

THE PURSE-WEB SPIDER *Atypus affinis* Eichwald ON "MAINLAND" LUNDY

By

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The purse-web spider, *Atypus affinis* has been known from Rat Island since 1928 (Bristowe 1929 & 1946, Alexander 1989) where a colony was found "among the tough grass on the north eastern slopes". Its presence there was subsequently reconfirmed on July 11th 1981 (Anon 1982; Alexander 1992). Both of these records have been from Rat Island and it was somewhat surprising that it had so far never been found on mainland Lundy.

On 1st August 1996 I found what I thought might be a burrow of *Atypus affinis* in the small gully leading down to the cliff top from Devil's Punchbowl Valley NGR SS131456. Careful examination of the burrow, which was lined with an 18cm long silk tube, of which a further 5cm protruded from the burrow entrance and was firmly adpressed to the soil surface downslope of the burrow entrance, confirmed the presence of a female purse-web spider complete with egg-sac. Examination of the surrounding area revealed the presence of at least six more burrows within 2m of the original discovery.

The area where the spider was found was an almost due south-facing bank, a few degrees from vertical, with very sparse vegetation comprised of sheeps fescue *Festuca ovina*, birds foot trefoil *Lotus corniculatus*, English stonecrop *Sedum anglicum*, buckhorn plantain *Plantago coronopus*, and sheeps sorrel *Rumex acetosella* interspersed with much bare soil. The vegetation is similar to that of much of the very exposed and fairly inaccessible cliff slopes of the south and west sides of the island and it is to be anticipated that other colonies will no doubt exist there.

The purse-web spider is a relatively primitive spider, the only representative in Britain of the suborder Mygalomorpha, which includes the large tropical "bird eating" spiders, often misnamed "tarantulas". These it resembles in general appearance, being very heavily built, with awesome, forward-pointing fangs which are used both for capturing prey and for digging its burrow. The burrow is completely lined with pure white silk but the exterior is covered with soil particles and is very well camouflaged. The few centimetres of the silk tube that protrude from the burrow are its trap, and insects, including very large ones such as large ground beetles and bumble bees, coming into contact with it are seized from within through the silk by the huge jaws through which the spiders paralysing toxin is injected. The spider is protected from harm by its prey by remaining within the silk tube. When the prey is fully paralysed, it is pulled through the silk and withdrawn into the burrow. There were no prey items within the excavated burrow on Lundy.

Purse-web spiders have an unusually long life-cycle of at least four years and, apart from the time that the spiderlings disperse and the male seeks to mate with a female in her burrow, the entire life is spent in the burrow. The eggs hatch in autumn and the spiderlings stay in the burrow with their mother before dispersing in early spring (Roberts 1995).

After photographing the female spider, an artificial burrow was created by gently inserting a pencil into the soil and the silk tube burrow lining placed in this and its entrance opened up. The spider was released into its tube, whereupon it retreated rapidly down it and it can only be hoped that it made repairs to its tube and was able to raise its young.

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