

## THE HEMIPTERA OF LUNDY

By

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### INTRODUCTION

The earliest report I have been able to trace of Hemiptera on Lundy is Donisthorpe's (1913) report on ants and myrmecophiles which includes a number of records of aphids and a scale insect which occur in ants nests. Charles Elton collected a few Hemiptera on Lundy in August 1927 and his findings were included in Carpenter's (1943) paper which covered a wide range of invertebrates recorded by him in September 1942. George has published lists of the aquatic bugs in conjunction with colleagues (1978, 1979, 1980 and 1986) while Parsons has been recording the group since 1983 and has published a number of lists in past Annual Reports of the Society (1983-9). Otherwise there are only records from single visits by P.S. Hyman in July 1985 and myself in May 1986. These latter include many additions to the Island's fauna from which it became apparent that the compilation of a checklist for the Island would be worthwhile.

In comparison to other invertebrate groups, one is immediately struck by the lack of significant rarities so far reported from the island. However, the list is certainly a long way from being complete, and much more work is needed on the group. Some comments on the more interesting species are provided in the following section, and the full systematic list follows.

### MYRMECOPHILES

Honeydew collected from aphids or scale insects is an important source of sugar and growth substances well-used by ants. The degree of association varies considerably between species, and many of the root-feeding aphids have evolved high degrees of dependence on ants — to the extent that they are never found alone. The aphid *Paracletus cimiciformis* is one of these extreme cases and is exclusive to the ant *Tetramorium caespitum*. It is tended by the ants underground, though it seldom feeds on plant roots and produces little honeydew; instead the ants feed it on regurgitated food (Brian 1977).

Donisthorpe's paper (loc.cit.) presents a number of nomenclatural problems. Some of the name changes which have occurred in subsequent years are readily dealt with, but others are a real problem and the true identity of his finds must remain uncertain until voucher specimens can be located and checked. A.J. Pontin (pers.comm.) offers the following comments: his *Geocia carnosus* is probably *G. utricularia* (Passerini); *Ripersia subterranea* is probably *Chnaurococcus subterraneus* (Newstead); *Tycheoides hirsutum* could be *Aploneura leutisci* (Pass.), but this is not usually ant-tended and old records may be *Geocia* spp or even *Baizongia*; *Macrosiphum* sp.nov. appears never to have been described. These problem names are omitted from the systematic list.

### LEAFHOPPERS (AUCHENORHYNCHA)

The leafhopper fauna of Lundy's wetlands is perhaps the most significant element of the bug fauna so far discovered. Parsons recorded the nationally scarce *Aphrodes albiger* from St John's Valley in 1984. This is known from open marsh communities in only a few southern English counties. Parsons has also found other moderately scarce species: *Macropsis impura*, which is associated with dwarf willow (*Salix repens*) in the Ponsbury area, and *Euconomelus lepidus*, associated with low-growing rushes (*Juncus* spp), which he found to be common in the Ponsbury and Quarterwall pond areas. Elton recorded another scarce marsh species, *Stenocranus longipennis*, in 1927, but the precise locality is not recorded.

### PLANT BUGS (HETEROPTERA)

The true bugs have so far been found to be of only limited interest on Lundy, but under-recording is almost certainly the reason. Seacliff grassland and heath in the

south-west are the classic habitat for rare Lygaeidae and other species, and it must be only a matter of time before some of these rarities are discovered. The most interesting species reported to date are *Temnostethus gracilis*, *Loricula elegantula* and *Globiceps dispar*. The first two live amongst encrusting lichen growth and were found by Parsons on a sycamore trunk in Millcombe in 1986. *Globiceps dispar* has a peculiar distribution in Britain being mostly confined to the north and west, but with isolated populations in Surrey and East Anglia, and living in a considerable diversity of habitat types. Hyman found it in the "area above Quarry Beach" which includes ponds as well as the cliff-land.

#### SYSTEMATIC LIST

1. Donisthorpe (1913)
2. Elton (in Carpenter 1943)
3. Carpenter (1943)
4. George (1978)
5. George & Stone (1979)
6. George & Stone (1980)
7. George & Sheridan (1986)
8. Parsons (1983-1989)
9. Hyman (pers.comm.)
10. National Trust Biological Survey, May 1986.

#### HETEROPTERA

##### Family Pentatomidae

- |   |         |
|---|---------|
| <i>Palomena prasina</i> (Linne)         | 8(1984) |
| <i>Piezodorus lituratus</i> (Fabricius) | 8(1983) |
| <i>Troilus luridus</i> (Fabricius)      | 10      |

##### Family Rhopalidae

- |                                   |         |
|-----------------------------------|---------|
| <i>Myrmus miriformis</i> (Fallen) | 8(1989) |
|-----------------------------------|---------|

##### Family Lygaeidae

- |   |               |
|---|---------------|
| <i>Nysius thymi</i> (Wolff, JF)                   | 8(1989)       |
| <i>Kleidocerys resedae</i> (Panzer)               | 10            |
| <i>Peritrechus geniculatus</i> (Hahn)             | 8(1984)       |
| <i>Macrodema micropterum</i> (Curtis)             | 2             |
| <i>Plinthisus brevipennis</i> (Latreille)         | 8(1985)       |
| <i>Dryinus sylvaticus</i> (Fabricius)             | 8(1985)       |
| <i>Scolopostethus decoratus</i> (Hahn)            | 8(1986,87),10 |
| <i>Taphropeltus contractus</i> (Herrich-Schaffer) | 9             |

##### Family Tingidae

- |                                 |           |
|---------------------------------|-----------|
| <i>Tingis cardui</i> (Linnaeus) | 8(1985),9 |
|---------------------------------|-----------|

##### Family Nabidae

- |                              |           |
|------------------------------|-----------|
| <i>Nabis rugosus</i> (Linne) | 8(1989)   |
| <i>Aptus mirmicoides</i>     | 8(1985),9 |
| <i>Himacerus apterus</i>     | 9         |

##### Family Cimicidae

- |   |           |
|---|-----------|
| <i>Temnostethus gracilis</i> (Horvath)  | 8(1986)   |
| <i>Anthocoris confusus</i> Reuter       | 8(1989)   |
| <i>Anthocoris nemoralis</i> (Fabricius) | 9         |
| <i>Anthocoris nemorum</i> (Linne)       | 8(1985),9 |

##### Family Microphysidae

- |  |         |
|--|---------|
| <i>Loricula elegantula</i> (Barensprung) | 8(1986) |
|--|---------|

##### Family Miridae

- |  |           |
|--|-----------|
| <i>Asciodema obsoletum</i> (Fieber)            | 8(1988)   |
| <i>Dicyphus pallicornis</i> (Meyer-Dur)        | 8(1989)   |
| <i>Campyloneura virgula</i> (Herrich-Schaffer) | 8(1989)   |
| <i>Globiceps dispar</i> (Boheman)              | 9         |
| <i>Blepharidopterus angulatus</i> (Fallen)     | 8(1989)   |
| <i>Orthotylus ochrotichus</i> Fieber           | 8(1985)   |
| <i>Orthotylus ericetorum</i> (Fallen)          | 2         |
| <i>Pithanus maerkeli</i> (Herrich-Schaffer)    | 8(1989),9 |

<i>Lygocoris pabulinus</i> (Linne)	8(1985),9
<i>Calocoris norvegicus</i> (Gmelin)	8(1986),9
<i>Capsus ater</i> (Linne)	8(1984),9
<i>Stenodema calcaratum</i> (Fallen)	8(1984)
<i>Stenodema laevigatum</i> (Linne)	8(1984)
<i>Trigonotylus ruficornis</i> (Geoffroy)	8(1989),9
Family Saldidae	
<i>Saldula saltatoria</i> (Linne)	8(1983)
Family Veliidae	
<i>Velia caprai</i> Tamanini	8(1984)
Family Gerridae	
<i>Gerris gibbifer</i> Schummel	6,7,9
Family Notonectidae	
<i>Notonecta glauca</i> Linne	4
<i>Notonecta obliqua</i> Gallen	5,6,7
Family Corixidae	
<i>Callicorixa praeusta</i> (Fieber)	6,9
<i>Corixa punctata</i> (Illinger)	4,5,7,9
<i>Corixa panzeri</i> (Fieber)	6,7
<i>Sigara dorsalis</i> (Leach)	9
<i>Sigara distincta</i> (Fieber)	9
<i>Sigara nigrolineata</i> (Fieber)	2,6
<i>Sigara limitata</i> (Fieber)	4
<b>HOMOPTERA</b>	
Family Cercopidae	
<i>Philaenus spumarius</i> (Linne)	8(1986),9
<i>Neophilaenus lineatus</i> (Linne)	2,8(1988),9
Family Cicadellidae	
<i>Ulopa reticulata</i> (Fabricius)	8(1987),10
<i>Megaphthalmus scanicus</i> (Fallen)	2
<i>Cicadella viridis</i> (Linne)	8(1985)
<i>Evacanthus interruptus</i> (Linne)	8(1989)
<i>Macropsis impura</i> (Boheman)	8(1988)
<i>Aphrodes albifrons</i> (Linne)	2,8(1984)
<i>Aphrodes albiger</i> Germar	8(1984)
<i>Aphrodes bicornis</i> (Schrank)	3,8(1986,88),9
<i>Deltocephalus pulicaris</i> (Fallen)	8(1986)
<i>Arthaldeus pascuellus</i> (Fallen)	8(1989)
<i>Psammotettix confinis</i> (Dahlbom)	8(1983,87,88)
<i>Psammotettix nodosus</i> (Ribaut)	8(1988)
<i>Conosamus obsoletus</i> (Kirschbaum)	8(1985)
<i>Streptanus sordidus</i> (Zetterstedt)	8(1989)
<i>Thamnotettix confinis</i> (Zetterstedt)	8(1983,84)
<i>Macrosteles sexnotatus</i> (Fallen)	8(1984)
<i>Eupteryx stachydearum</i> (Hardy, J)	8(1988)
<i>Eupteryx urticae</i> (Fabricius)	8(1983)
<i>Ribautiana cruciata</i> (Ribaut)	8(1989)
<i>Hauptidia maroccana</i> (Melichar)	8(1985)
<i>Zyginidia scutellaris</i> (Herrich-Schaffer)	8(1989)
Family Cixiidae	
<i>Cixius pilosus</i> (Olivier)	8(1983),9
<i>Cixius nervosus</i> (Linne)	8(1989),9
Family Delphacidae	
<i>Stenocranus longipennis</i> (Curtis)	2
<i>Stenocranus minutus</i> (Fabricius)	8(1989)
<i>Eucomelmus lepidus</i> (Bohman)	8(1989)
<i>Conomelmus anceps</i> (Germar)	8(1989)
<i>Criomorphus albomarginatus</i> Curtis	8(1984,88)

<i>Muellerianella</i> sp.	8(1989)
<i>Javesella pellucida</i> (Fabricius)	8(1989)
Family Phyllidae	
<i>Livia juncorum</i> (Latreille)	8(1989)
<i>Psylla alni</i> (Linne)	8(1988)
<i>Psylla foersteri</i> Flor	8(1989)
<i>Psylla saliceti</i> Forster	8(1988)
<i>Trioxa urticae</i> (Linne)	8(1989)
Family Lachnidae	
<i>Tuberolachnus salignus</i> (Gmelin, JF)	8(1989)
<i>Trama troglodytes</i> von Heyden, C.H.G.	1
Family Callaphididae	
<i>Drepanosiphum platanoidis</i> (Schrank)	8(1983)
Family Aphididae	
<i>Aphis sarothamni</i> Franssen	8(1985)
<i>Cavariella pastinacae</i> (Linne)	8(1983)
Family Thelaxidae	
<i>Anoecia nemoralis</i> Börner, C	8(1989)
Family Pemphigidae	
<i>Tetraneura ulmi</i> (Linnaeus)	1
<i>Paracletus cimiciformis</i> von Heyden, C.H.G.	1
<i>Forda formicaria</i> von Heyden, C.H.G. (1913)	1
<i>Forda marginata</i> Koch	1

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#### REFERENCES

- Brian, M.V. 1977. *Ants*. Collins New Naturalist, London.
- Carpenter, G.D.H. 1943. New records of insects and woodlice from Lundy Island. *Entomologist's Monthly Magazine* 79, 121-123.
- Donisthorpe, H. 1913. Ants and Myrmecophiles on Lundy. *The Entomologists's Record* 25, 267-269.
- George, J.J. 1978. The freshwater fauna of Lundy. *Annual Report of the Lundy Field Society* 29, 46-48.
- George, J.J. & Sheridan, S.P. 1986. Further investigations of the flora and fauna of the Lundy freshwater habitats. *Annual Report of the Lundy Field Society* 37, 35-46.
- George, J.J. & Stone, B.M. 1979. The flora and fauna of Pondsburry. *Annual Report of the Lundy Field Society* 30, 20-31.
- George, J.J. & Stone, B.M. 1980. A comparative investigation of the freshwater flora and fauna of Lundy ponds, 1980. *Annual Report of the Lundy Field Society* 31, 19-34.
- Parsons, A.J. 1983. Notes on some insects on Lundy. *Annual Report of the Lundy Field Society* 34, 36-37.
- Parsons, A.J. 1983. Notes on some insects on Lundy. *Annual Report of the Lundy Field Society* 34, 43-46.
- Parsons, A.J. 1984. Lundy 1984. *Annual Report of the Lundy Field Society* 35, 29-31.
- Parsons, A.J. 1985. Invertebrates on Lundy, 1985. *Annual Report of the Lundy Field Society* 36, 39-42.
- Parsons, A.J. 1986. Insects on Lundy, 1986. *Annual Report of the Lundy Field Society* 37, 51-53.
- Parsons, A.J. 1987. Invertebrates on Lundy, 1987. *Annual Report of the Lundy Field Society* 38, 52-53.

Parsons, A.J. 1988. Invertebrates on Lundy, 1988. *Annual Report of the Lundy Field Society* 39, 68-70.

Parsons, A.J. 1989. Insects on Lundy, 1989. *Annual Report of the Lundy Field Society* 40, 65-69.

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### LEPIDOPTERA ON LUNDY, 1991

The figures given are the earliest and latest sightings, followed by a figure in brackets which is the maximum recorded in any one day.

- Six Spot Burnet *Zygaena filipendulae* (Dupont) 26.7.91 (2)  
Five Spot Burnet *Zygaena trifolii decreta* (Verity) 21.7.91 to 31.7.91 (8)  
Large White *Pieris brassicae* (L.) 21.7.91 to 8.9.91 (2)  
Small White *Pieris rapae* (L.) 6.5.91 to 1.9.91 (12)  
Green-veined White *Pieris napi* (L.) 9.5.91 to 13.5.91 (2)  
Holly Blue *Celastrina argiolus* (L.) 27.4.91 to 22.5.91 (8)  
Red Admiral *Vanessa atalanta* (L.) 6.5.91 to 30.10.91 (30)  
Painted Lady *Cynthia cardui* (L.) 16.4.91 to 30.10.91 (60)  
Small Tortoiseshell *Aglais urticae* (L.) 16.4.91 to 15.10.91 (500)  
Peacock *Polygonia c-album* (L.) 15.10.91 (1, very fresh-looking)  
Grayling *Hipparchia semele* (L.) 3.7.91 to 29.8.91 (10)  
Gatekeeper *Pyronia tithonus* (L.) 4.8.91 (1)  
Meadow Brown *Maniola jurtina* (L.) 28.6.91 to 8.9.91 (120)  
Small Heath *Coenonympha pamphilus* (L.) 5.7.91 to 4.8.91 (2)  
Ringlet *Aphantopus hyperantus* (L.) 21.7.91 to 4.8.91 (6)  
Oak Eggar *Lasiocampa quercus* (L.) larvae 11.4.91 (2)  
adults 21.7.91 to 4.8.91 (21)  
Fox Moth *Macrothylacia rubi* (L.) larvae 30.3.91 to 6.10.91 (12)  
Yellow Shell *Camptogramma bilineata* (L.) 23.6.91 (1)  
Magpie Moth *Abraxas grossulariata* (L.) 26.7.91 to 22.8.91 (1)  
Peppered Moth *Biston betularia* (L.) 2.8.91 (2)  
Mottled Beauty *Aleis repandata* (L.) 27.7.91 (1)  
Convolvulus Hawk-Moth *Agrius convolvuli* (L.) 11.9.91 (1)  
Hummingbird Hawk-Moth *Macroglossum stellatarum* (L.) 10.10.91 to 12.10.01 (1)  
Cream-spot Tiger *Arctia villica* (L.) 27.6.91 (1)  
Antler *Cerapteryx graminis* (L.) 12.8.91 to 15.8.91 (1)  
Lunar Underwing *Omphaloscelis lunosa* (Haw.) 7.10.91 (10)  
Silver Y *Autographa gamma* (L.) 1.9.91 to 22.10.91 (c.1000)