

GREENER ABERYSTWYTH GROUP
Municipal Cemetery, Llanbadarn Rd, Aberystwyth
Moth Survey - 2015

Field Operators : Carolyn & Evan Lynn, Cwmere
 : Peter Walters Davies, Aberystwyth

1. Introduction:

The decision taken by the Ceredigion County Council five years ago in 2010 to adopt and implement the Cemetery Management Plan, has led to some noticeable habitat changes. In particular, while the footpath edges continue to be regularly maintained, the remaining grassland areas with associated herbaceous plants have been allowed to develop and set seed, with harvesting being restricted to just one cut per year in late summer. As it is reasonable to suppose that such a basic change in management regime would give rise to a corresponding improvement in the local wildlife, we decided this year (2015) to look at one particular invertebrate group – moths - in order to assess the present status of the group within the Cemetery and to set a benchmark against which to measure any changes that may occur in future.

2. Methods

During a series of visits to the cemetery undertaken during the course of the year no attempt was made to locate moth larvae or leaf mines, thus all records in this survey relate to adult moths flying at night. Three traps were used with differing light intensities – two battery operated 15Watt and 22Watt tubes, and one mains powered MV 164Watt blended bulb. All three traps were used in concert in different parts of the cemetery on 16 occasions, the two battery traps operating as a pair on four occasions and the mains trap only on seven occasions. The MV lamp obviously had to be within reach of a mains power supply (provided by CCC, site store), but the independent battery traps were used to varying degrees in up to six different locations among the headstones.

Traps were set at dusk on 27 occasions between April and October inclusive, and then revisited the following morning at about 9 a.m. to identify, record and release the moths caught. Although left unattended for up to 12 hours in a public open space, we experienced no instances of vandalism and in fact the few visitors we did encounter usually expressed an interest in our activities.

3. Results

3.1 Trap:

Trapping efficiency, based on the diversity of species and number of moths, varied between the lamps as follows :

Lamp	Trap-night	Total Species	Sp/Tnight*	Total Moths	Mth/Tnight**
15W	19	92	4.8	500	26.3
22W	19	54	2.8	207	10.9
160W	23	94	4.1	680	29.6

*= Average number of different moth species per trap-night.

**= Average number of moths (all species) per trap-night

3.2 Records:

Full details of all moths recorded are given in Appendix 1, arranged in accordance with the number of moths caught, largest to smallest. The list includes four aggregate species (agg), that is, moths that can only be identified by dissection due to overlapping diagnostic features; these are listed as genera – *Acronicta*, *Oligia*, *Mesapamea*, *Hoplodrina*. Also included for general information are summary details of the status of each species within UK.

The same moth list appears in Appendix 2 which shows the main larval food plants associated with each species, broadly classified into the main feeding preferences – herbaceous plants(herbs), trees & shrubs, grasses and other.

3.3 Species:

- i. Moths: The three traps together attracted a total of 1387 moths, comprising 142 different species. The three commonest moths – Heart & Dart, Large Yellow Underwing, Dark Arches - together make up 47 % of the total moth count. They are all polyphagous, having no special preference for any particular source within the food range (see below), and probably for this reason are commonly found throughout UK. Large Yellow Underwing is both resident and a partial immigrant, so numbers may on occasions be given a boost by incoming populations from the Continent; Heart & Dart and Dark Arches are both breeding residents. At the other end of the spectrum the Black-banded moth is a very uncommon moth, not only in Ceredigion but in UK generally. It is found in fewer than 30 10Km squares, mostly in south &

west Wales with a few in Devon & Cornwall; it is a rare coastal species feeding on Thrift, Sea Campion, Sea Plantain.

Other species worthy of note include:

Ni Moth,: an irregular migrant from Continental Europe, usually found in small numbers along the south coast of England. Occasionally, following a particularly successful breeding season, relatively larger numbers can be recorded with a few individuals penetrating further north, some reaching coastal areas in Ceredigion.

Light Brown Apple Moth: a remarkably successful adventive which is now resident and widely distributed throughout UK, flying throughout the year.

- ii Food Plants: Moths use a wide range of food plants for rearing larvae, selection commoner moths, the choice may cover herbaceous plants, trees, shrubs, and grasses. Details are given in App 2. The relative importance of these broad categories between the 142 species recorded can be assessed by the number of species associated with each category:-

Herbs – 76 (52%), Trees & shrubs – 64 (23%), Grasses – 24 (17%)

This assessment includes a number of polyphagous species, that is, moths that are able to use any one of these three groups for rearing larvae. When a similar assessment is made to determine the number able to use only one or other of these groups, the relative importance changes slightly: -

Herbs – 47 (32%), Trees & shrubs – 41 (28%), Grasses – 16 (11%)

In addition, there are also a few specialist feeders that rely on alternative food sources, not covered by any of these groups; -

Oegoconia quadripuncta: a very small moth with no English name (12 mm. wing span), which feeds on decaying vegetable matter (leaf litter).

Eudonia mercurella; also a micro-moth, feeding exclusively on mosses associated with trees, rocks, and walls.

Aphomia sociella – the Bee moth: lays eggs in Bumblebee and Wasp nests, larvae feed on old cells & debris, as well as developing pupae within the brood chamber.

Rosy, Dingy, Scarce, Buff and Common Footman : five closely related species all feeding exclusively on lichens, as also does the Marbled Beauty Moth.

Peter Walters Davies