

Report on beetles (Coleoptera) collected from the Dartington Hall Estate, 2013 by Dr Martin Luff.

1. Introduction

This year has been a particularly busy one for my work on the beetles of the Estate. I recorded numbers of species on 11 separate dates from April (at the end of the cold spring) through to mid-November. The generally warm and dry summer enabled me to record much more by sweeping herbaceous vegetation around field margins, especially in Hill Park. At the end of May I was assisted by an old friend of mine, and former fellow student, Dr Colin Welch (RCW), who is an authority on the Staphylinidae (rove beetles). I was also provided with the contents of the nest boxes from Dartington Hills in February and September, thanks to Will Wallis and Mike Newby. Finally Mary Bartlett again encouraged me to examine the fauna of her compost heap in November.

2. Results

A total of 201 beetle species from 35 families were recorded. This is considerably more than in any previous year that I have collected at Dartington. Of these, 85 species were not recorded in my earlier lists (Luff, 2010-12). The overall number of species that I have recorded from the Estate is now 369, which is almost 10% of the entire British beetle fauna. The bird nest boxes yielded 13 species, with over half being new to the Estate, despite having examined the boxes in previous years; the contents of the boxes were also rather different between spring and autumn, with only four species common to both. The compost heap yielded 13 species, of which seven were not found in the heap in 2012, but only one was new to the Estate. Many of the remaining additions were from sweeping herbaceous vegetation, although most of these were not of particular interest in a national or local context. There were however several more notable finds, which are detailed below.

3. Notable species

Fourteen of the 'new in 2013' species are either listed as Nationally Notable or rarer in the JNCC Review of Scarce and Threatened Coleoptera (Hyman & Parsons, 1992, 1994), or are new to or notable in Devon. Details of these, in taxonomic order, are given below. The figures show most species.

Family: Hydrophilidae (scavenger water beetles)

Cercyon ustulatus (Preysslner, 1790). Nationally Notable B.

This family of small, round beetles live not only in water, but also several in moist terrestrial habitats such as dung and compost. *C. ustulatus* is widespread but very local, there are several records from Devon. One was swept from the field margin in Hill Park on 31st May.



Family: Histeridae (shining pill beetles)

Gnathoncus nannetensis (Marseul, 1862). New to Devon.

A localised specialist species, predatory in birds' nests; three were found in the Dartington Hills nest boxes in February. Apparently a new record for Devon.

Family: Leiodidae

Nemadus colonoides (Kraatz, 1851). Notable in Devon.

Another birds' nest specialist, found with the previous species; there is only one record in G.H. Ashe's ms. index of Devon beetles, and no Devon records in the National Biodiversity Network (NBN) on-line database.



Family: Nitidulidae (pollen and sap beetles)

Meligethes fulvipes Brisout, 1863. Nationally Notable.

This small rectangular beetle resembles the common pollen beetles (*M. aeneus*) found on many flowers in the summer, but has paler legs and is darker in colour. It occurs on yellow Cruciferae flowers and there are several records from Devon. One was swept from the field margin of Hill Park on 31st May.

Family: Cryptophagidae (silken fungus beetles)

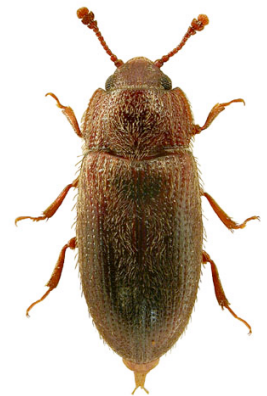
Atomaria scutellaris Motschulsky, 1849. RDBK, Indeterminate. New to Devon.

A tiny oval beetle from a large genus with many common species, several of which were recorded from compost in my 2012 report. A single specimen of *A. scutellaris* was swept from the margin of Hill Park on the evening of 7th August. The species occurs sporadically near the south coast from Cornwall to Sussex (Johnson, 1993) but this seems to be the first record for Devon.

Family: Biphyllidae

Diplcoelus fagi (Chevrolat, 1837). Nationally Notable B. Saproxylic Rarity Score 8. New to Devon.

A small, hairy beetle found in association with moulds under beech bark. It occurs in the south and east of England, with the nearest previous record being from north Somerset in 1992 (Duff, 1993). Two examples were found under bark of a stack of logs next to Deer Park Wall on 14th August.



Family: Endomychidae (false ladybirds)

Sphaerosoma pilosum (Panzer, 1793). Notable in Devon.

This minute, globular and hairy beetle (the Latin name means 'round-bodied hairy') is seldom recorded (there are only three records on the NBN database) and there is a single pre-1900 Devon record with no precise locality given. Two specimens were found on and under bracket fungi growing on a tree in the formal gardens, on 22nd August and 1st October.

Lycoperdina bovistae (Fabricius, 1792). RDB3, Rare.

A single specimen of this distinctive beetle occurred in the same situation as the previous species on 16th September. Ashe's index has only two previous Devon records, although surprisingly I have also found it twice earlier this year on Longmarsh, Totnes. It breeds in puff-ball fungi and maybe the wet summer of 2012 favoured this species.



Family: Mordellidae

Mordellochroa abdominalis (Fabricius, 1775). Notable in Devon. Saproxylic Rarity Score 4.

A distinctive flower-beetle with red prothorax in the female. One was found on an umbel in the margin of Hill Park on 31st May. The national distribution is south-eastern with only a single previous record from Devon. It develops in woody plant stems.



Family: Scraphiidae (tumbling flower beetles)

Anaspis thoracica (Linnaeus, 1758). Nationally Notable A. Saproxylic Rarity Score 8. New to Devon.

Several commoner species of this genus also occur at Dartington, especially on blossom in the summer. Their larvae live in rotten wood. *A. thoracica* is a rare species, and the nearest previous record is from the south coast of Dorset. Two were swept by RCW from the margin of Hill Park on 31st May.

Family: Cerambycidae (longhorn beetles)

Phytoecia cylindrica (Linnaeus, 1758). Nationally Notable B.

On specimen of this species was swept from the same site and date as the previous species. It occurs mainly in south-east England, although there are pre-1970 records from Devon (Twinn & Harding, 1999). Larvae tunnel in the stems of umbelliferous plants.



Family: Bruchidae (seed beetles)

Bruchus atomarius (Linnaeus, 1761). Nationally Notable B.

Specimens of this species were swept by both RCW and myself, again from the margin of Hill Park on 31st May. Another south-eastern species with a few previous Devon records. Larvae develop in the seeds of vetches (Cox, 2007).

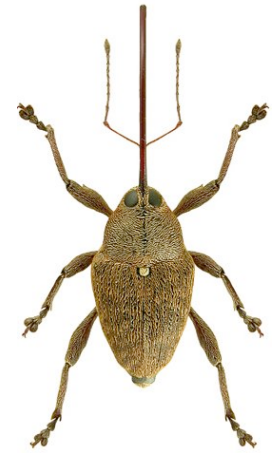
Family: Curculionidae (weevils)

Kyklioacalles roboris (Curtis, 1835). Nationally Notable B. Saproxylic Rarity Score 8.

A small, scaly weevil that breeds in dead branches of oaks. One occurred in litter at the base of a tree in the formal gardens on 1st October. Ashe's list has only one Devon record with no precise locality data.



Curculio glandium Marsham, 1802. An acorn weevil. New to Devon. One specimen of this distinctive species was swept by RCW from under an oak tree at the margin of Hill Park on 31st May. The related *C. venosus* is already known from the estate, but this appears to be the first record of *C. glandium* in Devon. By coincidence, a second Devon specimen was recorded independently from East Devon exactly one month later.



4. General Remarks

The generally warm weather lead both to more collecting (especially by sweeping herbaceous vegetation) and the largest number of species yet recorded in one season. But the proportion of species new to the Dartington list (42%) was lower than in either of the previous two years (63% and 61%) , suggesting that the law of diminishing returns may be starting to apply. However the proportion of nationally or locally notable species is the highest yet. The importance of dead-wood species is again evident, with four additional species on the Saproxylic Quality Index list (SQI, Fowles *et al.*, 1999). There are also many parts of the Estate which I have yet to examine, so I still hope to be able to continue this work in future years.

5. Acknowledgements

I am indebted to John Channon for permission to collect on the Estate. I also owe sincere thanks as always to the wardens Will Wallis and Mike Newby, and Mary Bartlett for again encouraging me to dismantle her compost heap. The help of my old friend Colin Welch in adding several species to the Dartington list was much appreciated.

The colour figures are from <http://www.colpolon.biol.uni.wroc.pl>, by kind permission of Lech Borowiec.

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7. List of additional beetle species found in 2013

Family	Taxon	Authority	
Carabidae	<i>Leistus ferrugineus</i>	(Linnaeus, 1758)	
	<i>Notiophilus biguttatus</i>	(Fabricius, 1779)	
	<i>Bembidion biguttatum</i>	(Fabricius, 1779)	
	<i>Bradycellus verbasci</i>	(Duftschmid, 1812)	
	<i>Demetrias atricapillus</i>	(Linnaeus, 1758)	
Hydrophilidae	<i>Cercyon ustulatus</i>	(Preyssler, 1790)	
Histeridae	<i>Gnathoncus nannetensis</i>	(Marseul, 1862)	
Leiodidae	<i>Nemadus colonoides</i>	(Kraatz, 1851)	
Staphylinidae	<i>Anthobium unicolor</i>	(Marsham, 1802)	
	<i>Eusphalerum sorbi</i>	(Gyllenhal, 1810)	
	<i>Omalius italicum</i>	Bernhauer, 1902	
	<i>Phloeonomus punctipennis</i>	Thomson, C.G., 1867	
	<i>Phloeostiba plana</i>	(Paykull, 1792)	
	<i>Megarthus bellevoeyi</i>	(Saulcy, 1862)	
	<i>Tachyporus pallidus</i>	Sharp, 1871	
	<i>Oxypoda alternans</i>	(Gravenhorst, 1802)	
	<i>Oxypoda haemorrhoea</i>	(Mannerheim, 1830)	
	<i>Oxypoda opaca</i>	(Gravenhorst, 1802)	
	<i>Haploglossa villosula</i>	(Stephens, 1832)	
	<i>Aloconota gregaria</i>	(Erichson, 1839)	
	<i>Mocyta amplicollis</i>	(Mulsant & Rey, 1873)	
	<i>Mocyta clientula</i>	(Erichson, 1839)	
	<i>Aleochara sparsa</i>	Heer, 1839	
	<i>Cypha longicornis</i>	(Paykull, 1800)	
	<i>Siagonium quadricorne</i>	Kirby, W., 1815	
	<i>Stenus brunnipes</i>	Stephens, 1833	
	<i>Stenus similis</i>	(Herbst, 1784)	
	<i>Philonthus varians</i>	(Paykull, 1789)	
	<i>Bisnius subuliformis</i>	(Gravenhorst, 1802)	
	<i>Gabrius breviventer</i>	(Sperk, 1835)	
	<i>Gabrius piliger</i>	Mulsant & Rey, 1876	
	<i>Xantholinus linearis</i>	(Olivier, 1795)	
	Clambidae	<i>Clambus simsoni</i>	Blackburn, 1902
	Cantharidae	<i>Cantharis decipiens</i>	Baudi, 1871
		<i>Rhagonycha limbata</i>	Thomson, C.G., 1864
<i>Rhagonycha lignosa</i>		(Müller, O.F., 1764)	
Melyridae	<i>Dasytes aeratus</i>	Stephens, 1830	
Nitidulidae	<i>Cychramus luteus</i>	(Fabricius, 1787)	
	<i>Meligethes atratus</i>	(Olivier, 1790)	
	<i>Meligethes carinulatus</i>	Förster, 1849	
	<i>Meligethes fulvipes</i>	Brisout de Barneville, 1863	
	<i>Meligethes nigrescens</i>	Stephens, 1830	
	<i>Glischrochilus quadriguttatus</i>	(Fabricius, 1777)	
	<i>Rhizophagus dispar</i>	(Paykull, 1800)	
Rhizophagidae	<i>Rhizophagus ferrugineus</i>	(Paykull, 1800)	
	<i>Stilbus testaceus</i>	(Panzer, 1796)	
Phalacridae	<i>Stilbus testaceus</i>	(Panzer, 1796)	
Cryptophagidae	<i>Cryptophagus pubescens</i>	Sturm, 1845	
	<i>Atomaria scutellaris</i>	Motschulsky, 1849	
Biphylidae	<i>Diplocoelus fagi</i>	(Chevrolat, 1837)	
Endomychidae	<i>Sphaerosoma pilosum</i>	(Panzer, 1793)	
	<i>Lycoperdina bovistae</i>	(Fabricius, 1792)	
Coccinellidae	<i>Rhyzobius litura</i>	(Fabricius, 1787)	

	<i>Myrrha octodecimguttata</i>	(Linnaeus, 1758)
Mycetophagidae	<i>Mycetophagus atomarius</i>	(Fabricius, 1787)
Ciidae	<i>Cis boleti</i>	(Scopoli, 1763)
Mordellidae	<i>Mordellochroa abdominalis</i>	(Fabricius, 1775)
Oedemeridae	<i>Oedemera lurida</i>	(Marsham, 1802)
Scraptiidae	<i>Anaspis pulicaria</i>	Costa, A., 1854
	<i>Anaspis thoracica</i>	(Linnaeus, 1758)
Cerambycidae	<i>Grammoptera ruficornis</i>	(Fabricius, 1781)
	<i>Pogonocherus hispidus</i>	(Linnaeus, 1758)
	<i>Phytoecia cylindrica</i>	(Linnaeus, 1758)
Bruchidae	<i>Bruchus atomarius</i>	(Linnaeus, 1761)
Chrysomelidae	<i>Oulema rufocyanea</i>	(Suffrian, 1847)
	<i>Cassida vibex</i>	Linnaeus, 1767
	<i>Chrysolina banksii</i>	(Fabricius, 1775)
	<i>Prasocuris phellandrii</i>	(Linnaeus, 1758)
	<i>Phyllotreta undulata</i>	Kutschera, 1860
	<i>Longitarsus flavicornis</i>	(Stephens, 1831)
	<i>Longitarsus pratensis</i>	(Panzer, 1794)
	<i>Longitarsus suturellus</i>	(Duftschmid, 1825)
	<i>Batophila rubi</i>	(Paykull, 1799)
	<i>Chaetocnema hortensis</i>	(Fourcroy, 1785)
	<i>Psylliodes napi</i>	(Fabricius, 1792)
Apionidae	<i>Protapion apricans</i>	(Herbst, 1797)
Curculionidae	<i>Otiorhynchus singularis</i>	(Linnaeus, 1767)
	<i>Polydrusus cervinus</i>	(Linnaeus, 1758)
	<i>Sciaphilus asperatus</i>	(Bonsdorff, 1785)
	<i>Kyklioacalles roboris</i>	(Curtis, 1835)
	<i>Pelenomus quadrituberculatus</i>	(Fabricius, 1787)
	<i>Ceutorhynchus assimilis</i>	(Paykull, 1792)
	<i>Anthonomus rubi</i>	(Herbst, 1795)
	<i>Curculio glandium</i>	Marsham, 1802
	<i>Mecinus pyraister</i>	(Herbst, 1795)
	<i>Orchestes fagi</i>	(Linnaeus, 1758)