

**Biodiversity Duty:
Arachnida (spiders and harvestmen) Survey of
National Slate Museum.**



Dysdera erythrina (body length approx. 6mm) is extremely localised in its distribution in Wales.

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Introduction

From 1 October 2006, all public authorities in England and Wales have a duty to have regard to the conservation of biodiversity in exercising their functions (Section 40 of the Natural Environment and Rural Communities Act 2006). As part of the Museum's response to this legislation, biodiversity audits are being carried out at all of its sites. In this report, a list of species of arachnid (spiders and harvestmen) is presented from a survey of the grounds of the National Slate Museum, Llanberis site during September 2009. However it must be remembered that most species of spider are seasonal and that they also have a wide range of lifestyles. Thus this brief survey can only provide an indication of the species present on the site.

The National Slate Museum, Llanberis is composed of two parts, the museum buildings and the Vivian Incline. The museum buildings are set in Padarn Country Park and consist of a rectangular building with a central courtyard, and an enclosed area to the east with a café, children's play area, quarry man's cottages and the water wheel tower. The Vivian Incline is set close by in the Coed Dinorwig Site of Special Scientific Interest (SSSI), a semi-natural oak woodland. The incline is leased from Gwynedd County Council and under the Museum's management.

Methods

The Slate Museum site survey was carried out over on the 8th and 9th July 2009. Samples were collected by visual searching around the Museum buildings and through using vacuum sampling (Stewart and Wright, 1995) on the incline. Samples were visually sorted in the field where all arachnids were removed and preserved for later identification. Species were identified using the keys of Roberts (1985 and 1987) for the spiders and Hillyard (2005) for the harvestmen.

Results

This brief survey identified 23 species of arachnid on the site. Table 1 lists the species found with brief notes as to their status and their typical habitats. Most of the species found were common and typical to the main habitats found at the Slate Museum although a few species of some note were found;

- *Araniella opisthographa*: Usually found on trees, particularly oaks. Whilst common in southern England, this species is much less common in Wales, particularly in the north.
- *Dysdera erythrina*: This species is extremely localised in the north of the UK with very few previous records in North Wales. Recorded from a range of habitats with a preference for maritime habitats.
- *Pardosa saltans*: Localised but widespread in its distribution, this spider is largely restricted to old and ancient woodland sites where it may be found running over the ground in open clearings, such as the incline area where this specimen was recorded in the survey.

Table 1: List of species found. *M: Main Museum Building, I: Vivian Incline

Order / Family	Species	Area	Notes
Araneae / Spiders			
Agelenidae	Tegenaria gigantea	M / I	Common. Human habitation but also rock, stone and tree crevices
	Tetrix denticulata	M / I	Widespread but patchy distribution. Stony habitats.
Amaurobiidae	Amaurobius similis	I	Common. Cracks in brickwork
Araneidae	Araniella opisthographa	I	Local in Wales. Trees and bushes
Dysderidae	Dysdera erythrina	I	Very local. Variety of habitats
Linyphididae	Bathypantes gracilis	M	Common in grassland and undergrowth
	Erigone atra	M	Common. Ground level on low vegetation
	Erigone dentipalpis	I	Common. Ground level on low vegetation
	Lepthyphantes ericaeus	I	Common. Ground level in heather and grasses
	Lepthyphantes flavipes	I	Common. Variety of habitats
	Lepthyphantes mengei	M	Common. Variety of habitats
	Lepthyphantes tenuis	I	Common. Variety of habitats
	Lepthyphantes zimmermanni	I	Common. Variety of habitats
	Maso sundevalli	M	Common. Variety of habitats
	Pocadicnemis pumila	I	Common. Variety of habitats
Lycosidae	Pardosa saltans	I	Localised. Largely restricted to old and ancient woodland sites.
Segestriidae	Segestria senoculata	M	Common. Holes in walls, bark or stones
Tetragnathidae	Pachygnatha degeeri	I	Very common. Variety of habitats
Therididae	Paidiscura pallens	I	Common. Shrubs and low branches
	Theridion melanurum	M	Local to Wales. Juveniles but all over wall of one of the houses.
Zoridae	Zora spinimana	I	Common. Grasslands
Opiliones / Harvestmen			
Liobuninae	Leiobunum rotundrum	M / I	Common. Variety of habitats
Phalangiidae	Mitopus morio	I	Common. Variety of habitats

Discussion

The species found reflected the main habitat areas sampled, and tended to be common and widespread. The museum buildings and the incline have a large 'wall fauna' of spiders which specialise in living around buildings and rocky structures. The incline is also influenced by the surrounding oak woodland and small sections of grassland / scrub and heath. Whilst the areas managed by the museum are limited in their habitat, and thus biodiversity, the habitats around the site are of significant nature conservation value. Next to the museum is the Llyn Padarn SSSI, whilst the Vivian Incline area is part of the Coed Dinorwig SSSI. Thus the museum is an integral part of an important landscape.

References

- Hillyard, P.D. 2005. *Harvestmen. Synopses of the British Fauna (New Series) 4, third edition*. The Linnean Society of London.
- Roberts, M.J. 1985. *The spiders of Great Britain and Ireland 1: Atypidae - Theridiosomatidae*. Harley.
- Roberts, M.J. 1987. *The spiders of Great Britain and Ireland 2: Linyphiidae*. Harley
- Rich, T. 2009. Biodiversity Duty: Phase 1 Habitat Survey of National Slate Museum, Llanberis.
- Stewart, A.J.A., & Wright, A.F. 1995. A new inexpensive suction apparatus for sampling arthropods in grassland. *Ecol. Entomol.* 20:98-102.