

# Ladybird Spider

## *Eresus sandaliatus*



The Ladybird Spider is one of the UK's rarest, and most spectacular spiders. The Ladybird Spider was first recorded in Britain in 1816 (Leach 1816), however there were only seven individuals recorded between 1816 and 1906 in South Dorset. After 1906 it was not seen for decades, and thought to be extinct until it was rediscovered in Dorset in 1979.

The Ladybird Spider is a member of the Eresidae family known as 'velvet' spiders. The mature male, on his final moult, transforms into the charismatic form with a striking red abdomen with pairs of black spots and black legs with hairs on the joints. This transformation is likely to be predator protection during his day time search for a female. Prior to this, the male's appearance is similar to the female and juveniles that are black with white stripes on their legs. The females can grow up to 16mm, while the male are generally 10mm or less.

Ladybird Spiders spend most of their lives in burrows in the ground, which are vertical, silk-lined and crowned with a canopy of silk.

### Lifecycle

Male Ladybird Spiders reach maturity after approximately 3 years. Following their final moult as mature males, they emerge from their underground burrows around late April to early May on warm, sunny, calm days. The male spiders then go in search of a mate. The males use chemical receptors on their front legs to detect pheromones that are released by mature females, secreted onto strand of silk on the canopy of their burrow. The female Ladybird Spider reaches maturity after 4- 5 years, but may live much longer if a male spider has not found her yet.

After mating, the female Ladybird Spider lays up to 80 eggs. She cares for the eggs by wrapping them in silk, her egg-cocoon measures up to 9mm long. She seals herself and the eggs into a nursery chamber in her burrow. The female spider attaches the egg-cocoon to the underneath of the web canopy moving it down into the burrow if disturbed.

After approximately one month, the spiderlings hatch, they spend most of their early life on or near their mother in the burrow. The mother spider fills the inside of the burrow with silk threads that the young spiderlings use to move around. The female Ladybird Spider then makes the ultimate sacrifice to give her spiderlings the best chance in life: she liquefies her internal organs and regurgitates it to feed her spiderlings the nutritious fluid from her mouth.

The mother dies after approximately two weeks following the emergence of the spiderlings.

The spiderlings build many silk tubes within the nursery chamber. Spiderlings emerge the following spring and begin building their own burrows a short distance or near to the maternal burrow.

## Habitat

The Ladybird Spider depends on lowland heathland. They favour south-facing, sheltered slopes with well drained sandy soil. In amongst the stones and heather, they build vertical silk-lined burrows crowned with a canopy of silk.

## Distribution

Distribution: In the whole of the UK, Ladybird Spiders are only found in Dorset. The species also occurs in France, Belgium, The Netherlands, Denmark, Sweden, Germany, Czech Republic, Austria, Greece and Turkey.

## GB status and rarity

Vulnerable, Nationally Rare

## Protection under the law

This spider is included as a species “of principal importance for the purpose of conserving biodiversity” under Section 41 (England) of the Natural Environment and Rural Communities Act 2006.

The Ladybird Spider is protected under the Wildlife and Countryside Act 1981, Schedule 5 Section 9.1 (intentional killing or injuring, taking/removing), 9.2 (possession or controlling -alive or dead), 9.4a (intentional damage or destruction) 9.4b (intentional disturbance) & 9.5a (being sold, offering for sale or being transported or held for sale -alive or dead or any part) 9.5b (being published or advertised as being for sale)

## Survey method

Due to the spider's conservation status and legal protection only a licensed individual may survey for this spider. It is against the law to disturb the spiders in any way, for example by taking photographs.

## Reasons for decline

Dramatic loss and damage to heathland habitat due to agriculture, forestry, development and other land-use changes, coupled with the spiders' very specific requirements, all increase the vulnerability of the Ladybird spider to extinction.



Image by I Hughes

Female Ladybird Spider with newly emerged spiderlings