

# Biodiversity Duty: National Museum Cardiff

## Bryophyte Biodiversity

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## Introduction

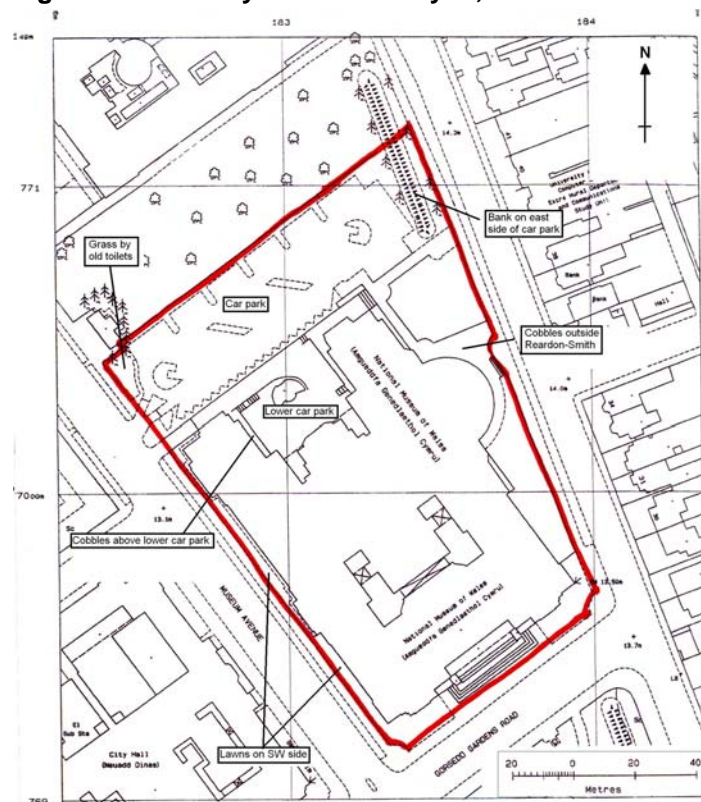
From 1 October 2006, all public authorities in England and Wales have a duty to have regard to the conservation of biodiversity in exercising their functions (Section 40 of the Natural Environment and Rural Communities Act 2006). As part of the Museum's response to this legislation, biodiversity audits are being carried out at a series of its sites. In this report, a bryophyte list is presented from a survey of the grounds of the National Museum Cardiff in 2008/9.

## Methods

Surveys were carried out in 2008/9 by collecting voucher specimens of bryophytes and recording their frequency and habitat. Species that may have been introduced on planted vascular plants were still recorded as the shrubs and trees have been at the NMC site for many years and so the bryophytes are likely to be naturalised.

The area surveyed is shown in Figure 1. No surveys were carried out on the roof of the building as this has been recently replaced. Identifications were done using Smith (2004), Paton (1999) and the draft version of the British Bryological Society Field Guide. Where needed, determinations were confirmed by Alan Orange.

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



## Results

In addition *Nostoc* cyanobacteria colonies are common on bare earth around the car park.

## Species List

1. *Barbula unguiculata* c.fr– On soil around car park. Det AO.
2. *Barbula convoluta* – Common in between paving stones.
3. *Brachythecium rutabulum* – on soil in between cobble paving.
4. *Bryum argenteum* – On soil. A common moss of man-made habitats as it likes disturbed areas.
5. *Bryum bicolor* - Common in-between paving stones, accompanying *Bryum argenteum* in disturbed habitats.
6. *Bryum capillare* – On heavily shaded concrete handrailing descending to bottom car park.
7. *Bryum ruderales* - By entrance to car park. Det AO.
8. *Dicranella varia* – By entrance to car park. Det AO.
9. *Didymodon rigidulus*- Common in between paving stones.
10. *Marchantia polymorpha* ssp. *ruderalis* – On soil in between cobble paving. A liverwort that is a common weed on soil in plant pots.
11. *Orthotrichum affine* – On base of the planted *Ginkgo biloba* trees in the car park.
12. *Orthotrichum diaphanum* - On base of the planted *Ginkgo biloba* trees in the car park.
13. *Pohlia bulbifera* - By entrance to car park. Det AO.
14. *Pseudocrossidium hornschanianum* - By entrance to car park. Det AO.

## Habitats

### Trees

Two species of *Orthotrichum* were found on the planted *Ginkgo biloba* trees in the car park; *O.diaphanum* and *O.affine*.

### Stones

*Bryum capillare*(?) was found on concrete handrailing beside steps on the NW side of the site.

In between paving stones *Barbula convoluta*, *Bryum bicolor* and *Didymodon* \_\_\_\_ are common.

### Soil

Common bryophytes such as *Barbula unguiculata*, *Bryum argenteum* and *Marchantia polymorpha* ssp. *ruderalis* grow on soil around the edges of the car park in beds.

### Grass

The new lawn as would be expected shows a lower diversity of bryophytes than the well established lawns.

## Discussion and Recommendations

All the habitats on the NMC site are man-made and typical of urban areas. They show little interest bryologically. No recommendations for management are suggested.

## References

- Wade A E et al (1989?) The Flora of Glamorgan.  
Paton, J A (1999) The Liverwort Flora of the British Isles. Harley Books.  
Smith, A J E (2004) The Mosses of Britain and Ireland. Second Edition. Cambridge University Press.