

INSECTS FROM COULTERS' GARAGE, ALCESTER

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Species List	250	240	Total
<u>INSECTA</u>			
TRICHOPTERA			
<u>Gen. et spp. indet.</u>	-	2	2
HEMIPTERA			
Corixidae <u>indet.</u>	-	1	1
<u>Gen. et spp. indet.</u>	1	-	1
COLEOPTERA			
Carabidae			
<u>Notiophilus biguttatus</u> (F.)	-	1	1
<u>Bembidion</u> sp.	1	-	1
<u>Pterostichus niger</u> (Schall.)	1	-	1
<u>P. nigrita</u> (Payk.)	1	-	1
Haliplidae			
<u>Haliplus</u> sp.	1	1	1
Dytiscidae			
<u>Hygrotus inaequalis</u> (F.)	-	1	1
<u>Colymbetes fuscus</u> (L.)	-	1	1
Sphaeriidae			
<u>Sphaerius acaroides</u> Waltl	-	1	1
Hydrophilidae			
<u>Helophorus aquaticus</u> (L.) or <u>grandis</u> Ill.	-	1	1
<u>H. brevipalpis</u> Bed. (agg.)	-	3	3

	250	240	Total
<u>Gercyon</u> spp.	3	5	8
<u>Cryptopleurum minutum</u> (F.)	-	1	1
<u>Helochares lividus</u> (Forst.) or <u>obscurus</u> (Müll.)	-	2	2
Hydraenidae			
<u>Ochthebius minimus</u> (F.)	-	1	1
<u>Ochthebius</u> sp.	-	1	1
<u>Hydraena</u> sp.	2	-	2
Staphylinidae			
<u>Lesteva longoelytrata</u> (Goeze)	-	1	1
<u>Platystethus cornutus</u> (Grav.) or <u>degener</u> Muls. & Rey	-	1	1
<u>Xantholinus linearis</u> (Ol.)	1	1	1
<u>Philonthus</u> sp.	-	1	1
<u>Quedius</u> sp.	-	1	1
Tachyporinae <u>indet.</u>	-	1	1
Geotrupidae			
<u>Geotrupes</u> sp.	1	1	2
Scarabaeidae			
<u>Aphodius</u> spp.	1	4	5
<u>Phyllopertha horticola</u> (L.)	-	1	1
Scirtidae			
<u>Gen. et sp. indet.</u>	-	1	1
Dryopidae			
<u>Dryops</u> sp.	1	-	1

	250	240	Total
Elmidae			
<u>Esolus parallelepipedus</u> (Mill.)	-	1	1
Elateridae			
<u>Agriotes</u> sp.	1	-	1
Anobiidae			
<u>Grynobius planus</u> (F.)	1	-	1
<u>Anobium punctatum</u> (Deg.)	-	1	1
Lathridiidae			
<u>Corticorina</u> sp.	-	1	1
Chrysomelidae			
<u>Prasocuris phellandrii</u> (L.)	-	1	1
Apionidae			
<u>Apion carduorum</u> Kirby	1	-	1
<u>Apion</u> spp.	1	5	6
Curculionidae			
<u>Barynotus obscurus</u> (F.)	1	-	1
<u>Sitona sulcifrons</u> (Thun.)	2	-	2
<u>Sitona</u> sp.	-	1	1
<u>Cleonus piger</u> (Scop.)	1	-	1
<u>Notaris acridulus</u> (L.)	1	-	1
<u>Ceutorhynchus</u> sp.	1	-	1
<u>Mecinus pyraister</u> (Herbst)	-	1	1
<u>Rhynchaenus</u> sp.	-	1	1
HYMENOPTERA			
Parasitica <u>indet.</u>	-	3	3
Formicidae <u>indet.</u>	-	3	3

	250	240	Total
DIPTERA			
<u>Gen. et spp. indet.</u> (adult)	-	5	5
<u>Gen. et spp. indet.</u> (puparia)	-	2	2
<u>ARANAEA</u>	-	1	1

In addition, an oogonium of the stonewort, Chara, occurred at level 240.

Environmental implications of the fauna.

The insects recovered from the layers 250 and 240 cms displayed a marked difference in preservation. Those from the lower layer, 250, were degraded and many exoskeletal elements had lost their pigment, these pale brown sclerites tending to collapse if dried. The smaller number of insects from this layer might reflect its poorer preservation rather than a real population change between the samples.

Two main groups can be identified in the assemblages; aquatic species which live in or at the edges of water and a number of phytophagous beetles which feed on a variety of low plants. Amongst the aquatic fauna is one species, Esolus parallelepipedus, whose requirement for well oxygenated water is usually met in running streams, rivers or the wave-lap zone of large ponds or lakes. Colymbetes fuscus swims in weed free stretches of water, but there is some evidence for well-vegetated muddy banks at the water's edge. Such areas provide breeding places for Helophorus, Ochthebius and Hydraena species. The presence of water plants such as Oenanthe (water dropwort) is suggested by the leaf-beetle Prasocuris phellandrii, and Notaris acridulus includes aquatic Polygonum species and reeds amongst its host plants. The tiny, globular species Sphaerius acaroides burrows into wet mud or sand at the edges of water. Today it has a very restricted range in England although its size would allow it to be easily overlooked and it

may be more widespread than collecting records indicate. In addition to these beetles which demand aquatic or waterside habitats the other insect orders include larval caddis (Trichoptera) remains and a back-swimming corixid bug. Chara (Stonewort) appears as thin algal filaments attached to stones in calcareous water.

The major food plants of the phytophagous species, summarised in the table, suggest an open landscape. A single elytron identified as Rhynchaenus sp., a leaf-miner of deciduous trees, provides the sole evidence in the small fauna for tree growth. All the specifically named phytophages are tied to the aquatic or waterside plants already mentioned, grasses, weeds and some cultivated plants. Thistles are attacked by Apion carduorum and Cleonus piger, this latter weevil remarkable for producing galls on its host Compositaea (Hoffmann 1950). Sitona sulcifrons is widespread on clover, lucerne, vetch and it has been recorded as a pest of cultivated peas. The fauna includes Phyllopertha horticola, a grass root miner, and the occurrence of several Aphodius (dung-beetles) and Geotrupes (dor-beetles often found in dung) suggest some grazing of the adjoining lands. Dung, if present, would also provide suitable habitats for certain Staphylinidae, including Platystethus cornutus or degener and possibly the Cercyon species.

Single examples of two anobiid species, Grynobius planus and Anobium punctatum, whose larvae are "woodworm", imply some availability of dead wood. A. punctatum is today strongly associated with structural timber (Hickin 1968) and G. planus occurs in wooden posts and fences as well as dead stumps.

Table of Food Plants for Phytophagous Species

Name	Food Plants
<u>Prasocuris phellandrii</u>	<u>Oenanthe</u> spp. especially <u>aquatica</u> (= <u>phellandrium</u>), <u>Cicuta virosa</u> , <u>Sium latifolium</u>
<u>Apion carduorum</u>	<u>Carduus acanthoides</u> , <u>C. nutans</u> , <u>C. pygnocephalus</u> , <u>Cirsium arvense</u> , <u>C. oleraceum</u> , <u>C. palustre</u> , <u>C. vulgare</u> , <u>Arctium lappa</u>
<u>Barynotus obscurus</u>	Very phytophagous, includes various Ranunculaceae, Papilionaceae
<u>Sitona sulcifrons</u>	<u>Pisum</u> spp. <u>Medicago sativum</u> , <u>Trifolium</u> <u>medium</u> , <u>T. pratense</u> , <u>Vicia</u> spp., <u>Lotus</u> <u>corniculatus</u> , other Papilionaceae
<u>Cleonus piger</u>	<u>Carduus</u> spp. including <u>C. arvense</u> , <u>C. oleraceum</u> , <u>C. nutans</u> , <u>C. acanthoides</u> , <u>Onoperdum acanthium</u> , <u>Cirsium lanceolatum</u> etc.
<u>Notaris acridulus</u>	Gramineae including <u>Glyceria maxima</u> , Aquatic <u>Polygonum</u> spp., <u>Typha</u> and <u>Carex</u> spp., also under moss, bark and leaves
<u>Mecinus pyraister</u>	<u>Plantago</u> spp. including <u>P. lanceolata</u>

Data from Hoffmann (1950), Joy (1932), Rutter (1912, 1916) and
Scherf (1964)

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