

Taken From

The Knepp Castle Estate Baseline Ecological Survey

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3.9 Wetland Coleoptera

3.9.1 Survey Brief

A wetland beetle survey was required to contribute to the baseline data required by the River Restoration Centre and the Environment Agency prior to river restoration work to be carried out on the River Adur corridor as it crosses the Knepp Estate. Peter Hodge was commissioned to carry out a wetland beetle survey on the site indicated on Map 1, Area B.

3.9.2 Methodology

The River Adur and areas of adjacent wetland were sampled using standard techniques, checking for species of conservation interest in particular.

3.9.3. Results

The results of just two day's fieldwork resulted in a total of 118 species of Coleoptera (beetles). These were recorded at four locations –

Ditch TQ1565 2100 (1st June)

R. Adur: south bank TQ1520 (1st June and 23rd July)

R. Adur: north bank TQ1520 (1st June and 23rd July)

R. Adur: east bank TQ1521 (1st June and 23rd July)

In addition, 21 species of Hemiptera-Heteroptera (bugs), 5 species of Hemiptera-Homoptera (bugs), 15 species of Diptera (flies), 11 species of Lepidoptera (10 butterflies and 1 moth), 5 species of Orthoptera (grasshoppers and crickets), 4 species of Hymenoptera (bees and wasps) and 1 species each of Odonata (dragonflies and damselflies), Neuroptera (lacewings) and Dermaptera (earwigs). This list included 10 species of conservation interest (Table 3.9.a). Full lists of species are presented in Appendix VI.

Table 3.9.a. Species of Conservation Importance




Species	Common name	Status	Comment
<i>Longitarsus rutilus</i>	A leaf beetle	Na	Widely distributed but very local in southern England. Phytophagous. Found near ponds or streams and in damp woodland, appearing to prefer partial shade. Associated with water figwort <i>Scrophularia aquatica</i> and balm-leaved figwort <i>S. scorodonia</i> . Larvae probably develop at the roots of the foodplant. Listed as RDB2 in Shirt (1987); the status now revised to Na (Hyman, 1992).
<i>Notaris scirpi</i>	A weevil	Nb	Widespread but local in England and Wales and not recorded from southwest England. Associated with Lesser Pond Sedge <i>Carex acutiformis</i> and reedmace

			<i>Typha latifolia</i> .
<i>Pelenomus comari</i>	A weevil	Nb	Widely distributed in England, Wales and southwest Scotland. Found in wetland habitats. Phytophagous. Associated with marsh cinquefoil <i>Potentilla palustris</i> and sometimes with purple loosestrife <i>Lythrum salicaria</i> . The larvae feed externally on the leaves.
<i>Melegethes gagathinus</i>	A pollen beetle	N	Very local in southern England and also recorded from North-east England. Found in wetlands beside ponds and ditches. Associated with flowers of water mint <i>Mentha aquatica</i> .
<i>Melegethes ochropus</i>	A pollen beetle	N	Very local with a scattered distribution in England. The larvae develop in the flowers of marsh woundwort <i>Stachys palustris</i> .
<i>Ishnomera cyanea</i>	A flower beetle	Nb	Two species (<i>I. caerulea</i> and <i>I. cyanea</i>) were previously confused in Britain under the name <i>I. Caerulea</i> . <i>I. cyanea</i> is by far the most frequent and is widely distributed though local in England and Wales. Mainly in ancient broad-leaved woodland, pasture-woodland and old hedgerows. Adults frequently visit flowers, including hawthorn and hogweed. The larvae develop in dead wood of a variety of tree species.
<i>Oliarus panzeri</i>	A leaf-hopper bug	N	A very local species confined to South-east England. The ecology is poorly understood - it may prefer areas that are periodically waterlogged but which dry out and crack in summer. The foodplants are unknown but the nymphs are thought to be root feeders.
<i>Odontomyia tigrina</i>	A soldier fly	N	Widespread but local, mostly in the southern half of England and Wales. Associated with wetland, especially ancient fens and grazing marshes. The aquatic larvae have been found in shallow water at the margins of both freshwater and slightly brackish ponds and ditches.
<i>Macropis europaea</i>	A solitary bee	Na	Restricted to southern England. Closely associated with yellow loosestrife <i>Lysimachia vulgaris</i> , in fens and beside ponds and rivers. Nests excavated in the ground, generally well concealed by overhanging vegetation. It is not so rare as once thought and has recently been recorded from a number of new sites. Its status has been revised from RDB3 (Rare) in Shirt (1987) to Nationally Scarce Category A (Na) in Falk (1991).
<i>Conocephalus discolor</i>	Long-winged cone-head (bush cricket)	Na	Formerly very local near the coast of Sussex, Hampshire, Isle of Wight and Dorset, this species has been slowly extending its range and now occurs in many inland localities in southeast England. Found in areas of long grass, reeds or rushes.

3.9.4. Discussion

With 118 species of beetles recorded in 2 days, the results of this limited survey were promising. A more extensive survey of wetland beetles could only be expected to augment these results considerably. This baseline information will be an important

component of the monitoring strategy subsequent to river restoration. A wider, shallower river allowed to flow in a naturally meandering channel will provide considerably enhanced habitat for aquatic and wetland beetles, and changes in the beetle fauna will be interesting.

Species	Comment
<p>A leaf beetle <i>Longitarsus rutilus</i></p>	<p>Widely distributed but very local in southern England. Phytophagous. Found near ponds or streams and in damp woodland, appearing to prefer partial shade. Associated with water figwort <i>Scrophularia aquatica</i> and balm-leaved figwort <i>S. scorodonia</i>. Larvae probably develop at the roots of the foodplant. Listed as RDB2 in Shirt (1987); the status now revised to Na (Hyman, 1992).</p>
	
<p>A weevil <i>Notaris scirpi</i></p>	<p>Widespread but local in England and Wales and not recorded from southwest England. Associated with Lesser Pond Sedge <i>Carex acutiformis</i> and reedmace <i>Typha latifolia</i>.</p>
	
<p>A weevil <i>Pelenomus comari</i></p>	<p>Widely distributed in England, Wales and southwest Scotland. Found in wetland habitats. Phytophagous. Associated with marsh cinquefoil <i>Potentilla palustris</i> and sometimes with purple loosestrife <i>Lythrum salicaria</i>. The larvae feed externally on the leaves.</p>
	
<p>A pollen beetle <i>Melegethes gagathinus</i></p>	<p>Very local in southern England and also recorded from North-east England. Found in wetlands beside ponds and ditches. Associated with flowers of water mint <i>Mentha aquatica</i>.</p>
<p>No Image</p>	
<p>A pollen beetle <i>Melegethes ochropus</i></p>	<p>Very local with a scattered distribution in England. The larvae develop in the flowers of marsh woundwort <i>Stachys palustris</i>.</p>
<p>No Image</p>	

A flower beetle
Ishnomera cyanea

No Image

Two species (*I. caerulea* and *I. cyanea*) were previously confused in Britain under the name *I. Caerulea*. *I. cyanea* is by far the most frequent and is widely distributed though local in England and Wales. Mainly in ancient broad-leaved woodland, pasture-woodland and old hedgerows. Adults frequently visit flowers, including hawthorn and hogweed. The larvae develop in dead wood of a variety of tree species.

A leaf-hopper bug
Oliarus panzeri

No Image

A very local species confined to South-east England. The ecology is poorly understood - it may prefer areas that are periodically waterlogged but which dry out and crack in summer. The foodplants are unknown but the nymphs are thought to be root feeders.

A soldier fly
Odontomyia tigrina



Widespread but local, mostly in the southern half of England and Wales. Associated with wetland, especially ancient fens and grazing marshes. The aquatic larvae have been found in shallow water at the margins of both freshwater and slightly brackish ponds and ditches.

A solitary bee
Macropis europaea



Restricted to southern England. Closely associated with yellow loosestrife *Lysimachia vulgaris*, in fens and beside ponds and rivers. Nests excavated in the ground, generally well concealed by overhanging vegetation. It is not so rare as once thought and has recently been recorded from a number of new sites. Its status has been revised from **RDB3 (Rare)** in Shirt (1987) to **Nationally Scarce Category A (Na)** in Falk (1991).

Long-winged
cone-head
(bush cricket)
Conocephalus
discolor



Formerly very local near the coast of Sussex, Hampshire, Isle of Wight and Dorset, this species has been slowly extending its range and now occurs in many inland localities in southeast England. Found in areas of long grass, reeds or rushes.