

Report on beetles (Coleoptera) collected from the Dartington Hall Estate, 2016 by Dr Martin Luff

1. Introduction and Methods

The majority of beetle recording in 2016 was concentrated on Berryman's Marsh. Two sets of five pitfall traps were operated there from 27th April to 8th June, when the vegetation became too high to locate the traps. A bottle trap was also used from 20th June to 14th September, suspended above several of the dead wood habitat piles in the marsh. A small survey was carried out in the old graveyard on 25th May using sweeping, hand searching and vacuum sampling. Pitfall traps were used in the proposed agro-forestry field Broadlears from 18th August to 15th September when they were trashed apparently by the sheep in the field. Finally, some beetles were also recorded during the field meeting of the Devon Fly Group on 15th October.

2. Results

In all, 202 beetle species were recorded in 2016 (just one fewer than in 2015!), of which 57 (28.2%) were additions to the Dartington list. The total Dartington beetle species list is now 561.

The 18 graveyard species were all common elsewhere. Those from the agro-forestry site were generally common, but the catch was notable for the large numbers of large ground beetles such as *Carabus violaceus* (the violet ground beetle); these are indicative of a lightly managed soil regime with abundant soil diversity as their predatory larvae require more than one year to develop in the ground. Particular species of note are itemised below, nearly all are from Berryman's Marsh.

2.1 Some species of note

Carabidae (ground beetles)

Chlaenius nigricornis. This attractive ground beetle, green and copper coloured with a covering of fine hairs, was formerly graded Nationally Notable. It is usually found in damp, well-vegetated grassland and marsh. Several were caught in pitfalls on Berryman's Marsh. There are several records from Devon but it is a good indicator of quality habitat.



Agonum micans. Another marsh-living ground beetle, caught with *C. nigricornis* but probably preferring damper areas. Also widespread but localised.

Staphylinidae (rove beetles)

Ilyobates bennetti (formerly *I. subopacus*). A small rove beetle, one of three in the genus about which little is known. A single specimen was caught in the Berryman's Marsh pitfall traps; it appears to be a new record for Devon. The picture is another similar *Ilyobates* species





Gyrophaena hanseni. This minute rove beetle is one of a large genus that live in fungal fruiting bodies, usually on trees. Other species of the genus have occurred elsewhere on the estate. They can only be identified with certainty by examination of the internal male genitalia. Large numbers of *G. hanseni* were found on fungi on a dead standing willow trunk by the river in Giston Park during the Devon Fly Group meeting on 15th October. It has not previously been recorded from Devon.

Sphindidae

Aspidiphorus orbiculatus. A minute beetle of the obscure family Sphindidae, that feed on powdery mildews on dear branches. Two specimens were found in bottle traps in Berryman's Marsh. There are only three previous records from Devon.



Cerambycidae (longhorn beetles)

Clytus arietis. The wasp beetle is a distinctive species, quite widespread. One was found in a bottle trap on Berryman's Marsh. Its larvae develop in dead wood.

Stenurella melanura. Another longhorn species, quite local in the south-west, also from the bottle trap. It had previously been recorded from Dartington by Keith Alexander in 2011. Also saproxylic, developing in dead or rotten tree trunks and stumps.



Cryptophagidae (hairy fungus beetles)



Cryptophagus denticulatus. One of a large genus of Cryptophagidae (hairy fungus beetles). Found together with the commoner *C. dentatus* and several species of fungus beetles (Ciidae) on a large decaying fungal fruiting body at the base of a large oak tree by the river close to the bottom of the lower drive. There is only one previous record from Devon.

Curculionoidea (weevil families)

Nanophyes marmoratus. The loosestrife weevil, now placed in the family Nanophyidae occurs on purple loosestrife in marshy situations. It was found in Berryman's marsh both by sweep-netting and vacuum sampling. There are several Devon records.



3. Conclusions and future work.

It is clear that Berrymans' Marsh has a distinctive beetle fauna of wetland/marsh together with species breeding in or on dead wood. I will carry out further bottle trapping there in 2017. The ponds had dried out during most of 2016, but if they remain filled in 2017, I will re-sample them for water beetles. Broadlears field has abundant populations of ground beetles; these will be sampled again in the summer to provide a base line against which to judge any changes resulting from the development of the agro-forestry. I also hope to put more bottle traps on or among veteran trees on the estate.

4. List of Additional species recorded in 2016.

BM = Berryman's Marsh

BL = Broadlears Field agro-forestry

G = General collecting elsewhere

Taxon (Family names in capitals)	Site		
		CRYPTOPHAGIDAE	
		Cryptophagus dentatus	G
CARABIDAE		Cryptophagus denticulatus	G
Bembidion mannerheimii	BM	Atomaria nigrirostris	BM
Bembidion varium	BM	Atomaria rubida	BM
Pterostichus niger	BL	COCCINELLIDAE	
Pterostichus nigrita	BM	Coccidula rufa	BM
Oxypselaphus obscurus	BM	Calvia quattuordecimguttata	BM
Agonum fuliginosum	BM	Adalia decempunctata	BM
Agonum micans	BM	Tytthaspis sedecimpunctata	BL
Agonum muelleri	BM	CIIDAE	
Amara similata	BM	Cis bilamellatus	G
Chlaenius nigricornis	BM	Cis castaneus	G
Philorhizus melanocephalus	G	Ennearthron cornutum	G
HYDROPHILIDAE		CERAMBYCIDAE	
Cercyon melanocephalus	BM	Clytus arietis	BM
HYDRAENIDAE		CHRYSOMELIDAE	
Ochthebius bicolon	BM	Bruchidius varius	BL
PTILIIDAE		Phaedon tumidulus	BM
Ptenidium fuscicorne	BM	Galerucella lineola	BM
Acrotrichis strandi	BM	Altica lythri	BL
LEIODIDAE		Crepidodera fulvicornis	BM
Ptomaphagus medius	BM	Sphaeroderma testaceum	BL
SILPHIDAE		Psylliodes affinis	BM
Nicrophorus vespilloides	BM	NANOPHYIDAE	
STAPHYLINIDAE		Nanophyes marmoratus	BM
Ilyobates bennetti	BM	APIONIDAE	
Philhygra debilis	BM	Ceratapion gibbirostre	BM
Aleochara bipustulata	BL	CURCULIONIDAE	
Gyrophaena hanseni	G	Notaris acridulus	BM
Carpelimus corticinus	BM	Phyllobius glaucus	BM
Platystethus cornutus	BM	Sitona hispidulus	BL
Stenus boops	BM	Hypera zoilus	BL
Quedius levicollis	BL	Rhinoncus perpendicularis	BM
CANTHARIDAE		Ceutorhynchus pallidactylus	BM
Malthodes marginatus	G	Dryocoetes villosus	BM
SPHINDIDAE			
Aspidiphorus orbiculatus	BM		
NITIDULIDAE			
Epuraea melina	BM		
MONOTOMIDAE			
Monotoma picipes	BM		