FACTSHEET
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Money spiders

(Family: Linyphiidae)

British Arachnological Society

Advancing Arachnology

Alan Brown

Male *Erigone* species

These tiny, usually black spiders, which often land on us on warm sunny days, represent over 40% of the 680 spider species recorded in Britain.

Mark Horton

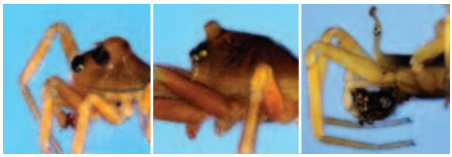
Linyphia triangularis

How to recognise Money spiders

In Britain, we have about 280 species of Money spider species, all of which are in one family, the Linyphiidae. Their webs are a characteristic horizontal sheet of silk resembling a hammock. For larger species, these structures are supported and stabilised by 'guy ropes' above and below. Unusually among British spiders, the occupant patrols upside-down beneath the web rather than on top.

Feeding and life history

Money spiders specialise in the capture of flying prey, largely small insects. These accidentally land on the hammock and are seized from below, through the web, by the occupying spider. In larger species, the structural 'guy ropes' above the web also serve to intercept flying insects. Hitting these silk 'ropes' they tumble onto the silk sheet below. Unlike many spiders, some Money spider species mature in autumn and spend the winter as adults among grass roots or higher up in the vegetation, where their activity is revealed by frost-covered webs.



Richard Gallon

Some male Money spiders have highly modified heads

Bizarre modifications - knobs, pits, humps and turrets - of the heads of some male Money spider species are associated with secretory glands that produce a nuptial gift for females. The female's mouthparts contact the glands during courtship. The fluid secretions she ingests increase her brood size.

Ballooning

Although spiders don't have wings, this doesn't stop them flying across the world at high altitudes. They do this by climbing to a high vantage point and, standing on tiptoe, release several strands of silk, which are caught by the breeze. Once the lift created by the silk is sufficient, the spider lets go and is wafted up into the air. Recent research has shown that the earth's electrical field can also assist take off even in the absence of moving air. Most flights are short-lived but

FACT FILE

Money spiders
(Linyphiidae)
Body length: 3-8 mm, depending on species, and typically with little difference in size between males and females.

Appearance:
• Cephalothorax (front section of the body) – The head area of some species is sculptured in curious ways with various humps, cavities and towers, usually supporting at least some of the eight eyes. In the majority though, the cephalothorax is 'normal' and uniformly black or dark brown. In some, it is lighter with a dark edging.
• Abdomen (back section) – Usually rather egg-shaped when viewed from above and dark brown or black in many species. The larger species can be more colourful with a leaf-shaped design.
• Legs – Medium length, brown, black or sometimes red, and in the vast majority of species without other markings, such as bands.

Habitat: Money spiders occupy a range of habitats from cracks in soil and tiny depressions in bare ground through low-growing vegetation (including many crops) to higher structures such as the branches of shrubs and trees.

Joanne Joyce

Spectacular displays of gossamer highlight the vast numbers of ballooning spiders

occasionally spiders are lifted up into the jet stream and can survive flights of thousands of kilometres. Indeed, spiders are often among the first organisms to colonise remote volcanic islands, such as Hawaii. Silk is also used for short-distance movement. Again, strands of silk are released and, blowing in the wind, snag nearby structures. The spider pulls the silk taut and walks along it to the new location – a process called rapelling. These forms of silk-assisted movement are particularly associated with Money spiders although the young of many other spider families use the same techniques.

The name 'gossamer' is possibly derived from Goose Summer, the time in autumn when geese were sold to be fattened up for Christmas, and when this phenomenon is most noticeable.

Under certain atmospheric conditions, usually associated with autumn, mass ballooning events can festoon vegetation with sheets of spider silk, stunningly displayed by early morning dew or frost – a phenomenon known as gossamer. These events are triggered by food shortages caused by very high spider numbers or sudden environmental changes. In the 1970s, a remarkable mass emigration of Money spiders living among filter bed stones in a Birmingham sewage treatment works was triggered by a breakdown in the sewage inflow. This starved the spiders of their rich food supply. The filter beds usually supported incredible numbers of spiders - nearly 30,000 of just one of the common species there were found in a cubic metre. Their sudden aerial departure covered the site with a thick blanket of gossamer. Despite the incredible numbers of spiders often involved, just a couple of species, *Erigone atra* and *Erigone dentipalpis* are responsible for most gossamer events.

Helping farmers

Some Money spider species also occur at relatively high densities (up to 120 per square metre) in agricultural crops. Their webs can cover half the surface of a field and so it's not surprising they are effective in reducing pest species. They can slow down (but not stop) the build up of crop pests in arable fields to the extent that fewer applications of insecticides are needed. Dispersal by ballooning means species can recolonise newly planted fields each year.

Geoff Oxford

Multiple Money spider webs on holly

Why *Money* spiders?

One widespread folk myth was that when a Money spider lands on you it has arrived to weave a new set of clothes. When clothes were very expensive, this was indeed equivalent to a gift of money. Other traditional beliefs held that throwing a Money spider over your left shoulder, or dangling one by its silk thread three times round your head, would bring good fortune.

Geoff Oxford

A male *Lepthyphantes leprosus* - one of the patterned Money spiders

Where are they?

Money spiders are found in almost every terrestrial habitat. Some are highly restricted in habitat and geographical range; for example, the Horrid Ground-weaver Spider *Nothophantes horridus* has only been found in a tiny area of Plymouth, where it lives in cracks in the ground. It has not been discovered anywhere else in the world. On the other hand, *Tenuiphantes zimmermanni* (no common name!) is abundant all over the UK. Although some species are restricted to southern England, Money spiders generally make up a larger proportion of total spider species in northern England and Scotland. This is part of a general pattern, related to distance from the equator, found in both northern and southern hemispheres.

For more information

Bee, L., Oxford, G. & Smith, H. (2020) *Britain's Spiders*. 2nd edn. Princeton **WILD***Guides* (11 of the larger species only).

The British Arachnological Society

The BAS is Britain's only charity devoted exclusively to spiders and their relatives. We use science and education to advance the wider understanding and appreciation of arachnids, and to promote their conservation.

Find us at: **www.britishspiders.org.uk,** on **Twitter @BritishSpiders** and on **YouTube** at **youtube.com/c/BritishArachnologicalSociety**

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