

***ARMADILLIDIUM DEPRESSUM* BRANDT, 1833 CLIMBING TREES IN DORSET**

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INTRODUCTION

The specialist fauna of encrusting algae and lichens on exposed surfaces has been little studied in Britain and merits more attention from ecologists. Many mollusc species and a few woodlice and millipedes are especially characteristic browsers to be found on tree trunks and/or exposed rock surfaces (including walls). There remain many questions, however, about the seasonality of their use of the situation, and the relative importance of the wider landscape. There is much to learn, and habitat classification schemes need to acknowledge exposed surfaces as an important feature for invertebrates.

Gregory (2009) describes *Armadillidium depressum* Brandt, 1833 as favouring dry, relatively exposed places and typically occurring on drystone walls in Limestone country as well as loosely mortared walls. Semi-natural sites tend to be restricted to exposures of hard limestone rocks. This was certainly the present authors experience until 2010 when the species was found on the dry exposed trunk bark of large old trees forming an ancient beech avenue in parkland in east Dorset. Interestingly the same trees also had a population of Lapidary Snail *Helicigona lapicida*, a snail with otherwise similar rocky habits but also occurring on old trees in places with long continuity of old trees such as ancient woodlands and old hedgerows.

ST GILES' PARK, WIMBORNE, DORSET

St Giles' Park is an old designed landscape park dating back at least into the 17th century. Although it has suffered badly from modern intensive agriculture and forestry, it still contains an ancient avenue formed of old beech trees. An invertebrate survey was commissioned by Chris Burnett Associates in 2010 as part of a Parkland Plan being developed for a Higher Level Stewardship application.

On 30th May 2010, full grown *A. depressum* were found in small numbers active over the bark surface of some of the old beech trees. They appeared to be browsing on the epiphytes; these appeared to be predominantly algae. One was also knocked from a large bracket fungus *Ganoderma australe* on one of the old beech trees while seeking beetles. Further specimens were found in debris within a rotting pine trunk lying in deep shade beneath the beech trees. None were seen on later visits on 13th July and 20th September. The May visit was during fine dry and sunny weather, while the July day was very wet and showery, and the September visit dry at the time, but closely following a showery period.

DISCUSSION

The discovery of a population in a long-established semi-natural tree situation alongside other characteristic species such as Lapidary Snail raises an interesting point about its native habitats in Britain. While it is best known from synanthropic situations, it is also a typical inhabitant of natural bare rocky ground on Limestone formations in the south-west, such as along the Cotswold escarpment and the Portland/Purbeck coastal limestone cliffs of Dorset.

Unfortunately the habitat data analysis provided in Harding & Sutton (1985) – based on the Non-Marine Isopod recording card used for the British Isopoda Study Group's survey scheme from 1970-82 – provides few supporting facts. It did not ask for distinction between long-established semi-natural habitat and more disturbed situations. However, 6% of records came from natural cliff face, demonstrating a significant association with natural features as opposed to man-made or man-disturbed situations.

There does appear to be a strong association with dry, relatively exposed places, with some availability of deep crevices providing shelter. This association fits tree bark surfaces as much as natural rock exposures - both providing foraging habitat in the form of epiphytic (tree) or saxicolous (rock) algae and lichens. Woodlice are known to feed on a wide variety of material, including lichen, algae, fungi, partly decomposed plant material and even flesh from dead animals (Gregory, 2009) but nothing is known of any specialism in *A. depressum*. Could it be that the key food in native situations in Britain is algae and/or lichen on exposed surfaces? This does seem to be the case with many molluscs, not just Lapidary Snail. Some share the dual situation, such as *Clausilia bidentata*, while others specialise on just rock, e.g. *Clausilia dubia*, or only on trees, e.g. *Ena montana*, *Merdigera obscura* and *Cochlodina laminata*. These all tend to concentrate on the lower tree trunks, where they are closer to the soil and general debris for humid shelter. *Porcellio spinicornis* is another exposed rock associated woodlouse which can also be found on tree bark (S. Gregory, pers. comm.), while *P. scaber* is well known to ascend tree trunks during the summer months (Gregory, 2009).

None of these species appear to remain on tree trunks during the winter months, retiring into soils crevices around the tree base whenever conditions are less suitable for foraging. So are they soil invertebrates which extend their foraging onto tree trunks when conditions are suitable? Or are they arboreal invertebrates which shelter amongst debris when conditions are unsuitable? This distinction may seem academic, but habitat and assemblage classification schemes are often used in assessment of conservation values and may be used to inform land management for conservation purposes. It is therefore useful to gain a better understanding of invertebrate behaviour in relation to the landscapes in which they live.

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REFERENCES

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