

**Biodiversity Duty:
Mollusca Survey of National Museum Wales,
Cathays Park**



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**National Museum Wales
14 October 2008**

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 a series of its sites. In this report, a list of Mollusca species is presented from a survey of the grounds of the National Museum Cardiff in early autumn 2008.

Methods

A survey was carried out on 14th October coupled with a few records taken from previous survey work. The area surveyed is shown in Figure 1.

We carried out the survey by walking around the grounds; the roof of the building was not included, as this has been recently replaced. As a Phase 1 habitat survey had been carried out on the site earlier in the year we were able to concentrate our searches on each of the habitats identified in this survey. These habitats were:

- **Mixed Parkland/scattered trees** – around the bank on the east side of the car park.
- **Unimproved neutral grassland** – the old lawns on the Southwest side of the museum.
- **Amenity grassland** – the new mown lawns on the Northeast and at the front of the building.
- **Ephemeral/short perennial vegetation of varied composition** - on bare open cobbles by the Reardon Smith lecture theatre and on the French Drain above the lower car park.
- **Introduced shrub** - species of evergreen shrub around the car park, shrubberies with evergreen shrubs and Ginkgo trees.
- **Planted Beech hedge** - along the northwest edge of the car park with a few trees in places.

Searches were carried out by manually in each of these target habitats. This involved searching on our hands and knees through the foliage and leaf litter layer (figures 2 and 3); we also used a sweep net in areas where there was low hanging vegetation (figures 3 and 4). Finally, we collected samples of leaf litter and surface soil from four different areas, which we then dried out in the oven at a low temperature, sieved (5mm and 0.5 mm sieves) and then searched through under a bright light to find smaller litter dwelling species.

We were able to identify a large proportion of the taxa in the field, but some specimens difficult to identify were collected for later determination. Nomenclature follows Roy Anderson, 2005 - An annotated list of the non-marine mollusca of Britain and Ireland. *Journal of Conchology*, **38** (6): 607-637. Notes on the distribution on the taxa in the UK are taken from Michael Kerney, 1999 - *Atlas of the Land and Freshwater Molluscs of Britain and Ireland*. 264 pp. Harley Books.

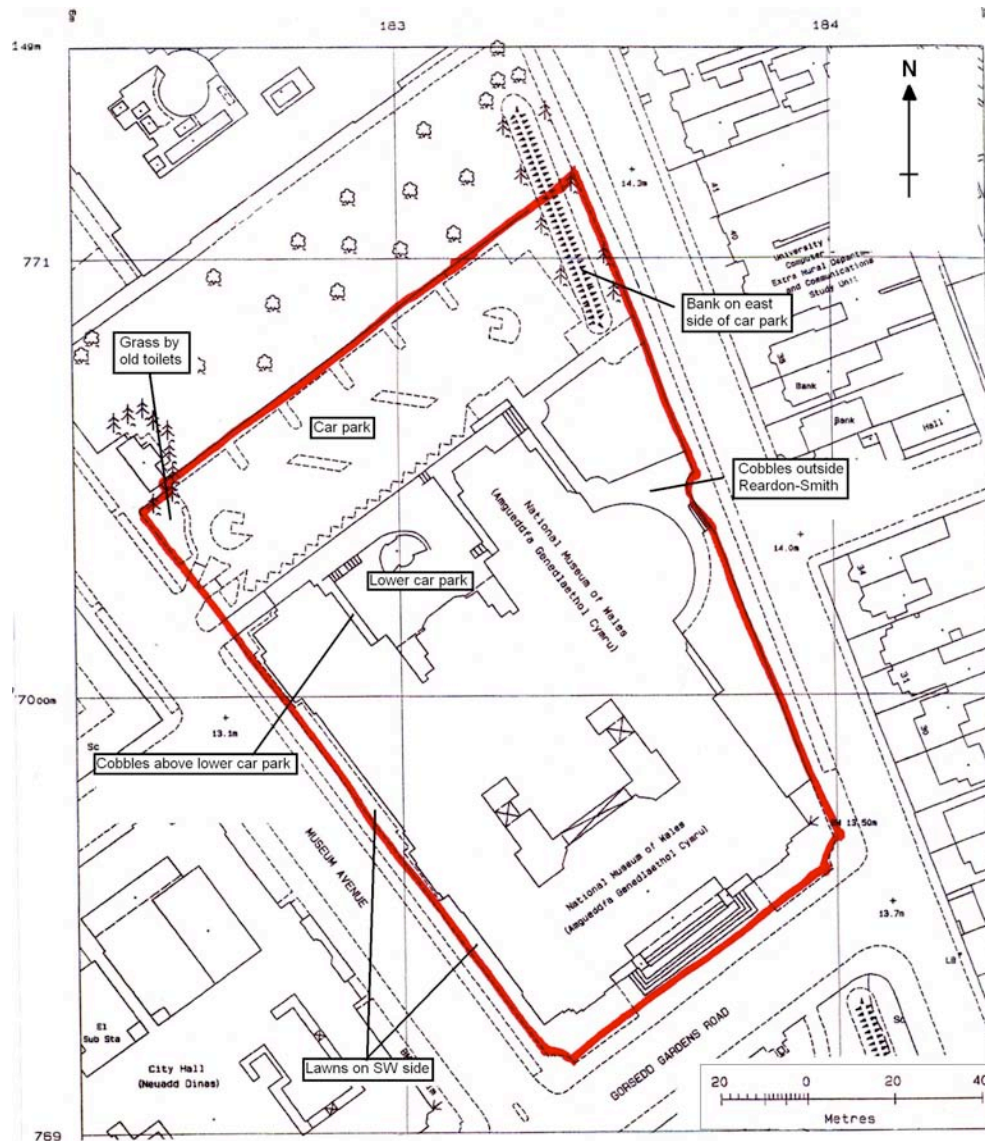


Figure 1. Boundary of area surveyed, National Museum Wales, Cardiff.



Figure 2. Searching manually for molluscs in hedgerow along the northwest edge of the car park.



Figure 3. Searching manually for molluscs in the mixed parkland around the bank on the east side of the car park.



Figure 4. Using the sweep net in the mixed parkland around the bank on the east side of the car park.



Figure 5. Searching through the findings of the sweep net.

Results

The species recorded are listed below.

TABLE 1. MOLLUSCA RECORDED AT CATHAYS PARK.

Species	Common name (if applicable)	UK distribution of taxa
<i>Aegopinella nitidula</i>	Smooth glass snail	Native – common and widespread.
<i>Arion (Kobeltia) distinctus</i>	Common garden slug	Probably native – under recorded yet likely to occur throughout most of the British Isles.
<i>Boettgerilla pallens</i>	Worm slug	Introduced – first noted in England and Wales in 1972. Continuing to spread rapidly.
<i>Carychium tridentatum</i>	Slender herald snail	Native – common and widespread.
<i>Cecilioides (Cecilioides) acicula</i>	Blind/Agate snail	Probably introduced – common to most areas of southern and eastern England, also south Wales. Extending its range north and west.
<i>Cochlicopa cf. lubrica</i>	Slippery moss snail	Native – common and widespread.
<i>Cochlicopa cf. lubricella</i>	Snail – no common name	Native – common and widespread.
<i>Cornu aspersum</i>	Common/Garden snail	Introduced – early in Romano-British period. Broadly distributed although less so in northern parts of Britain.
<i>Deroceras (Deroceras) panormitanum</i>	Caruana's/Sicilian slug	Probably introduced – first record for southeast Wales in 1931. Spread has been rapid, now common in many areas of the UK.
<i>Deroceras (Deroceras) reticulatum</i>	Field/Milky slug	Probably native – common and widespread.
<i>Hygromia cinctella</i>	Girdled snail	Introduced – first recorded in Paignton, Devon in 1950.
<i>Lauria cylindracea</i>	Common chrysalis snail	Native – common and widespread.
<i>Lehmannia marginata</i>	Tree slug	Probably native – common and widespread, some decline in central and eastern England.
<i>Limacus maculatus</i>	Slug – no common name	Introduced – first recorded in Hampshire in 1884. Native to Crimea and Caucasus. Common in Ireland, uncommon in Britain, though underrecorded.
<i>Nesovitrea hammonis</i>	Rayed glass snail	Native – common and widespread.
<i>Oxychilus alliarius</i>	Garlic snail	Native – common and widespread, no evidence of regional change.
<i>Oxychilus cellarius</i>	Cellar snail	Native – common and widespread.
<i>Oxychilus draparnaudi</i>	Draparnaud's glass snail	Introduced – in Roman/post-Roman period. Common in southern and central Britain, not in Scotland or Northern Ireland.
<i>Oxychilus navarricus helveticus</i>	Glossy/Swiss glass snail	Probably introduced – common in southern and central Britain although distribution is patchy in parts.
<i>Paralaoma servilis</i>	Snail – No common name	This is the first record for Wales! An introduced species first recorded in

		England 1985, native to Australasia. See 'discussion' below.
<i>Punctum pygmaeum</i>	Dwarf snail	Native – common and widespread.
<i>Tandonia sowerbyi</i>	Keeled/Sowerby's slug	Probably introduced – common in southern and central Britain although distribution is patchy in parts.
<i>Testacella maugei</i>	Maugé's slug	Probably introduced – first recorded from Bristol in 1812. Uncommon in Britain, see 'discussion' below.
<i>Vallonia costata</i>	Ribbed grass snail	Native – common in S, E and NE parts of England, SE and SW Wales and parts of Ireland.
<i>Vallonia pulchella</i>	Smooth grass snail	Native – distribution similar to <i>V. costata</i> although less common in comparison.
<i>Vitrea contracta</i>	Milky crystal snail	Native – common and widespread.
<i>Vitrea crystallina</i>	Crystal snail	Native – common and widespread.

Discussion

A total of 27 species were recorded, a number typical for an inner city site of this character. The majority of molluscs species found were common and none of them are listed as threatened or protected. Despite this, there are four species worth noting.

To begin with, the record of *Paralaoma servilis* is a first for Wales. It is a very small species of snail (see figure 6) commonly found in disturbed habitats such as roadside banks and gardens. We found the species in the leaf litter samples that we collected from the scattered trees overhanging the beech hedge along the northwest edge of the car park, also in the introduced shrub on the east of the car park. It is an introduced Australasian species common around the Western Mediterranean and Atlantic islands. The first record of it in Britain was in Luton, England in 1985, it is now widespread in South-west England with another population in the Southeast. This record, in addition to one from Bristol shows that perhaps it is extending its range further north.



Figure 6. *Paralaoma servilis* (approx. 2mm x 1.7mm)

The second species of note was *Testacella maugei*. This is an uncommon slug species (see figure 7) that we found under the planted beech hedge along the northwest edge of the car park. This species has been recorded from this hedge since the mid-1970s but this was the first live specimen to be found there since 2003.



Figure 7. Maugé's slug - *Testacella maugei*

The third species of note was the slug *Boetgerilla pallens*, also known as the 'worm slug' due to its worm-like, extensible body which has evolved as an adaptation to living below ground in cracks, root holes and worm burrows (see figure 8). It is an introduced species first recorded in 1972, since then its spread appears to have been rapid although apparently uneven and unpredictable (see Kerney, 1999).



Figure 8. Worm slug - *Boetgerilla pallens*

We found many specimens of *Hygromia cinctella* (see figure 9). This snail is a relatively recent introduction to Britain, first recorded in Paignton, Devon in 1950, where it has established itself and continues to spread rapidly. Populations have now been recorded in 16 other vice counties including parts of southeast Wales, spreading as far north as Yorkshire. The museum's Learning department is currently running a monitoring scheme of this species as part of its SCAN – Education for Sustainable Development program.



Figure 9. Girdled snail - *Hygromia cinctella* (approx. 6-7mm x 10-12mm)