



**Championing UK's most special species:
the wildlife of UK's Overseas Territories (UKOTs) and
Crown Dependencies (CDs)**

FACT-SHEET ON:

**437 Endemic Invertebrate Species
UK Overseas Territory: St Helena**

St Helena is home to a third of the endemic species that can be found on British territories around the world. Over the 14 million years since its creation by volcanic action, St Helena developed a unique biosphere of incredible diversity, protected by thousands of km of ocean. But over 500 years ago it was discovered by people who brought goats, cats, rats and other species that had a huge impact on its fragile environment. Despite this – and the undoubted extinction of many species never even named – what remains today is still clearly remarkable and unique and of international significance.

St Helena currently has at least 502 endemic species of animals and plant, not including those in the marine environment, probably plus others not yet described and named. Even those which have been named can be very elusive: despite the small size of the island, the 3mm long leaf hopper *Chlorita edithae* was described in 1875 but was not seen again until 2013. A Basilewsky's Crane-fly *Dicranomyia basilewskyana*, an endemic species from the High Peaks that had not been seen for 45 years and was thought to be extinct, flew into naturalist Liza Fowler's car at High Peak in January 2016 and landed on her!

St Helena has more endemic species than any other British Overseas Territory. Of St Helena's 502 described endemic species, 437 are invertebrates. We will not attempt to mention all here, but limit ourselves to a few examples.

Spiky Yellow Woodlouse

Pseudolaureola atlantica Critically Endangered

Always a fairly rare animal, hiding amongst dense ferns deep in the darkest and oldest patches of vegetation on the Peaks, but they used to be at least a reasonably familiar sight. In the 1990s they were sometimes seen near Diana's Peak, and at High Peak they could occasionally be so abundant that conservationists had to brush them off their clothes after walking through the site of a well-known colony. But they are now in trouble: known at only one tiny site, at High Peak, and even there extremely rare. No one yet knows why this sensitive and unique species has declined so dramatically, but it is possible that introduced predators and diseases have played a part. In particular, mice and rats are likely to have had an impact, as has the voracious 'woodlouse-eating spider', brought from Europe and now spread over the island.

Unusually for woodlice, the spiky yellow does not feed on dead organic matter, or forage among leaf litter on the ground, but lives by clambering among fern fronds where it probably feeds on spores. It is critically endangered - only 50 or so survive (one could put the planet's entire population in a beer glass).

It has been suggested that the Spiky Yellow Woodlouse should be declared St Helena's National Invertebrate. In 2017 it was discovered that the Spiky Yellow Woodlouse fluoresces in ultraviolet light – only the second woodlouse species known to do so; the feature is more commonly seen in scorpions.



Left: *Basilewsky's Crane-fly*, © Liza Fowler

Below: *Spiky Yellow Woodlouse*, © Ed Thorpe.

Bottom: *Blushing Snail*, © R S Key



Blushing Snail *Succinea sanctaehelenae*

This tiny, terrestrial snail is the only indigenous snail still surviving on the island. Prior to the 1850s, at least 20 species of snail had been recorded on St Helena; however, these were drastically reduced by deforestation, the introduction of non-native species and domesticated animals, pollution and over-collecting. Commonly pale amber to golden brown in colour, different populations of the blushing snail vary extensively in their shell shape, size and colour. In general, its glossy shell is made up of a small number of whorls which increase rapidly in size, so that while the aperture is very large, the tip (spire) of the shell is short and pointed. It is 1-1.5 cm in size.

The blushing snail is widely distributed around the island, but is particularly abundant throughout the central peaks of St Helena, in habitats which include remnants of native cloud forest, as well as pasture, areas of the introduced alien invasive New Zealand Flax and forestry plantations. It is also found on the more arid plains of the island, and along stream gorges.

Spiders

St Helena's wide variety of endemic invertebrates includes many spiders, such as the Golden Sail Spider *Argyrodes mellissii*, Peaks Burrowing Spider (just one of possibly six new endemic spiders for the Peaks discovered in 2008), various Wolf Spiders and an as yet undescribed formally Mole Spider.

The wolf spiders are a key group in the desert ecosystem on Prosperous Bay Plain. With a torch their presence can be observed through the reflection from their eyes - rather like cat's eyes on a road. At night they either sit in their burrows waiting for passing prey, or venture out to hunt their prey. The Endangered Prowling Wolf Spider *Hogna nefasta*, the dominant predator of the Central Basin runs actively in the open but usually stays close to its burrows. The lurking wolf spider sits waiting for prey to pass.

Often found in patches amongst the samphire in the softer fine grit is the Mole Spider, which buries itself deep underground. It is possible that it does not even come out for its prey but feeds on the beetle grubs and other invertebrates in the soil. One cannot normally see the spider, but can know it is there because of the small 'mole hill' like mounds it creates from its deep underground chambers.

The Napoleon Jumping Spider *Paraheliophanus napoleon* was declared Critically Endangered in November 2014. Named in honour of Napoleon, the spider has only ever been found in four distinct sites around the Island associated with endemic Scrubwood *Commidendrum rugosum*, itself of Vulnerable status.

Some Ashmole (Re-)Discoveries

On the path from Mundens to Ruperts one can find the Ruperts Lava Tube - a tunnel which forms in lava flows when the lava on the surface cools and forms a crust, under which hotter molten lava flows out to leave a tube. It is home to an endemic booklouse which occurs nowhere else in the world; and the only place it has been found on St Helena is here. The Booklouse *Sphaeropsocopsis myrtleae*, which is named after Myrtle Ashmole, lives in complete darkness and is the first known species of psocid without eyes.

The book *St Helena and Ascension: a Natural History* by Philip and Myrtle Ashmole was written after their 2000 visit and remains the definitive guide to the wildlife on St Helena. The Ashmoles have the distinction of rediscovering, amongst other things, the Ammonite Snail *Helenoconcha relict*a (another Critically Endangered endemic) in 1994 in a small remote corner of a high ridge.

Extinct Endemics

Perhaps the island's most famous invertebrate was the Giant Earwig *Labidura herculeana*, which was 78mm long and lived under rocks on Prosperous Bay Plain. It seems to have been the first endemic insect noted by scientists and was first described in 1798. It was last seen in 1968 and attempts to find it, including by the Zoological Society of London, have failed and it was declared Extinct in August 2014. It is suggested that the Earwig's extinction resulted from nearly all the surface stones that could provide the insect with shelter being taken away for use in construction.

The Giant Ground Beetle *Aplothorax burchelli* was last collected in the Plain areas in 1967. No individuals have subsequently been seen despite searches in 1988 and 1993. Similarly the St Helena Dragonfly *Sympetrum dilatatum*, which has not been



Above left: Golden Sail Spider, © Roger Key

Above right: Endemic Ammonite Snail. © sainthelena.island.info

Below: A Wolf Spider carries its young on its back while hunting on Prosperous Bay Plain, where the airport has now been built.

© Dr Mike Pienkowski, UKOTCF

Bottom: Extinct St Helena Giant Earwig, © sthelenatourism.com



seen with certainty since 1963 and is considered to be Extinct.

In all, there are 48 species that have not been sighted for at least fifty years. The primary destroyers of St Helena's endemics are all human-introduced:

Goats: introduced by the Portuguese when the island was first located to provide a food source for passing ships. They had no natural predators, so expanded to vast flocks. Goats eat almost everything. Many formerly tree-filled areas (including James Valley) were rendered barren by these feral goats.

Rats: also probably introduced by the Portuguese when the island was first located, although in this case unintentionally. Rats too had no natural predators, so also multiplied to great numbers and predated the endemic animals.

Cats: it is not clear who brought cats here. It was probably the English settlers, quite possibly with the aim of controlling the rats. Many households today keep domesticated cats, but the current problem is caused by feral cats. Attempts to exterminate these have not been successful, possibly because there is a constant new supply from unwanted kittens and people abandoning pets when leaving.

The biggest threat is humankind. Land is needed for housing, recreation, agriculture, to build airports and roads, etc. There is never as much land available as is needed by people. Possibly the largest intentional destructions of endemics were when the Great Wood was destroyed for firewood in the 17th and 18th Centuries and when endemic habitats were torn up in the early 20th Century to create flax plantations. There is a need for more care in the future, to save the wildlife - which is also of great future economic potential.