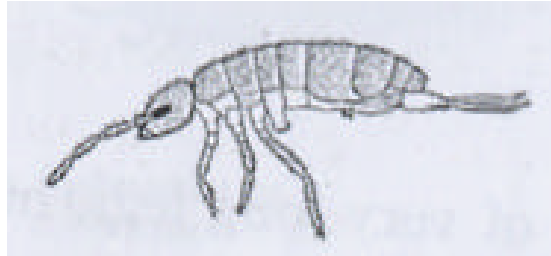
The endemics are divided into 11 groups: 1 earthworm; 5 pseudoscorpions; 4 spiders; 2 mites; 3 woodlice; 1 centipede; 3 collembola (springtails); 3 crickets; 1 psocopteran (booklice); 1 parasite wasp and 2 moths.

Some more information about a variety of Ascension Island's unique invertebrate species is included in this brochure.

Springtails

Springtails (Collembola) are minute flightless insects that feed on variety of organic material including pollen and fungi.

Three new species of springtails have been discovered recently. They are closely related and could have evolved from a single colonising ancestor. These three species currently occupy distinct ecological niches.



Collembola (4mm in length)

The deep blue species is found mainly along the shore; the pale-grey species occurs on the barren lava flows and the last one, which is colourless and eyeless, lives in subterranean spaces

Endemic Blind Spider

This is one of the four endemic spiders found on Ascension Island. It is found mainly in caves and is blind. This species was recently discovered in Packer's Hole Cave and was sufficiently different from those elsewhere to be allocated to a new genus. The taxonomist named it *Catonetria caeca*. Its ancestor most likely came here as an aeronaut, where tiny spiders use silken threads as parachutes and can be kept aloft for hours in the right weather conditions.

Pseudoscorpions

There are five endemic species of pseudoscorpions found on Ascension Island. Two of these are only found on Boatswain Bird Island. The largest

pseudoscorpion in the world (*Garypus titanius*) is found on Boatswain Bird Island and nowhere else in the world. They search at night for prey, insects, on the surface of the guano.



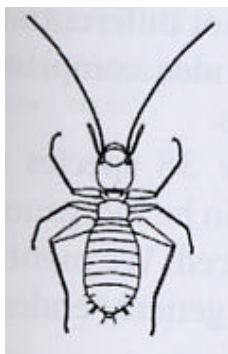
Garypus titanius

The giant pseudoscorpion probably became so large due to the lack of faunal diversity and thus the lack of predators before human colonization.

Ascension Island is unique in that the pseudoscorpion group makes up the highest number of endemic species than any other invertebrate order.

Psocids

Psocids, which are commonly known as booklice, have four species occurring on Ascension Island. There is only one endemic species called *Troglotroctes ashmoleorum*, which has been found in several caves and on lava flows. It represents a new species and genus and is one of the most interesting invertebrates on the island. It has long legs, is pale in colour and has reduced eyes.



Troglotroctes ashmoleorum (2mm in length)

These characteristics are adaptations to their cave dwelling lives. This species is wingless now, but their ancestors most likely reached the island by air.

Flightless crickets

This group is divided into three species. One lives on the shore, another lives on the lava flows and the third resides underground in caves and in the deep crevices of the “lava lake” at the foot of Sisters’ Peak. They are part of the mogoplistine group of crickets which are generally very scaly.

Threats to endemic and indigenous invertebrates.

- Invasive alien plants can change the habitats in which the invertebrates live. An example is that of the Mexican thorn tree. It has a widespread distribution over the island and affects many physical conditions.
- The physical disturbance and destruction of these unique habitats could cause a population decline or even lead to an extinction.
- The chemical poisoning of groundwater and sub-surface atmosphere caused by garbage and sewage disposal, accidental spillage of contaminants and deliberate disposal of contaminants.
- Alteration of cave environments

What can you do to make sure that these unique invertebrates survive?

- remove any invasive plants and trees
- be careful not to disturb the cave environments when entering and also inside the cave
- do not litter

For more information contact:

Ascension Island Conservation Centre
Georgetown
Ascension Island
South Atlantic Ocean
ASCN 1ZZ

Email: conservation@atlantis.co.ac

Tel: (247) 6359

Website: www.ascensionconservation.org.ac

Endemic Invertebrates of Ascension Island



This leaflet was compiled by Caren George.
Funded and edited by Ascension Island
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Information and pictures kindly supplied by Phillip
and Myrtle Ashmole.

