



# The fall and rise of the Ladybird Spider in Britain

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## Introduction – the spider and its world

One of our rarest spider species, the Ladybird Spider (*Eresus sandaliatus*) is also one of our most colourful... sometimes. In Britain, Ladybird Spiders live on dry heaths in Dorset. Most of the time, both male and female spiders are satiny grey or black



and furry, living in burrows which they dig to a depth of about a finger's length during their roughly four-year lifespan. Breeding at the end of their life, each female produces one batch of eggs and guards her young until she dies. She spends her entire life in her web and burrow.



Mature female.



## Spider mummies

In summer, the mature female spider produces 50 or so eggs, wrapped in silk. She seals herself into her tent-like web, which covers the top of her burrow and protects her from birds whilst acting as a capture web. By sealing the edges, she transforms the tent into a chamber that will form a nursery for her young. On hatching, the cream-coloured spiderlings scamper onto her back and rest in a cluster. Occasionally, they leave their group and trundle to the front of their mother to feed on a fluid (I am going to call it spider-milk) which sort of dribbles from her mouth. This is their baby-food, their start in life. The mother's dribbly spider-milk, together with her energy, runs out and she dies with her offspring around her. What a way to grow up is that? Locked in a tomb with brothers, sisters and a dribbling mum whose dribble you drank until she died. The spiderlings spin silk over her drying corpse. She really is a mummy.



Mature female, with her web.



Mature female, on my hand.

## Growing up

The spiderlings often renovate their mother's nursery tent into a capture web again. They feed together and, as a group, can attack large prey. Each spiderling gradually builds an individual silk tube and so, eventually, they just share the dining area. They extend their tunnels through the moss and lichen around the web and then dig a burrow and build a tent. All around are voracious predators: ants, predatory beetles and lizards. The communal webs and spiderlings are vulnerable to being trodden on or scuffed away by plodding humans and other heavy mammals. Sticky tangling silk is a great defence against small predators and a great trap too (but poor defence against clumsy feet). The silk tunnels explain why we find little villages of tents close together. Eventually, the young spiders cut themselves off from the communal area and rely entirely on their own webs.



A web, with the remains of prey.



## **Life beyond the nursery**

The young spiders continue digging downwards and extending their tents. A large web is about 10cm across. The insects that eat spiderlings in turn become prey with the skilful use of this web. Trapped ants, beetles or bees slip into unconsciousness, following a nip, and are sucked dry of their valuable juices. Left-over bodies and body-parts become web decorations.

## **It is different for boys**

The tents and burrows of males are the same but, following the last moult, the male emerges as dramatically as the ugly duckling who became a swan. His once plain black legs are now white banded pantaloons and his once plain black abdomen is now a gorgeous deep red, adorned with big black polka dots. His legs look as if they are clad in rugby socks, made for running. He is clearly dressed to go out. He dares to leave his burrow and web and trundles about looking for a mate; it is only then that Ladybird Spiders appear in public!





## **The fall**

British Ladybird Spiders were first recorded in the early 1800s with just a handful of sightings, all in Dorset, until 1906 and then...nothing.

Heathland was being transformed from vast wilderness into fragments separated by urban sprawl and farmland. The fragments, unchanged for centuries, were either over-grazed or under-grazed, over-managed or under-managed but rarely treated like in the old days. Wildlife suffered. Then, the First World War led to plantations of trees on those fragments, mainly to ensure that the country would not run out of pit props for coal mines.

It looked as if Ladybird Spiders were lost from British heaths.

## **Discovery**

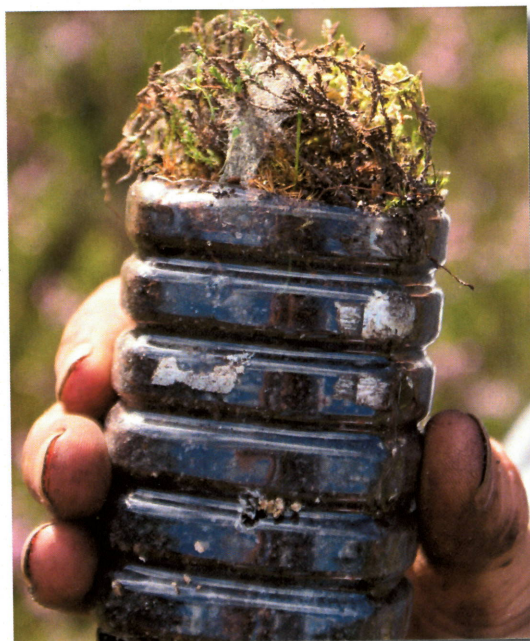
There were no confirmed sightings after 1906 until 1980 when Dr Peter Merrett (a Top Arachnologist!) found a small population on a patch of land about the size of a tennis-court.



He began trying to conserve them, but spider numbers were plummeting. It took 10 years for numbers to pick up, having dropped to less than 10 webs. Peter collected wandering males, placing them near webs of females. He essentially ran a spider dating service!

### **The rise – return of the Ladybird Spider**

In the early 1990s, help arrived in the form of English Nature's Species Recovery Programme. My job in this was to try to create new populations in case a fire or another calamity might destroy the original site.



I found that the best method was to place spiders in artificial burrows in miniature mobile gardens, using plastic water bottles cut into three sections, filled with soil and topped with moss and lichens. When the spiders had built good webs, their gardens were buried in the ground at the new place we had chosen and the top section of the bottle (having

completed its job of keeping the spider in) removed. The spiders did the rest and – after a long, agonising wait – it worked.

Since 2001, with the many members of the *Eresus* conservation partnership, we have made 22 translocation attempts on 11 separate heaths, resulting in 16 new



populations that have produced juvenile spiders. At the time of writing, at least 10 populations have expanded in range and six of the introduced populations have produced enough spiders for further translocations. Whilst it is very satisfying to see introduced populations thriving, it tends to be the ones who do not do so well that teach us the most important lessons.



*Ian*