

BLACKMOORFOOT BEETLES

Blackmoorfoot Reservoir is situated at the base of the Pennines c. 5.6 km SW of Huddersfield, West Yorkshire (GR: SE098127) at an elevation of 256 m a.s.l. Construction began on 1 May 1871 and the reservoir was filled to overflowing by 20 December 1876. As with most Victorian reservoirs, Blackmoorfoot was formed by damming a valley, but due to the topography, it was necessary to build two dam walls. The total cost of the reservoir was £260,549.

The surface area of the reservoir is relatively large (c. 41 ha) but being situated at the base of the Pennines, and having a maximum depth of 12 m, there are no marginal or submerged plant communities (with the exception of small outcrops of Amphibious Bistort *Persicaria amphibia* along the west bank). Plantations of deciduous woodland (in which Rhododendron is dominant) fringe the west and east banks and there is a more extensive wooded area on the western half of the south bank. A small oak woodland (Orange Wood) lies immediately to the south of the reservoir and is included in the recording area.

The bird life of the area has been documented since the 1950s, but it was not until the mid-1970s that other life-forms began to be scrutinised with any seriousness. Since this time a number of specialists have been invited to the reservoir with a view to identifying organisms within their specialisation. With the advent of the Recorder database it became possible to maintain records that were easily accessible and workable. It was therefore decided that a subsite approach would be the best way forward: 16 subsites were erected.

For the purposes of evaluating invertebrate faunas and priorities for conservation action, invertebrates are attributed various rarity status categories, the meanings of which are given below. Criteria for the selection of species into the three Red Data Book categories follow Shirt (1987), with minor modifications derived from Hyman & Parsons (1994).

- 1) RED DATA BOOK CATEGORY 1. RDB1 - ENDANGERED. Species which are known or believed to occur as only a single population within one 10 km square of the National Grid.
- 2) RED DATA BOOK CATEGORY 2. RDB2 - VULNERABLE. Species which are declining throughout their range.
- 3) RED DATA BOOK CATEGORY 3. RDB3 - RARE. Species which are estimated to exist in only 15 or fewer 10 km squares. This criterion may be relaxed where populations are likely to exist in over 15 10 km squares but occupy small areas of especially vulnerable habitat.
- 4) RED DATA BOOK CATEGORY I. RDB I - INDETERMINATE. Taxa considered to be Endangered, Vulnerable or Rare, but where there is not enough information to say which of the three categories (RDB1 to 3) is appropriate.
- 5) RED DATA BOOK CATEGORY K. RDBK - INSUFFICIENTLY KNOWN. Taxa recently discovered or recognised in Great Britain which may prove to be more widespread in the future (although some recent discoveries may be placed in other categories if the group to which they belong is thought not to be under-recorded).
- 6) PROVISIONAL RED DATA BOOK. pRDB. The prefix 'p' before any Red Data Book category implies that the grading is provisional.
- 7) NOTABLE A. Species which are thought to occur in 30 or fewer 10 km squares of the National Grid or, for less well-recorded groups, within seven or fewer vice-counties.
- 8) NOTABLE B. Species which are thought to occur in between 31 and 100 10 km squares of the National Grid or, for less well recorded groups between eight and twenty vice-counties.
- 9) INDETERMINATE. Species considered to be Endangered, Vulnerable or Rare, but there is insufficient information to say which of these categories is appropriate.
- 10) INSUFFICIENTLY KNOWN. Taxa with very few known localities, but which belong to a poorly recorded or taxonomically difficult group.
- 11) LOCAL. The term is not rigidly defined, but loosely means species confined to a particular habitat type (usually associated with better quality examples of that habitat), a particular geographic area, or species that are too widespread to warrant Nationally Scarce (Notable) status but are nevertheless infrequently encountered.
- 12) COMMON. Common or very widespread species, frequently recorded.

13) UNKNOWN. Species where no status has been attributed. There may be confusion over the species' taxonomy, it may belong to a poorly recorded group or may occur in an infrequently sampled habitat.

All scientific names are taken from Duff (2008).

Those species with an asterisk * following the authority are saproxylic on deciduous trees (the n depicts a naturalised species). Those species with a double asterisk ** following the authority are saproxylic on conifers.

The known distribution of each species within the Kirklees Metropolitan Council area and also Yorkshire as a whole is discussed.

Central grid references for each subsite are as follows:

West bank	SE095126
East bank	SE102106
North waterworks	SE099130
Jubilee Quarries	SE103128
NE. corner	SE102130
South plantation	SE097123
Inflow	SE099123
Edge Moor	SE104125
Edge End Farm	SE103125
Orange Wood	SE101123
South waterworks	SE102123
SW corner overflow field	SE095123
West bank road	SE095126
North bank road	SE097131
North embankment	SE098130
South embankment	SE121124

CARABIDAE

There are 368 British species of this group which comprises the well-known "ground beetles". Both the adult and larval stages are essentially carnivorous and predacious, but a few genera devour cereal and seeds, and some may damage crops. Some genera are only nocturnally active and can be best studied by the setting of pitfall traps. This is one of the most extensively studied beetle groups, the volume of literature on the Carabidae being very extensive

Cicindela campestris Linnaeus, 1758 Local.

Green Tiger Beetle.

A large (15.0mm) tiger beetle, green with yellow speckles. It is found in areas with bare ground or sparse vegetation such as sandy heath, moorland, clay pits and quarry spoil heaps, always in sunny situations. Adults are active in early summer and will often take to the wing when disturbed. Both adults and larvae are predators on other invertebrates. The larvae form a burrow in the ground, often on or near paths. Widespread and common in some areas, very local in others.

A single individual seen in the large open area in Orange Wood on 13th May 2008 remains the only record. Although Edge Moor offers better habitat for this species, there are no records. Known to occur at seven other Kirklees localities. Widely distributed in Yorkshire.

Cychrus caraboides (Linnaeus, 1758) Local.

Snail Hunter.

Large (15.0-19.0mm) dull black ground beetle with very narrow foreparts, specially adapted to feeding on snails in their shells. Adults live under stones, under loose bark and in litter, usually in woodland but often in other habitats, particularly moorland.

Recorded from three subsites: West bank, East bank and Edge Moor (first record: West bank 1st June 1981). Common and widely distributed in Kirklees. Widespread in Yorkshire.

Carabus arvensis Herbst, 1784 Local.

A ground beetle.

Large (16.0-20.0mm), granulate bronze ground beetle of heathland and open moorland.

The only record remains that of a single along the West bank 10th June 1983. Known to occur at one other Kirklees locality. Widely, but thinly, distributed in Yorkshire.

Carabus nemoralis Muller, O.F., 1764 Local.

A ground beetle.

A large (22.0-26.0mm), greenish-bronze ground beetle which lives under stones, loose bark and among litter, venturing out at night to prey on other insects, particularly larvae. It is not restricted to any particular habitat but can be found in arable fields and gardens. Although widespread it has declined recently over much of its range. The long, black larva has a greenish tint and red legs, is found from April and becomes full grown by July. The adult is particularly active at night in August and September and discharges an acrid liquid from the anus and mouth when disturbed.

Recorded from two subsites: West bank and NE corner (first record: West bank 7th July 1987). Widely distributed in both Kirklees and the rest of Yorkshire.

Carabus problematicus Herbst, 1786 Common.

A ground beetle.

Large (18.0-30.0mm) metallic blue- or purple-black ground beetle. No particular habitat specificity, although less often on arable land. Particularly in woodland and on moorland, living under stones, under loose bark or among plant litter. Widespread and common, probably the commonest *Carabus* species in Britain.

Recorded from four subsites: West bank, East bank, NE corner and Orange Wood (first record: West bank 26th August 1978). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Carabus violaceus Linnaeus, 1758 Common.

Violet Ground Beetle.

Large (20.0-30.0mm) metallic blue- or purple-black ground beetle. Most habitats, including gardens and arable, living under stones, loose bark and in plant litter. Generally common species, although has declined in some areas.

Recorded from Orange Wood on three occasions (first record: 10th May 2009). Widely distributed in both Kirklees and Yorkshire, but somewhat rarer than *Carabus problematicus*.

Leistus ferrugineus (Linnaeus, 1758) Common. A ground beetle.
Red brown small ground beetle. Most types of habitat, particularly in grassland, living in grass tussocks, under stones, in litter etc. Widespread and common over much of Great Britain, becoming rare in Scotland.

Recorded from two subsites: West bank and Edge Moor (where it is frequently recorded) (first record: West bank 4th May 1981). Widely distributed in both Kirklees and Yorkshire, with most records stemming from the centre and southern half.

Leistus fulvibarbis Dejean, 1826 Local. A ground beetle.
Small black ground beetle of moist places, often in woodland. Widely distributed but never abundant.

There are two records, both from the West bank (first record: 17th August 1979). Widely distributed in both Kirklees and the rest of Yorkshire.

Leistus terminatus (Hellwig in Panzer, 1793) Common. A ground beetle.
Small reddish brown beetle with a black head. Under stones, loose bark, in grass tussocks etc, primarily in damp places. Widespread and locally common over much of Britain.

Recorded from two subsites: West bank and Edge Moor (first record: West bank 15th June 1989). Widely distributed in both Kirklees and the rest of Yorkshire. This is the most widely distributed *Leistus* species in the county.

Nebria brevicollis (Fabricius, 1792) Common. A ground beetle.
Fairly large (10.0-14.0mm) black ground beetle. No particular habitat specificity, being extremely abundant in situations ranging from the shore, through woodland to high moorland.

Recorded from four subsites: West bank, NE corner, South waterworks and Orange Wood (first record: West bank 5th June 1979). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Nebria rufescens (Strom, 1768) Common. A ground beetle.
Fairly large (9.0-12.0mm) black ground beetle (form *balbi* Bonelli has red legs). Lives under stones, among shingle etc, at the side of upland streams and rivers, and also common among boulders and scree on high mountain tops. Widespread and locally common in much of upland Britain, very rare in the south and east.

The only record remains that of a single along the West bank on 15th September 1986. Common and widely distributed in Kirklees. In Yorkshire the species is mainly confined to the west and north-east (reflecting the habitat requirements of the species).

Nebria salina Fairmaire & Laboulbene, 1854 Common. A ground beetle.
Fairly large (10.0-14.0mm) black ground beetle living in a diversity of habitats from the shore to high moorland, usually under stones or among plant litter. It is very similar to the ubiquitous *Nebria brevicollis* and is probably much overlooked.

There are two records, both from the West bank (first record: 11th September 1986). Widely distributed in Kirklees. Widely, but thinly, distributed in Yorkshire.

Notiophilus biguttatus (Fabricius, 1779) Common. A ground beetle.
Small (5.0-6.0mm) bronze ground beetle. Diurnal, usually in fairly open ground, including gardens and arable, also on the shore and on high moorland. Very common species in all habitats throughout Great Britain.

Recorded from three subsites: West bank, inflow (in flood refuse) and Edge Moor (first record: West bank 7th July 1989). Common and widely distributed in both Kirklees and the rest of Yorkshire. One of the commonest Carabidae in Yorkshire.

Notiophilus palustris (Duftschmid, 1812) Local. A ground beetle.
Small (5.0-6.0mm) shiny black ground beetle. Diurnal, living among vegetation in damp, often shady places. Widely distributed and locally common over much of Great Britain.

The only record remains that of two specimens on Edge Moor on 25th August 2007. Known to occur at one other Kirklees locality. Widely, but very thinly, distributed in Yorkshire.

Notiophilus substriatus Waterhouse, G.R., 1833 Local. A ground beetle.
Small (4.5-5.5mm) bronze ground beetle of open, usually fairly dry, country, usually with short vegetation. Widely distributed but local over much of Great Britain.

Recorded from two subsites: West bank and Edge Moor (first record: Edge Moor 31st August 2005). Known to occur at one other Kirklees locality. Thinly distributed in Yorkshire with most records stemming from the southern half.

Elaphrus cupreus Duftschmid, 1812 Common. A ground beetle.
Bronze ground beetle with conspicuous purple ocellate depressions on the elytra (8.0-9.5mm). Common in marshland and on bare mud at the side of fresh water over much of Britain.

Recorded from three subsites: West bank, East bank and SW corner overflow field (first record: West bank 15th May 1985). Widely distributed in both Kirklees and the rest of Yorkshire.

Elaphrus riparius (Linnaeus, 1758) Common. A ground beetle.
Smallish (6.5-8.0mm) greenish bronze ground beetle living in marshland and on bare mud or shingle at the sides of rivers and lakes. Widespread and locally common over much of Britain.

There are five records, all from the West bank (first record: 6th July 1985). Known to occur at five other Kirklees localities. Widely distributed in Yorkshire.

Loricera pilicornis (Fabricius, 1775) Common. A ground beetle.
Small bronze-black ground beetle with conspicuously bristly antennae. Very common in most habitats, including gardens and arable.

Recorded from five subsites: West bank, East bank, Jubilee Quarries, Edge Moor and Orange Wood (first record: West bank 13th August 1978). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Dyschirius globosus (Herbst, 1784) Local. A ground beetle.
Small (2.0-3.0mm) shiny black fossorial ground beetle found on most types of moist ground, particularly bare peat and mud. Local but very widespread. Abundant where found.

Located at three subsites: West bank, East bank and inflow (first record: West bank 19th May 1992). Widely distributed in both Kirklees and the rest of Yorkshire.

Clivina fossor (Linnaeus, 1758) Common. A ground beetle.
A small (5.5-6.5mm), black ground beetle with fossorial habits, found commonly under stones, among litter and in grass tussocks on all types of open ground, preferring it not too dry and more or less vegetated. It is locally common throughout the British Isles except for the Scottish Highlands. It has the thorax divided from the abdomen by a waist and the forelegs are modified for digging.

Recorded from two subsites: West bank and Edge Moor (first record: West bank 13th August 1978). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Miscodera arctica (Paykull,1798) Notable/Nb. A ground beetle.
6.0-8.0mm long black ground beetle found on sand or gravel, often on moraine deposits, and in *Racomitrium* heath on mountain tops. Predatory on larvae of moss feeding pill beetles *Byrrhus* spp. A northern species, widespread in Scotland. Very local in England south to Staffordshire.

The only record remains that of a single found in flood refuse at the inflow on 13th February 1987. Known to occur at three other Kirklees localities. In Yorkshire the species is mainly confined to the west and north-east (reflecting the habitat requirements) but most records are pre-1985.

Patrobis atrorufus (Strom,1768) Common. A ground beetle.
7.5-10.0mm long reddish ground beetle. Common in moist habitats throughout Britain, most often in woodland but also in marshes, gardens and on moorland.

The only record remains that of specimens along the West bank on 16th September 1978. Widely distributed in both Kirklees and the rest of Yorkshire.

Patrobis septentrionis Dejean,1828 Notable/Nb. A ground beetle.
7.5-10.0mm long piceous black ground beetle of upland wetlands and streamsides with long vegetation.

The only record remains that of a single found in flood refuse at the inflow on 3rd October 1980. This is the only Yorkshire record and the most southerly record of a species which is confined to Scotland and northern England.

Trechus obtusus Erichson,1837 Common. A ground beetle.
3.5-4.0mm long orange brown ground beetle. Most habitats from high moorland to estuarine mud.

Recorded from three subsites: West bank, East bank and Edge Moor (first record: West bank 4th April 1984). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Trechus quadristriatus (Schrank,1781) Common. A ground beetle.
3.5-4.0mm long orange brown ground beetle. Under stones, in grass tussocks, on bare ground etc. Very common in most habitats.

Located at three subsites: West bank, East bank and Orange Wood (first record: East bank 16th May 1979). Widely distributed in Kirklees. Common and widespread in Yorkshire.

Trechoblemus micros (Herbst,1784) Local. A ground beetle.
4.0mm long reddish ground beetle of marshland, crevices on river and stream margins and hence, frequently in flood litter. Also sometimes in rodent burrows. Widespread but very local.

Recorded from flood refuse along the West bank on two occasions (first record: 9th June 1980). This is the only known Kirklees locality for the species. Widely, but very thinly, distributed in Yorkshire.

Asaphidion curtum (Heyden,1870) Common. A ground beetle.
Small bronze ground beetle with very bulbous eyes. Only recently added to British list by the splitting of *Asaphidion flavipes*. Grass tussocks, open ground, usually in moist conditions, including gardens and arable.

Recorded from the West bank on two occasions (first record: 10th July 1987). Known from a further five Kirklees localities. Widely distributed in Yorkshire, with most records stemming from the centre and southern half.

Bembidion lampros (Herbst,1784) Common. A ground beetle.
3.0-4.5mm long bronze ground beetle. Very common species, living under stones, in leaf litter, grass tussocks etc, also on open ground. Most habitats, including high altitude, also gardens and arable.

Located at three subsites: West bank, East bank and Jubilee Quarries (first record: West bank 17th August 1992). Common and widely distributed in both Kirklees and the rest of Yorkshire. This is the most commonly encountered *Bembidion* in the county.

Bembidion properans (Stephens,1828) Common. A ground beetle.
3.5-4.0mm long bronze ground beetle. Common, living in tussocks, leaf litter, under stones etc, also on open ground. Easily confused with the abundant *Bembidion lampros* and possibly under-recorded, although almost certainly less common than that species.

Recorded from three subsites: West bank, Edge Moor and NE corner (first record: West bank 7th May 1998). Widely distributed in Kirklees. Widely, but thinly, distributed in Yorkshire.

Bembidion dentellum (Thunberg,1787) Local. A ground beetle.
5.0-6.0mm long bronze ground beetle of wet places. Marshes, fens, riverbanks, often on bare mud but also amongst dense vegetation. Widespread but local. Abundant where found.

Located at two subsites: West bank and inflow (in flood refuse) (first record: West bank 11th August 1978). Widely distributed in Kirklees. Widespread in Yorkshire except for the far west and along the east coast.

Bembidion obliquum Sturm,1825 Notable/Nb. A ground beetle.
3.0-4.5mm long dull bronze ground beetle found on mud and in litter at the margin of freshwater, particularly in acid conditions. England north to Yorkshire.

Recorded from the West bank on numerous occasions (first record: 11th November 1978). This is the only known Kirklees locality for the species. In Yorkshire the species is widespread and sometimes abundant at localities in the centre and south.

Bembidion varium (Olivier,1795) Common. A ground beetle.
4.0-5.0mm bronze ground beetle. Open wet mud in marshes, fens, river banks and saltmarshes. Widespread and common in some areas, local in others. Abundant where found.

Recorded from the West bank on five occasions (first record: 26th June 1994). This is the only known Kirklees locality for the species. In Yorkshire the species is mainly confined to the south and south-east.

Bembidion atrocaeruleum (Stephens,1828) Local. A ground beetle.
4.5-5.5mm long metallic blue black ground beetle typical of gravel beds along rivers. Locally abundant at the side of gravelly rivers throughout Britain.

The only record remains that of specimens along the West bank on 17th August 1984. Known to occur at two other Kirklees localities. Widely, but thinly, distributed in the northern half of Yorkshire.

Bembidion bruxellense Wesmael,1835 Local. A ground beetle.
4.0-5.2mm long black ground beetle with four dull orange spots on elytra. Moist, sparsely vegetated ground, particularly river banks and on the coast. Local species, more common in the north but present throughout Great Britain.

The only record remains that of a single in flood refuse along the West bank on 23rd May 1980. Widely distributed in both Kirklees and the rest of Yorkshire.

Bembidion femoratum Sturm,1825 Local. A ground beetle.
4.2-5.2mm long red spotted black ground beetle. Open country, usually in moist situations although not necessarily by water.

Recorded from the West bank on 1st February 1987. This is the only known Kirklees locality for the species. Widely, but thinly, distributed in Yorkshire, but most records are pre-1985.

Bembidion deletum Aubinet-Serville,1821 Local. A ground beetle.
4.5-5.3mm long metallic blue-green ground beetle found on moist, clayey soil with trickling water, in particular by small streams but also in gravel pits etc. Widespread and often abundant.

Recorded from the West bank on 29th June 1979. Widely distributed in both Kirklees and the rest of Yorkshire.

Bembidion stephensii Crotch,1866 Local. A ground beetle.
5.2-6.1mm long black ground beetle found in shaded places and crevices in moist conditions, usually where there is trickling water. Predominantly coastal where it is found on earth cliffs. Widely distributed but very local.

Recorded from the West bank on 6th June 1997. This is the only known Kirklees locality for the species. Widely, but very thinly, distributed in Yorkshire. Interestingly, of the 28 records most are post-1980 and coastal.

Bembidion tetracolum Say,1825 Common. A ground beetle.
5.0-6.0mm long black ground beetle with four orange spots. Very common in most habitat types. Woodland, grassland, wetland, on the shore etc.

Recorded from the West bank on numerous occasions (first record: 23rd April 1983). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Bembidion quadrimaculatum (Linnaeus,1761) Common. A ground beetle.
3.0mm long shiny bronze black ground beetle with four red spots on the elytra. Open dry soil with little or no vegetation, very common in most parts of Britain, often in gardens or on arable land.

Located at two subsites: West bank and East bank (first record: West bank 26th December 1984). Widely distributed in both Kirklees and the rest of Yorkshire.

Bembidion gilvipes Sturm,1825 Notable/Nb. A ground beetle.
2.5-3.0mm long shiny black ground beetle of moss and litter in marshes and on riverbanks. England and Wales north to Yorkshire.

There are two records, both from the West bank (first record: 3rd January 1987). This is the only known Kirklees locality for the species. Mainly restricted to the centre and southern half of Yorkshire.

Bembidion clarkii (Dawson,1849) Notable/Nb. A ground beetle.
3.2-3.7mm long shiny black ground beetle with obscure paler markings. Wet places, often at the margins of ponds in woodland but sometimes in more open conditions. Also occasionally found under dead bark.

Recorded from the West bank on 3rd February 1987. Known to occur at one other Kirklees locality. In Yorkshire the species is mainly confined to the centre and southern half.

Bembidion fumigatum (Duftschmid,1812) Notable/Nb. A ground beetle.
3.5-4.0mm long metallic black ground beetle numerous lighter markings. Lives among litter in marshes. England and Wales north to Yorkshire.

Recorded from the West bank on 11th August 1986. This is the only known Kirklees locality for the species. Mainly confined to the southern half of Yorkshire.

Bembidion illigeri Netolitsky, 1914 Common. A ground beetle.
Shiny, four spotted ground beetle. Occurs on open mud, usually by ponds or on river banks. More common in the south but occurs locally as far north as the Scottish lowlands. British specimens are subspecies *illigeri*.

Recorded from the West bank on two occasions (first record: 7th August 1979). This is the only known Kirklees locality for the species. Widely distributed in Yorkshire, especially in the lowlands and on the coast.

Bembidion obtusum Audinet-Serville, 1821 Common. A ground beetle.
3.0-3.5mm long black ground beetle of open soils. Very common, frequent on cultivated ground and in gardens.

Recorded from the West bank on 4th May 1998. Widely distributed in both Kirklees and the rest of Yorkshire.

Bembidion aeneum Germar, 1824 Common. A ground beetle.
3.5-4.5mm long bronze-black ground beetle living among vegetation usually among mud at the side of freshwater and in muddy estuaries and saltmarshes. Locally abundant throughout much of Britain, especially on the coast.

Located at three subsites: West bank, East bank and South waterworks (first record: West bank 14th May 1980). Widely distributed in both Kirklees and the rest of Yorkshire.

Bembidion biguttatum (Fabricius, 1779) Common. A ground beetle.
3.8-4.3mm long metallic black ground beetle with apical yellow spot. Moist ground, among leaves and litter, mainly by water.

There are two records, both from the West bank (first record: 29th June 1989). Known to occur at one other Kirklees locality. In Yorkshire the species is mainly confined to the centre.

Bembidion guttula (Fabricius, 1792) Common. A ground beetle.
2.8-3.5mm long black ground beetle with obscure red spot at apex of elytra. Very common species in most habitats from the shore to high moorland, also gardens and arable.

Known from eight subsites: West bank, East bank, Edge Moor, Orange Wood, South embankment, South waterworks, SW corner overflow field and inflow (in flood refuse) (first record: West bank 12th February 1984). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Bembidion lunulatum (Geoffroy in Fourcroy, 1785) Common. A ground beetle.
3.5-4.0mm long black ground beetle with obscure reddish apical spot. Lives at the side of freshwater, usually on mud or among vegetation. Also on the shore. Very common in most of southern and midland England and Wales, at least as far north as Yorkshire. Much rarer north of this.

Recorded from four subsites: East bank, Edge Moor, South embankment and SW corner overflow field (first record: East bank 2nd April 1999). Known from eight other Kirklees localities. In Yorkshire the species is mainly to be found in the south and central lowlands with a few coastal records.

Ocys harpaloides (Audinet-Serville, 1821) Common. A ground beetle.
4.0-6.0mm long very dark brown ground beetle with conspicuous red thorax. Very common in many habitats, although usually in moist places. Under bark, in litter, on the shore, on river shingle etc. Also arable ground and gardens.

Located at two subsites: West bank and Orange Wood (first record: West bank 30th September 1996). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Ocys quinquestriatum (Gyllenhal,1810) Local. A ground beetle.
3.5-4.3mm brownish ground beetle with slight metallic sheen. Largely synanthropic, found in cellars, stables, under Ivy *Hedera helix* on walls etc. Very uncommon in 'wild' conditions where it is usually in moist, shady conditions.

Recorded from two subsites: South embankment (on the wall) and West bank (first record: West bank July 1983). The species has been recorded along the West bank on four occasions, each time in the Huddersfield Birdwatchers' Club hide. Known from a further two Kirklees localities. Very scarce in Yorkshire with most records stemming from the south-west quarter.

Pterostichus diligens (Sturm,1824) Common. A ground beetle.
5.0-7.0mm long black ground beetle. Very common in most habitats, in particular damper ones. Fairly easily confused with the very common *Pterostichus strenuus* and perhaps not quite as common as that species.

Known from seven subsites: West bank, East bank, Edge Moor, Orange Wood, South waterworks, SW corner overflow field and inflow (first record: West bank 28th July 1978). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Pterostichus madidus (Fabricius,1775) Common. Black Clock.
15.0-20.0mm long shiny black ground beetle (occasionally with red legs – form *concinus* Sturm), living under stones, loose bark and grass tussocks etc. Very common species in most habitats, including gardens and arable.

Known from nine subsites: West bank, East bank, NE corner, Jubilee Quarries, Edge Moor, South embankment, South waterworks, Orange Wood and inflow (first record: West bank 13th May 1979). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Pterostichus melanarius (Illiger,1798) Common. A ground beetle.
12.0-20.0mm long shiny black ground beetle, living under stones, loose bark and in grass tussocks and leaf litter etc. Most moist habitats. Locally common throughout Britain.

Recorded from three subsites: West bank, Orange Wood and Jubilee Quarries (first record: West bank 9th July 2005). Widely distributed in both Kirklees and the rest of Yorkshire.

Pterostichus minor (Gyllenhal,1827) Local. A ground beetle.
7.0-8.5mm long black predatory ground beetle, usually living in marshes. Widespread but local. More eurytopic in the west of Britain where it may be common.

Located at two subsites: West bank (in flood refuse) and East bank (in flood refuse) (first record: West bank 1st February 1983). Widely distributed in Kirklees. Widespread in Yorkshire except for the high ground in the north.

Pterostichus niger (Schaller,1783) Common. A ground beetle.
15.0-20.0mm long predatory black ground beetle. Common in most habitats, including gardens and arable, although does not occur in very dry places. Adults live under stones, under bark, in tussocks etc.

Recorded from four subsites: West bank, Orange Wood, NE corner and SW corner overflow field (first record: West bank 13th August 1978). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Pterostichus nigrita (Paykull,1790) Common. A ground beetle.
10.0-15.0mm long black ground beetle. Predatory. In 1988 it was realised that two species were included under this name, *Pterostichus nigrita* and *Pterostichus rhaeticus*, the two being separable with some difficulty. First indications are that the nominate species is widespread and common, but less so than *Pterostichus rhaeticus*, and more confined to wetland habitats, although it will be some time before the status and distribution of the two species is determined with any certainty.

Located at two subsites: West bank and Edge Moor (first record: West bank 19th June 1978). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Pterostichus rhaeticus Heer,1837/8 Common. A ground beetle.
10.0-15.0mm long black ground beetle. Predatory. Common in most habitats, particularly in wetland and woodland. In 1988 it was realised that two species were being recorded in Britain as *Pterostichus nigrita*. The two are separable only with difficulty and it is likely to be some time before the distribution and status of this species is determined, but first indications are that it is quite widespread, and possibly commoner than *Pterostichus nigrita*.

Recorded from two subsites: West bank and SW corner overflow field (first record: West bank 9th April 1989). Widely distributed in Kirklees. Widely, but thinly, distributed in Yorkshire.

Pterostichus strenuus (Panzer,1796) Common. A ground beetle.
5.0-7.0mm long black ground beetle. Predatory. Very common in almost every habitat, usually living among plant litter but also under stones. Common in gardens and on arable land.

Known from seven subsites: West bank, East bank, Edge Moor, Orange Wood, South plantation, South waterworks and SW corner overflow field (first record: West bank August 1981). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Pterostichus vernalis (Panzer,1795) Local. A ground beetle.
6.0-7.5mm long black ground beetle living under stones and among litter etc in moist meadows and also beside freshwater. Widespread and common over much of southern England and all of Wales, apparently much more local in the far north of England and Scotland.

A single was found in grass cuttings on the South embankment on 13th July 2010. Widely distributed in Kirklees and the southern half of Yorkshire.

Abax parallelepipedus (Piller & Mitterpacher,1783) Common. A ground beetle.
18.0-22.0mm long very broad dull black ground beetle. Lives under stones, loose bark, leaf litter etc, mostly in woodland but also in gardens and occasionally in other moist shady habitats. Common throughout Britain in suitable localities.

Recorded from two subsites: West bank and Jubilee Quarries (first record: West bank 3rd April 2005). Widely distributed in both Kirklees and the rest of Yorkshire.

Calathus fuscipes (Goeze,1777) Common. A ground beetle.
10.0-14.0mm long black ground beetle of dry open ground, including gardens and arable land. Generally common throughout Great Britain.

Located at two subsites: West bank and NE corner (first record: West bank 1st May 1981). Widely distributed in both Kirklees and the rest of Yorkshire.

Calathus melanocephalus (Linnaeus,1758) Common. A ground beetle.
A 6.0-9.0mm long ground beetle with two colour forms – black with a bright red pronotum, or all black. In 1989 it was recognised that *Calathus melanocephalus* incorporated two species in Britain, the true *Calathus melanocephalus* and *Calathus cinctus*. The true *Calathus melanocephalus* occurs in fairly dry conditions throughout the country.

Recorded from three subsites: West bank, East bank and Edge Moor (first record: West bank 15th July 1989). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Synuchus vivalis (Illiger, 1798) Local. A ground beetle.
6.0-8.5mm long black ground beetle living on open damp sand or gravel. Widespread throughout Britain but very local.

Located at three subsites: West bank (in flood refuse), Jubilee Quarries (in grass cuttings) and NE. corner (first record: West bank 27th May 1981). Known from two other Kirklees localities. Widely, but thinly, distributed in Yorkshire.

Olisthopus rotundatus (Paykull, 1790) Local. A ground beetle.
6.5-7.5mm long metallic bronze brown ground beetle, most often living on sandy heath or moorland, often under Heather *Calluna vulgaris*, less frequently of dry calcareous grassland, usually where there is bare ground. Local but widespread.

Recorded from two subsites: West bank and Orange Wood (first record: West bank 9th September 1979). Widely distributed in both Kirklees and the rest of Yorkshire.

Paranichus albipes (Fabricius, 1796) Common. A ground beetle.
6.5-9.0mm long black ground beetle with conspicuous yellow legs. Lives under stones and among litter and on mud at the side of rivers, on estuaries and on the shore. Widespread and very common.

Located at four subsites: West bank, East bank, Orange Wood and inflow (in flood refuse) (first record: West bank 8th October 1979). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Platynus assimilis (Paykull, 1790) Common. A ground beetle.
8.5-12.0mm long black ground beetle. Most often under bark in woodland, but often also found under stones and in tussocks, sometimes away from woodland. Sometimes partly colonial.

Recorded from two subsites: West bank and Orange Wood (first record: West bank July 1979). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Agonum fuliginosum (Panzer, 1809) Common. A ground beetle.
5.0-8.0mm long brownish black ground beetle. Predatory. Very common in most moist habitats, being found under stones, in leaf litter, under bark, on river shingle, on the shore etc.

Located at four subsites: West bank, Edge Moor, South waterworks and inflow (in flood refuse) (first record: West bank 16th September 1978). Common and widely distributed in Kirklees.

Agonum gracile Sturm, 1824 Local. A ground beetle.
6.0-7.0mm long black ground beetle living in damp shady places, particularly in *Sphagnum* bogs and among moss at the edge of standing water. Widespread but local.

Recorded from two subsites: West bank and Edge Moor (first record: West bank 4th October 1978). Widely distributed in both Kirklees and the rest of Yorkshire.

Agonum marginatum (Linnaeus, 1758) Local. A ground beetle.
8.5-10.5mm long metallic green ground beetle with conspicuous yellow sides to the elytra. Locally common in marshy places, bare mud at the side of ponds and lakes and on muddy coastlands.

There are two records, both from the West bank (first record: 29th October 1978). Widely distributed in both Kirklees and the rest of Yorkshire.

Agonum muelleri (Herbst,1784) Common. A ground beetle.
7.0-9.5mm long bicoloured ground beetle, metallic green and brassy. It occurs on open, moderately dry ground, including arable land. Widely distributed and locally common, flying readily and often therefore turning up on pavements etc.

Located at three subsites: West bank, South embankment and Edge Moor (first record: West bank 30th June 1989). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Agonum thoreyi Dejean,1828 Local. A ground beetle.
A rather small (6.0-8.0mm), brownish or black ground beetle which is widespread and common in the south but more local further north, occurring as far as Yorkshire. It lives in damp, heavily vegetated places, usually on clay soils near water, and is often in beds of Common Reed *Phragmites australis* or reedmace *Typha* spp., usually in the litter. Two colour forms are known, *puellum* as described above and *thoreyi* which has pale, yellow or light brown elytra. Both forms occur together and so cannot be regarded as subspecies.

The only record remains that of a single found in flood refuse along the East bank on 26th March 1999. Known from eight other Kirklees localities. Widely distributed in Yorkshire, but absent from the north-east.

Oxypselaphus obscurus (Herbst,1784) Local. A ground beetle.
5.0-6.5mm long, very narrow, reddish brown ground beetle found in damp deciduous woods and densely vegetated marshes among reed and leaf litter and moss. Widely distributed but local.

Recorded from the West bank on 26th December 1984. Known to occur at one other Kirklees locality. In Yorkshire the species is mainly restricted to a narrow central corridor which runs north to south.

Curtonotus aulicus (Panzer,1796) Common. A ground beetle.
11.0-15.0mm long black ground beetle living under stones in grassland and waste ground. Adults nocturnal, feeding on seeds of Compositae.

Located at three subsites: West bank, Edge Moor and South waterworks (first record: West bank 13th May 1998). Known from a further eight Kirklees localities. Widely distributed in Yorkshire.

Amara aenea (De Geer,1774) Common. Common Sun Beetle.
6.0-9.0mm long oval bronze ground beetle. Largely phytophagous. Most often on dry sandy ground with sparse vegetation, but also common on bare soil in gardens, arable land, river gravels etc. Flies readily and often occurs in 'swarms' on hot days in towns.

Known from seven subsites: West bank, East bank, Jubilee Quarries, Edge Moor, South embankment, SW corner overflow field and inflow (in flood refuse) (first record: West bank 20th March 1998). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Amara apricaria (Paykull,1790) Common. A ground beetle.
6.5-9.0mm long brownish black ground beetle. Phytophagous. Common in open dryish habitat, often in gardens and waste ground. Perhaps more local in the far north.

Recorded from the West bank on 15th June 1988. Widely distributed in both Kirklees and the rest of Yorkshire.

Amara communis (Panzer,1797) Local. A ground beetle.
6.0-8.0mm long brassy oval ground beetle occurring in moss and under leaf rosettes in fairly dry open country. Phytophagous. Widespread but nowhere common.

Recorded from five subsites: West bank, East bank, Edge Moor, South embankment and South waterworks (first record: West bank 26th March 1983). Known from a further six Kirklees localities. Widely, but thinly, distributed in Yorkshire.

Amara convexior Stephens, 1828 Local. A ground beetle.
7.0-8.0mm long oval, brassy ground beetle of dry gravelly ground, often in gravel pits. Local, becoming very uncommon in the north.

Recorded from Orange Wood on 30th June 1987. Known to occur at one other Kirklees locality. Very scarce in Yorkshire with records from five other localities.

Amara familiaris (Duftschmid, 1812) Common. A ground beetle.
5.5-7.2mm long brassy oval ground beetle. Phytophagous. Very common in all types of open ground, including gardens and arable land.

Located at five subsites: West bank, East bank, Edge Moor, South embankment and inflow (in flood refuse) (first record: West bank 16th December 1978). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Amara lunicollis Schiodte, 1837 Local. A ground beetle.
7.5-9.0mm long oval metallic ground beetle of meadows, gardens and open woods, especially on peaty soil. Also under moss carpets on rocks and in grass litter. Widely distributed but somewhat local.

Recorded from two subsites: West bank and Edge Moor (first record: West bank 3rd June 1979). Widely distributed in Kirklees. In Yorkshire the species is mainly confined to the south and centre.

Amara ovata (Fabricius, 1792) Common. A ground beetle.
8.0-9.5mm long oval blue-black ground beetle of dry, open ground with sparse vegetation, such as quarries, railway embankments etc. Widespread and common in southern Britain, perhaps becoming more local in the north.

Located at two subsites: West bank and a garden near the Bull's Head public house (first record: West bank 10th June 1997). Known to occur at three other Kirklees localities. Widely, but very thinly, distributed in Yorkshire.

Amara plebeja (Gyllenhal, 1810) Common. A ground beetle.
6.0-8.0mm long bronze black oval ground beetle. Phytophagous. Very common in most habitats, including gardens, arable land etc.

Known from seven subsites: West bank, East bank, Jubilee Quarries, Edge Moor, NE corner, Orange Wood and South embankment (first record: West bank 15th May 1985). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Amara similata (Gyllenhal, 1810) Common. A ground beetle.
8.0-10.0mm long oval black ground beetle, usually occurring on waste ground where there is ruderal vegetation. Phytophagous. Widely distributed and generally fairly common.

Recorded from two subsites: Edge Moor and South embankment (first record: South embankment 25th June 2001). Known to occur at a further twelve Kirklees localities. Widely distributed in Yorkshire.

Ophonus rufibarbis (Fabricius, 1792) Common. A ground beetle.
6.2-9.5mm long black ground beetle. Most types of habitat including gardens and arable land. Phytophagous. Very common species in southern England as far north as Yorkshire. Much more local north of this.

The only record remains that of males located in stable refuse on Edge Moor on 14th June 2009. Common and widely distributed in both Kirklees and the rest of Yorkshire.

Harpalus rufipes (De Geer,1774) Common. Strawberry Seed Beetle.
10.0-17.0mm long black ground beetle with red legs and yellowish pubescence. Common in grassland, gardens, arable land, waste ground etc. Phytophagous, sometimes a pest of strawberries *Fragaria* spp.

Recorded from the West bank on 5th May 1992. Widely distributed in both Kirklees and the rest of Yorkshire.

Harpalus latus (Linnaeus,1758) Common. A ground beetle.
8.2-11.0mm long black, phytophagous ground beetle found in all kinds of open to lightly shaded ground. Particularly common in dunes and sandy grassland. Common in southern England, becoming much more local in the north.

Located along the East bank on 9th August 2001. Known to occur at a further seven Kirklees localities. Widely, but very thinly, distributed in Yorkshire.

Trichocellus cognatus (Gyllenhal,1827) Local. A ground beetle.
3.5-4.2mm long blackish brown ground beetle of open, sandy or peaty ground, especially on upland Heather *Calluna vulgaris* moors. More common in the north, but occasional on sandy heaths in the Midlands and Hampshire.

Recorded along the West bank on numerous occasions (first record: 12th February 1985). Known to occur at one other Kirklees locality. Widely, but thinly, distributed in Yorkshire.

Trichocellus placidus (Gyllenhal,1827) Local. A ground beetle.
4.0-5.5mm long brownish black ground beetle living among reed and other litter of fens and lowland river banks. Widespread but local, abundant where found.

Located at three subsites: West bank, Edge Moor and South waterworks (first record: West bank 20th March 1998). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Bradycellus caucasicus (Chaudoir,1846) Common. A ground beetle.
3.0-4.0mm long dark brown ground beetle of sandy and peaty soils, usually in litter under Heather *Calluna vulgaris*. Northern moorland species but also found in lowland heath south to Cambridgeshire. Widespread and not uncommon in the uplands.

Recorded from flood refuse along the West bank on 20th March 1983. Known to occur at one other Kirklees locality. Widely, but very thinly, distributed in Yorkshire.

Bradycellus harpalinus (Audinet-Serville,1821) Common. A ground beetle.
3.8-4.2mm long dark reddish to black ground beetle living in litter under Heather *Calluna vulgaris* on sandy or peaty soils. Lowland heathland and moorland. Widespread and common in suitable localities.

Located at four subsites: West bank, Edge Moor, South waterworks and inflow (in flood refuse) (first record: West bank 23rd July 1979). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Bradycellus ruficollis (Stephens,1828) Common. A ground beetle.
2.5-3.4mm long black ground beetle with sharp red central stripe. Lives under Heather *Calluna vulgaris* on sand or peat. Widely distributed and common on heathland and moorland.

Recorded from three subsites: West bank, East bank and Edge Moor (first record: West bank 26th February 1983). Widely distributed in both Kirklees and the rest of Yorkshire.

Bradycellus verbasci (Duftschmid,1812) Common. A ground beetle.
4.5-5.0mm long reddish ground beetle. Phytophagous, found mainly on sandy and gravelly soils, but often climbing vegetation, particularly onto umbelliferous flowers and often therefore caught by sweeping. Flies readily and regularly comes to light at night. Common and widespread.

Located at two subsites: West bank and Edge Moor (first record: West bank 26th May 1989). Widely distributed in both Kirklees and the rest of Yorkshire.

Stenolophus mixtus (Herbst,1784) Local. A ground beetle.
5.0-5.5mm long blackish brown ground beetle with paler markings, living at the margins of ponds, streams, rivers and in fens, usually among dense vegetation. Widespread but local north to Co. Durham. Abundant where found.

Recorded from the West bank on seven occasions (first record: 25th May 1984). Known to occur at one other Kirklees locality. In Yorkshire the species is mainly confined to the southern half.

Acupalpus parvulus (Sturm,1825) Local. A ground beetle.
3.0-4.0mm long brownish black ground beetle with paler spots. Lives among lush vegetation at the margins of freshwater, usually in acid conditions. England and Wales north to Yorkshire.

Located along the West bank on three occasions (first record: 1st September 1991). This is the only known Kirklees locality for the species. Widely distributed in Yorkshire but absent from the north.

Acupalpus dubius Schilsky,1888 Local. A ground beetle.
2.5-2.7mm long brownish black ground beetle of damp moss, leaf litter, etc, in marshy and heathy places. Widespread but local, becoming rarer in the north.

Recorded from the West bank on two occasions (first record: 6th July 1989). Known to occur at a further three Kirklees localities. In Yorkshire the species is confined to the south and centre.

Badister bullatus (Shrank,1798) Common. A ground beetle.
A common and attractive, bright red and black predatory ground beetle which is usually found under stones, in moss or litter in a variety of habitats. It is the most eurytopic *Badister* species, occurring in dry as well as moist and open as well as shaded places.

Located in stable refuse on Edge Moor on three occasions (first record: 15th April 2006). Widely distributed in both Kirklees and the rest of Yorkshire.

Badister sodalis (Duftschmid,1812) Local. A ground beetle.
4.0-5.0mm long brownish black predatory ground beetle found among damp leaf litter and moss, usually by running water. Widespread but very local.

Recorded from the West bank on 18th February 1990. This is the only known Kirklees locality for the species. Thinly distributed in Yorkshire with most records stemming from the southern half.

Paradromius linearis (Olivier,1795) Common. A ground beetle.
4.5-6.0mm long reddish brown ground beetle. Found in most types of habitat, often in leaf or reed litter, under bark, in moss etc. Very common throughout Britain.

Located at four subsites: Edge Moor (regularly recorded from stable refuse), Orange Wood, South waterworks and inflow (in flood refuse) (first record: inflow 15th April 1998). Known to occur at a further four Kirklees localities. Common and widely distributed in Yorkshire.

Philorhizus melanocephalus (Dejean,1825) Common. A ground beetle.
2.5-3.5mm long pale brown ground beetle with a black head. Found in leaf litter, moss, among tall grass etc. Very common in most habitats, particularly in grassland and on the coast.

Located at four subsites: West bank, Edge Moor (regularly recorded from stable refuse), South waterworks and inflow (in flood refuse) (first record: inflow 15th April 1998). Widely distributed in both Kirklees and Yorkshire, but absent from the north of the county.

Dromius meridionalis Dejean, 1825 Local. A ground beetle.
6.0-7.0mm long red brown 'ground' beetle usually found mainly under bark of deciduous trees, occasionally on conifers. Widespread and locally common.

Recorded along the West bank on three occasions (first record: 15th June 1986). Known from a further two Kirklees localities. Widely, but very thinly, distributed in Yorkshire.

Dromius quadrimaculatus (Linnaeus, 1758) Common. A ground beetle.
5.2-6.4mm long, rather flattened dark brown ground beetle with prominent white spots on the elytra. Found beneath bark and on trunks of trees. Widely distributed and generally common.

Located under bark along the West bank on 16th February 2001. Widely distributed in both Kirklees and the rest of Yorkshire.

Calodromius spilotus (Illiger, 1798) Common. A ground beetle.
3.0-4.0mm long brown ground beetle with four cream spots on elytra. Lives in fissures in bark and under dead bark, usually of standing trees, often on conifers. Locally common throughout the country.

Recorded under bark along the West bank on two occasions (first record: 24th October 1983). Widely distributed in both Kirklees and the rest of Yorkshire.

Water beetles

As a group, the water beetles of the reservoir have not been systematically worked, although occasional attempts to record them have been undertaken. This, in part, is due to a lack of habitat. With the exception of the reservoir itself, which is unfavourable for most water beetles as it has no submerged or marginal plant communities, the only water bodies which offer a suitable habitat are the small pond on Edge Moor, the pond near Jubilee Quarries (now filled with rubble etc), the catchment drain (inflow channel) and the SW corner overflow field (only when the reservoir is full, or nearly full to capacity).

HALIPLIDAE

All species of this family are to be found among aquatic plants in slow flowing or stagnant water and both the adults and larvae feed on algae.

Haliphus confinis Stephens, 1828 Common. A crawling water beetle.
A water beetle usually found in lakes and quarry ponds.

Recorded from the inflow channel on 12th June 2006. This is the only known Kirklees locality for the species.

Haliphus lineatocollis (Marsham, 1802) Common. A crawling water beetle.
Located at two subsites: Jubilee Quarries (pond) and inflow channel (first record: both subsites 12th June 2006). Known from a further five Kirklees localities.

Haliphus lineolatus Mannerheim, 1844 Local. A crawling water beetle.
A water beetle found in man-made ponds and lakes.

Recorded from the West bank on 6th May 1989. Known to occur at one other Kirklees locality.

Haliplus ruficollis (De Geer,1774) Common.

A crawling water beetle.

A water beetle of well vegetated, lowland ponds and lakes.

Located in the inflow channel on 12th June 2006. Known from a further four Kirklees localities.

Haliplus sibiricus Motschulsky,1860 Local.

A crawling water beetle.

Water beetle found in all types of lowland water. Widespread but local.

Recorded from Jubilee Quarries (pond) on 12th June 2006. Known from a further five Kirklees localities.

NOTERIDAE

Noterus clavicornis (De Geer,1774) Local.

The Larger Noterus.

A local water beetle of lowland, grassy ponds. It is mostly found in the southern half of Britain, becoming scarce in northern England and only just reaching the Scottish Border and the Dumfries area. Often abundant where it occurs. In the north it does appear to be confined to older, well established sites.

Located in the SW corner overflow field on 12th June 2006. Known from two other Kirklees localities.

DYTISCIDAE

The adults of this large family, 118 British species, are well adapted for life in water as they have a stream-lined body and long-haired hind leg modified for swimming. Air is collected from the surface of the water and stored beneath their elytra. They can also fly, and move to new water bodies when necessary.

Hydroporus discretus Fairmaire & Brisout,1859 Local.

A water beetle.

Small black water beetle of springs and cold streams. Its distribution suggests an association with chalk and limestone, but this is probably because springs are commoner in such areas. Patchily distributed throughout Great Britain but local.

Recorded along the West bank on two occasions (first record: 7th June 1983). This is the only known Kirklees locality for the species.

Hydroporus gyllenhali Schiodte,1841 Common.

A water beetle.

A small reddish-brown water beetle, 3.0 to 4.0mm long. Found in peaty water throughout the British Isles, but apparently declining in the Midlands.

Recorded from the West bank on three occasions (first record: 4th June 1983). Widely distributed in Kirklees.

Hydroporus incognitus Sharp,1869 Local.

A water beetle.

A small water beetle usually found in woodlands but sometimes abundant in peat bogs and fens. Somewhat scattered distribution centred on the Scottish Border (fortuitous due to recording pressure?), but rare or absent in south-west England, south and central Wales and the central Highlands.

Located at three subsites: Jubilee Quarries (pond), SW corner overflow field and inflow channel (all records 12th June 2006). Known from a further eight Kirklees localities.

Hydroporus memnonius Nicolai,1822 Common.

A water beetle.

Water beetle usually found in shallow pools among dead leaves. Widespread but not usually considered common possibly because it is a difficult species to collect by normal techniques.

Recorded from four subsites: West bank, Edge Moor (pond), Jubilee Quarries (pond) and SW corner overflow field (first record: West bank 29th June 1980). Known from a further nine Kirklees localities.

Hydroporus palustris (Linnaeus,1761) Common. A water beetle.
A small dark water beetle. One of the commonest species and with no obvious habitat associations.

Located at three subsites: West bank, Jubilee Quarries (pond) and SW corner overflow field (first record: West bank 4th August 1983). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Hydroporus planus (Fabricius,1781) Common. A water beetle.
A small black water beetle. One of the commonest species. An active flier which can turn up almost anywhere, but appears to prefer lower altitudes.

Recorded from the inflow channel on 12th June 2006. Common and widely distributed in both Kirklees and the rest of Yorkshire.

Hydroporus pubescens (Gyllenhal,1808) Common. A water beetle.
A small black diving beetle. A very widespread and common species with no obvious habitat associations.

Located at five subsites: West bank, Jubilee Quarries (pond), Edge Moor (pond), SW corner overflow field and inflow channel (first record: West bank 6th May 1979). Widely distributed in Kirklees.

Hydroporus tristis (Paykull,1798) Common. A water beetle.
A common species in acid waters throughout Britain, although loss of habitat in central and eastern England has led to something of a disjunct distribution with southern heathland sites now isolated from the main range in the north and west.

Recorded from the SW corner overflow field on 12th June 2006. Known from a further five Kirklees localities.

Stictonectes lepidus (Olivier,1795) Notable/Nb. A water beetle.
Small yellow and black water beetle of clear well oxygenated water. Most records are for base-poor streams and quarry ponds with a concentration of localities on the Millstone Grit in the Pennines. Scattered and very local.

Located at two subsites: West bank and Jubilee Quarries (pond) (first record: West bank 16th August 1984). Known from a further ten Kirklees localities.

Graptodytes pictus (Fabricius,1787) Local. A water beetle.
A southern water beetle found in ditches and ponds. In north-eastern England, it is mainly found in man-made water bodies, and it appears to be declining in this region. Widespread in lowland Britain, but absent from the south-west and northern Scotland.

Recorded from the West bank on 8th May 1981. Known from a further three Kirklees localities.

Nebrioporus elegans (Panzer,1794) Common. A water beetle.
An attractively marked black and yellow diving beetle, slightly less than 10mm in length, found in stony rivers and lakes, sometimes in abundance.

Located at two subsites: SW corner overflow field and inflow channel (first record: both subsites 12th June 2006). Known from a further two Kirklees localities.

Stictotarsus duodecimpustulatus (Fabricius,1792) Local. A water beetle.
Water beetle usually found in fast flowing streams and rivers, but occasionally in well oxygenated still water such as quarry ponds.

Recorded from two subsites: West bank and Jubilee Quarries (pond) (first record: West bank 24th August 1983). Known from a further two Kirklees localities.

Oreodytes davisii (Curtis,1831) Notable/Nb. A water beetle.
Water beetle found amongst sand and gravel in fast flowing streams. Common in northern and western Britain, but scarce or absent in southern and central England.

Located along the West bank on 17th September 1986. Known from one other Kirklees locality.

Oreodytes sanmarkii (Sahlberg,C.R.,1826) Common. A water beetle.
A small yellow and black water beetle found in fast-flowing and rocky streams and rivers. Restricted to western and northern Britain.

Recorded from two subsites: Orange Wood (in the stream) and inflow channel (first record: Orange Wood 31st August 1994). Known from a further nine Kirklees localities.

Platambus maculatus (Linnaeus,1758) Common. A water beetle.
Flightless water beetle found in a variety of flowing water habitats, usually where there is little vegetation. Widespread and common, but absent from islands except Skye.

Located at two subsites: West bank and inflow channel (first record: West bank 15th June 1986). Known from a further six Kirklees localities.

Agabus bipustulatus (Linnaeus,1767) Common. A water beetle.
A common and widely distributed black water beetle, found in a very wide range of water body types all over the country.

Recorded from five subsites: West bank, Jubilee Quarries (pond), Edge Moor (pond), South waterworks (in the channel), Orange Wood (in the stream) and inflow channel (first record: West bank 30th July 1984). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Agabus didymus (Olivier,1795) Local. A water beetle.
A water beetle found in lowland slow flowing water such as grassy streams and, very occasionally, in ponds with grassy edges. Widely distributed in England north to Northumberland in the east and Cheshire in the west.

Located at two subsites: West bank and SW corner overflow field (first record: West bank 20th July 1984). Known from a further four Kirklees localities.

Agabus guttatus (Paykull,1798) Common. A water beetle.
Found in all types of running water, both lowland and upland.

Recorded from two subsites: West bank and Orange Wood (in the stream) (first record: West bank April 1995). Known from a further thirteen Kirklees localities.

Agabus nebulosus (Forster,1771) Common. A water beetle.
A black and pale straw coloured water beetle, common and widespread over much of the British Isles. Usually found in open water with little vegetation, often temporary pools or recently created habitats.

Located in Jubilee Quarries (pond) on 12th June 2006. Known from a further three Kirklees localities.

Agabus paludosus (Fabricius,1801) Local. A water beetle.
Water beetle found in slow moving water in lowland situations.

Recorded from the inflow channel on 12th June 2006. Known from a further three Kirklees localities.

Agabus sturmii (Gyllenhal in Schonherr,1808) Common. A water beetle.
A common water beetle of fens, marshes and ponds.

Located at two subsites: Jubilee Quarries (pond) and inflow channel (first record: both subsites 12th June 2006). Known from a further six Kirklees localities.

Ilybius fuliginosus (Fabricius,1792) Common. A water beetle.
An active water beetle recorded from a variety of situations including small streams and temporary ponds.

Recorded from three subsites: West bank, SW corner overflow field and inflow channel (first record: West bank 6th June 1989). Known from a further eleven Kirklees localities.

Rhantus exsoletus (Forster,1771) Local. A water beetle.
A water beetle of lowland, acid ponds and old fenland areas where it is found in sedge *Carex* spp. beds. Rare or absent in the south-west and Wales and most abundant in southern Scotland.

Located along the West bank on 9th April 1989. Known from one other Kirklees locality.

GYRINIDAE

The members of this family are all surface swimmers of a very distinctive appearance and a gregarious nature, often occurring in large congregations.

Gyrinus substriatus Stephens,1828 Common. A whirligig.
The common whirligig beetle. Abundant in all types of still water throughout Britain.

Recorded from six subsites: West bank, Jubilee Quarries (pond), Edge Moor (pond), South waterworks (in the channel), SW corner overflow field and inflow channel (first record: West bank 15th May 1978). Widely distributed in Kirklees.

HYDROPHILIDAE

Although a large number of species are truly aquatic, the name of the family is inappropriate as a considerable number are wholly terrestrial. Habitats include damp or marshy places amongst vegetable refuse, dung, the roots of certain plants and water bodies of various types.

Helophorus aequalis Thomson,C.G.,1868 Common. A scavenger water beetle.
Water beetle which, whilst being common and widely distributed, appears to favour somewhat acidic conditions.

Located at five subsites: West bank, East bank, Jubilee Quarries, SW corner overflow field and inflow channel (first record: West bank 29th November 1979). Widely distributed in Kirklees.

Helophorus arvernicus Mulsant,1846 Notable/Nb. A scavenger water beetle.
Small water beetle of slow flowing rivers where it can be found in wet silt at the margins. Locally distributed, mainly in the west and the Scottish Borders.

Recorded from the South waterworks channel on 2nd July 2009. Known from one other Kirklees locality.

Helophorus brevipalpis Bedel,1881 Common. A scavenger water beetle.
3.0mm long speckled brown water beetle. Very common in almost any type of still water. Often swarms and lands on any shiny surface. One of Britain's commonest beetles.

Located at seven subsites: West bank, East bank, Jubilee Quarries, Edge Moor, SW corner overflow field, South waterworks (in the channel) and inflow channel (first record: East bank 21st April 1982). Widely distributed in Kirklees. Common and widespread in Yorkshire.

Helophorus flavipes Fabricius,1792 Common. A scavenger water beetle.
A small black phytophagous water beetle restricted to peaty substrates. Widespread in suitable areas throughout the British Isles. One of the typical species of heath and moorland ponds.

Recorded from six subsites: West bank, East bank, Edge Moor, Orange Wood, South waterworks and SW corner overflow field (first record: West bank 10th February 1982). Known from a further eight Kirklees localities. Common and widespread in Yorkshire.

Helophorus grandis Illiger,1798 Common. A scavenger water beetle.
7.0mm long brownish water beetle living in stagnant or slow flowing water including ponds, puddles, wheel ruts etc. Very common over Britain. Flies readily and is often attracted to shiny paintwork.

Located at seven subsites: West bank, Jubilee Quarries, Edge Moor, Orange Wood, South waterworks (in the channel), SW corner overflow field and inflow (in the channel and flood refuse) (first record: West bank 29th November 1979). Widely distributed in Kirklees. Common and widespread in Yorkshire.

Helophorus minutus Fabricius,1775 Common. A scavenger water beetle.
Water beetle mainly recorded from lowland, standing water.

Recorded from four subsites: West bank, Orange Wood, South waterworks and inflow channel (first record: Orange Wood 31st August 1994). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Helophorus obscurus Mulsant,1844 Common. A scavenger water beetle.
3.0mm long brown water beetle. Common in still, muddy bottomed water.

Located in the SW corner overflow field on 12th June 2006. Known from a further two Kirklees localities.

Coelostoma orbiculare (Fabricius,1775) Common. A scavenger water beetle.
4.5-5.0mm long brownish black water beetle, frequently living in moss or wet plant debris at the side of freshwater as well as living in the water itself. Very common in a variety of water types.

Recorded from two subsites: West bank and South waterworks (in the channel) (first record: West bank 6th June 1986). Known from two other Kirklees localities.

Sphaeridium bipustulatum Fabricius,1781 Common. A scavenger water beetle.
6.0mm long rounded dung beetle, black with red and creamy yellow markings on the wing cases. Usually in very fresh dung, especially cow and horse dung, often arriving within minutes of the dung being deposited. Widespread and common species, difficult to distinguish from the equally common species *Sphaeridium lunatum* without dissection of males.

Located in horse dung on Edge Moor on two occasions (first record: 2nd June 2007). Known from two other Kirklees localities.

Sphaeridium lunatum Fabricius,1792 Common. A scavenger water beetle.
6.0mm long rounded dung beetle, common but difficult to distinguish from the equally common species *Sphaeridium bipustulatum* without dissection of males. Usually in very fresh dung, especially cow and horse dung, often arriving within minutes of the dung being deposited.

Recorded from three subsites: West bank, Edge Moor (in horse dung) and South embankment (in horse dung) (first record: West bank 11th October 1991). Widely distributed in Kirklees.

Sphaeridium marginatum Fabricius,1787 Unknown. A scavenger water beetle.
Located at two subsites: West bank and Edge Moor (in horse dung) (first record: West bank 1st September 1992). Widely distributed in Kirklees.

Sphaeridium scarabaeoides (Linnaeus,1758) Common. A scavenger water beetle.
5.0-8.0mm long oval black beetle with red and yellow markings. Adults are attracted to very fresh (liquid) cow dung, wherein the larvae develop. Very common throughout Britain.

Recorded from five subsites: West bank, Edge Moor (in horse dung), South embankment (in horse dung), Orange Wood and inflow (first record: West bank 23rd May 1983). Widely distributed in Kirklees.

Cercyon analis (Paykull,1798) Unknown. A scavenger water beetle.
Located at six subsites: West bank, East bank, Edge Moor (in horse dung and stable refuse), South embankment (in horse dung), South waterworks and Orange Wood (first record: West bank 8th August 1984). Widely distributed in Kirklees.

Cercyon impressus (Sturm,1807) Common. A scavenger water beetle.
3.0mm long black dung beetle with reddish apex to the elytra. Usually recorded in sheep, horse or cow dung, but occasionally also in rotting plant material and carrion. Very common.

Recorded from three subsites: West bank, Edge Moor (in horse dung and stable refuse) and South embankment (first record: West bank 3rd April 2005). Known from a further seven Kirklees localities.

Cercyon haemorrhoidalis (Fabricius,1775) Common. A scavenger water beetle.
2.0-3.0mm long black and red beetle living in herbivore dung. Very common.

Located at five subsites: West bank, East bank, NE corner, Edge Moor (in horse dung and stable refuse) and South embankment (first record: West bank 21st May 1989). Widely distributed in Kirklees.

Cercyon lateralis (Marsham,1802) Local. A scavenger water beetle.
2.5mm long black beetle living in dung. Somewhat local.

Recorded from four subsites: West bank, Edge Moor (in horse dung and stable refuse), South waterworks and South embankment (first record: West bank 1st April 1982). Widely distributed in Kirklees.

Cercyon marinus Thomson,C.G.,1853 Local. A scavenger water beetle.
3.0mm long black and dirty yellow beetle living among submerged plant litter at the edges of still water and in marshes. Local throughout Britain.

Located along the West bank on 21st March 2003. This is the only known Kirklees locality for the species.

Cercyon melanocephalus (Linnaeus,1758) Common. A scavenger water beetle.
3.0mm long black and red dung beetle. Very common species, occurring in most types of animal dung.

Recorded from eight subsites: West bank, East bank, NE corner, Edge Moor (in horse dung and stable refuse), South embankment (in horse dung), Orange Wood, South waterworks and inflow (in flood refuse) (first record: West bank 20th March 1998). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Cercyon pygmaeus (Illiger,1801) Unknown. A scavenger water beetle.
Located at four subsites: West bank, Edge Moor (in horse dung), Orange Wood and South embankment (first record: West bank 6th August 1983). Widely distributed in Kirklees.

Cercyon quisquilius (Linnaeus,1761) Unknown. A scavenger water beetle.
Recorded from stable refuse on Edge Moor on four occasions (first record: 20th May 2007). Widely distributed in Kirklees.

Cercyon terminatus (Marsham,1802) Local. A scavenger water beetle.
A small shining black beetle associated with decaying vegetable material.

Located at two subsites: West bank and South waterworks (first record: West bank 19th August 1983). Known from one other Kirklees locality.

Cercyon unipunctatus (Linnaeus,1758) Local. A scavenger water beetle.
2.5mm long black and yellow beetle living in dung. Somewhat local.

Recorded from two subsites: West bank and East bank (first record: East bank 2nd May 1981). Known from a further three Kirklees localities.

Cercyon ustulatus (Preyssler,1790) Notable/Nb. A scavenger water beetle.
Small scavenging beetle found among wet plant litter in marshes and at the edge of still water.

Recorded from two subsites: West bank and inflow (first record: West bank 20th August 1983). Known to occur at two other Kirklees localities.

Megasternum concinnum (Marsham,1802) Common. A scavenger water beetle.
1.5-2.0mm long dark red to black globose beetle living in decaying organic matter, dung and in plant litter in water. Very common everywhere.

Located at five subsites: West bank, East bank, Edge Moor (in horse dung and stable refuse), South waterworks and South plantation (first record: West bank 4th July 1979). Widely distributed in Kirklees. Common and widespread in Yorkshire.

Cryptopleurum minutum (Fabricius,1775) Common. A scavenger water beetle.
1.5-2.0mm long brownish black beetle living in dung, leaf litter and moss.

Recorded from six subsites: West bank, East bank, Jubilee Quarries, Edge Moor (in horse dung and stable refuse), South waterworks and South embankment (first record: West bank 10th March 1997). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Hydrobius fuscipes (Linnaeus,1758) Common. A scavenger water beetle.
A common water beetle which prefers stagnant water, especially small temporary pools.

Located at six subsites: West bank, Jubilee Quarries (pond), Edge Moor, South waterworks (in the channel), inflow and SW corner overflow field (first record: West bank 15th May 1985). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Anacaena globulus (Paykull,1798) Common. A scavenger water beetle.
A small black water beetle found in decaying vegetation at the edge of ponds. Very common and widespread.

Recorded from seven subsites: West bank, Edge Moor, Jubilee Quarries, Orange Wood, South embankment, South waterworks and inflow (in flood refuse) (first record: West bank 3rd June 1989). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Anacaena lutescens (Stephens,1829) Common. A scavenger water beetle.
A small dark water beetle only recently recognised as distinct from *Anacaena limbata*. Records are therefore confused. However, both species appear to be widespread and common in Britain. Found in standing water, including puddles.

Located at four subsites: West bank, Jubilee Quarries (pond), SW corner overflow field and inflow (first record: West bank 6th June 1989). Widely distributed in Kirklees.

Laccobius bipunctatus (Fabricius,1775) Common. A scavenger water beetle.
Water beetle found in muddy lowland ponds.

Located at two subsites: West bank and South waterworks (first record: West bank 5th August 1992). Known from a further seven Kirklees localities.

Laccobius sinuatus Motschulsky,1849 Notable/Nb. A scavenger water beetle.
Water beetle of stagnant water, slow flowing trickles and streams. A mainly southern species.

Recorded from two subsites: West bank and South waterworks (first record: West bank 18th May 2000). This is the only known Kirklees locality for the species.

Enochrus quadripunctatus (Herbst,1797) Common. A scavenger water beetle.
Located along the West bank on 15th August 1994. This is the only known Kirklees locality for the species.

Enochrus fuscipennis (Thomson,C.G.,1884) Local. A scavenger water beetle.
Small (4.7-5.5mm) water beetle, usually dark with a pair of distinct, yellow preocular spots, but rather variable. Found at the edges of stagnant, usually well vegetated, mainly acid water, often in somewhat shaded positions. Occasionally in slightly saline water. Distributed across the whole of the British Isles in bog conditions.

Recorded along the West bank on two occasions (first record: 25th April 1998). This is the only known Kirklees locality for the species.

HISTERIDAE

The adults of this family are characterised by their hard, shining appearance and clubbed, geniculate ("elbowed") antennae. The body is truncate behind leaving the last two abdominal segments exposed. Their habitats include the dung of various animals, carrion and ants' nests. We have a known complement of 51 species in Britain, most of which are associated with dung or carrion.

Carcinops pumilio (Erichson,1834) Local. A carrion beetle.
Very local scavenging beetle found in rotting vegetable material, dung etc. Sandy places, mainly in the south.

The only record concerns that of specimens along the West bank on 3rd August 1981. Known from a further eight Kirklees localities.

Onthophilus striatus (Forster,1771) Common. A carrion beetle.
A common carnivorous hister beetle which is found in horse dung, rotting vegetation and leaf litter.

Recorded from four subsites: West bank, East bank, Edge Moor (regularly in stable refuse) and SW corner overflow field (first record: West bank 25th April 1998). Widely distributed in Kirklees.

Margarinotus brunneus (Fabricius,1795) Local. A carrion beetle.
A shining black rounded beetle, 6.0 to 9.0mm in length, found in carrion, dung and rotting vegetation. Widely distributed and generally common.

Located at two subsites: West bank and South waterworks (first record: West bank 1st December 1981). Known to occur at one other Kirklees locality.

Margarinotus merdarius (Hoffmann,J.,1803)* Unknown. A carrion beetle.
Recorded along the East bank on 24th January 1982. Known to occur at two other Kirklees localities.

Margarinotus striola (Sahlberg,C.R.,1819) Common. A carrion beetle.
The only record remains that of a single along the West bank on 23rd May 1982. Widely distributed in Kirklees.

Margarinotus ventralis (Marseul,1854) Common. A carrion beetle.
Recorded from two subsites: East bank and Edge Moor (numerous records) (first record: East bank 1st December 1981). Recorded from a further five Kirklees localities (one of which is pre-1950).

Margarinotus purpurascens (Herbst,1792) Local. A carrion beetle.
A beetle, 4.0mm in length, which feeds on mites (Acari), springtails (Collembola), etc in rotting vegetation such as compost heaps.

Located in stable refuse on Edge Moor on 23rd May 2012. This is the only known Kirklees locality for the species.

Atholus duodecimstriatus (Schrank,1781) Local. A carrion beetle.
4.0-5.5mm long shiny black scavenging beetle, living in dung and decaying plant material, including compost heaps. Quite local, rare in Scotland.

Located in stable refuse on Edge Moor on two occasions (first record: 31st May 2007). Recorded from a further five Kirklees localities (two of which are pre-1950).

Atholus bimaculatus (Linnaeus,1758) Local. A carrion beetle.
Small black beetle in dung, compost heaps etc.

Recorded from three subsites: West bank, Edge Moor (in stable refuse) and Orange Wood (first record: West bank and Orange Wood on 21st September 1986). The only other Kirklees record is pre-1950.

HYDRAENIDAE

The 30 British species of this family live in water, flowing or stagnant, or on damp stones, and feed on filamentous algae.

Limnebius truncatellus (Thunberg,1794) Common. A small water beetle.
2.0mm long brownish water beetle living in muddy still or slow moving water. Very common.

Recorded from three subsites: West bank, Jubilee Quarries and SW corner overflow field (first record: West bank April 1995). Widely distributed in Kirklees.

PTILIIDAE

This family comprises the “feather wing” beetles – the wings being very narrow with a marginal fringe of exceptionally long hairs. All the 65 or so British species are less than 2mm long. Undoubtedly with insects of this kind of size scale, many species still await discovery. The Yorkshire distribution is taken from Johnson (1990).

Ptenidium laevigatum Erichson, 1845 Common. A featherwing beetle.
Tiny feather-wing beetle less than 1.0mm long. Occurs in a range of habitats - woodland, wetland, grassland and gardens but mostly in the first two. In damp litter or moss, especially in rodent burrows and mole nests, occasionally in garden compost. Widespread and frequent.

Specimens found in stable refuse on Edge Moor on 25th June 2010 remains the only record. Known from a further three Kirklees localities. Widespread and frequent in Yorkshire.

Ptenidium nitidum (Heer, 1841) Common. A featherwing beetle.
Tiny feather-wing beetle less than 1.0mm in length. In a wide range of open habitats such as grasslands, gardens, moorland and heath. Especially in animal dung, but frequent in a range of other microhabitats. Widespread and common.

Recorded from three subsites: Edge Moor (in stable refuse), South embankment and Jubilee Quarries (first record: South embankment 2nd April 2005). Known from a further six Kirklees localities. Widespread and common in Yorkshire.

Ptenidium punctatum (Gyllenhal, 1827) Local. A featherwing beetle.
Tiny (0.9mm) black-feather wing beetle living under seaweed on the strandline. Occasionally also in dung heaps inland.

Specimens located along the West bank on 2nd July 1985 remain the only Kirklees locality for the species. Local and scarce in Yorkshire.

Ptenidium pusillum (Gyllenhal, 1808) Common. A featherwing beetle.
Tiny feather-wing beetle less than 1.0mm long. In a wide range of open habitats, especially grasslands. Occurs in all kinds of plant refuse from farms and gardens, including dungheaps, although rarely in animal dung. Widespread and very common.

Located at four subsites: West bank, Edge Moor (in stable refuse) Orange Wood and Jubilee Quarries (first record: West bank 12th July 1984). Known from a further three Kirklees localities. Widespread and very common in Yorkshire.

Ptiliolium fuscum (Erichson, 1845) Common. A featherwing beetle.
Tiny feather-winged beetle. Mostly grassland species, but also woodland and gardens. Mainly in animal dung, sometimes in grass traps and compost heaps. Widespread and common.

Specimens found in grass cuttings at the South waterworks on 5th July 2010 remains the only record. Known from a further three Kirklees localities. Widespread and common in Yorkshire.

Ptinella cavelli (Broun, 1893)*n Naturalised. A featherwing beetle.
Yellowish with no eyes. Woodland species, under tight bark of broad-leaved and coniferous trees. A species introduced from New Zealand, first recorded in Britain in 1975.

Specimens found under bark in Orange Wood on 15th August 2003 remain the only record. Known to occur at one other Kirklees locality. Local and scarce in Yorkshire.

Acrotrichis atomaria (De Geer,1774) Common. A featherwing beetle.
Tiny feather-winged beetle. Occurs in a range of habitats, woodlands, wetlands and grasslands, in all kinds of damp vegetational litter and moss. Widespread and common.

Specimens found in stable refuse on Edge Moor on 15th June 2010 remains the only record. Known from a further four Kirklees localities. Widespread and common in Yorkshire.

Acrotrichis cognata (Matthews,A.,1877) Naturalised. A featherwing beetle.
Woodland species, sometimes in other shaded places such as hedgerows. In all kinds of putrefying substances, especially animal dung, rotting fungi, carrion and grass litter. Widespread and fairly common. A North American species first recorded in Britain in 1967.

Recorded from three subsites: West bank (several records), Jubilee Quarries and South embankment (first record: West bank 7th May 1999). Widely distributed in Kirklees. Widespread and fairly common in Yorkshire.

Acrotrichis danica Sundt,1958 Common. A featherwing beetle.
In a wide range of open habitats such as grassland, moorland and heath but also extending through scrub into woodland edges. Mostly at the roots of vegetation, in moss, among dead leaves etc, sometimes in grass cuttings. Widespread and common.

Located at two subsites: West bank and Edge Moor (in stable refuse) (first record: West bank 27th April 2001). Known from a further seven Kirklees localities. Widespread and fairly common in Yorkshire.

Acrotrichis fascicularis (Herbst,1793) Common. A featherwing beetle.
Grassland species occurring in all open habitats, but also in woodlands. In heaped plant refuse from farms and gardens, often in various other putrefying substances. Widespread and common.

Recorded from five subsites: West bank, Edge Moor (in stable refuse), South embankment, South waterworks and South plantation (first record: West bank 7th May 1999). Widely distributed in Kirklees. Widespread and common in Yorkshire.

Acrotrichis grandicollis (Mannerheim,1844) Common. A featherwing beetle.
1.5mm long black beetle living in dung, usually in grassland, feeding on fungal mycelia growing therein. Very common.

Located at four subsites: West bank, Edge Moor (several occasions in stable refuse and horse dung), South embankment and South waterworks (first record: West bank 4th October 1999). Widely distributed in Kirklees. Widespread and common in Yorkshire.

Acrotrichis insularis (Maklin,1852) Naturalised. A featherwing beetle.
Woodland species occurring in a range of decaying substances, grass litter, decaying fungi, carrion etc. Until recently only known from Alaska, but since being found in Great Britain it is turning out to be widely distributed.

The only record remains that of specimens from the South plantation on 7th November 2006. Known from two other Kirklees localities. Widespread and frequent in Yorkshire.

Acrotrichis intermedia (Gillmeister,1845) Common. A featherwing beetle.
Woodland species, characteristic of leaf litter from broad-leaved trees, rarely in conifer plantations. Widespread and very common.

Specimens located in Orange Wood on 6th May 1999 remain the only record. Widely distributed in Kirklees. Widespread and very common in Yorkshire.

Acrotrichis sericans (Heer,1841) Common. A featherwing beetle.
Recorded from two subsites: West bank and Edge Moor (in stable refuse) (first record: West bank 3rd April 2005). Known to occur at one other Kirklees locality. Widespread and common in Yorkshire.

LEPTINIDAE

The single British species is highly modified for life as a commensal of mammals; being chiefly found in the nests of mice and moles but also in bat excrement in caves.

Leptinus testaceus Muller,P.W.J.,1817 Local. A nest beetle.
Britain's only parasitic beetle. Small, yellow and eyeless, lives in fur of voles and wood mice, sometimes found in their nests and also recorded from bumble bee (Aculeate Hymenoptera) nests (old mammal nests?). Widespread and apparently local though likely to be under-recorded.

A single located in flood refuse along the West bank on 26th May 2007 remains the only record. Widely distributed in Kirklees.

LEIODIDAE

The members of this family can be found in a wide variety of habitats: subterranean fungi, ants' nests, woodland leaf-litter, carrion etc. There are nearly 100 British species, and in some genera, identification can be notoriously difficult.

Hydnobius punctatus (Sturm,1807) Notable/Nb. A round fungus beetle.
A small brownish beetle of obscure ecology, perhaps most frequent in sandy places and possibly associated with underground fungi. There are scattered records from a wide area of southern and eastern England.

A single male located in flood refuse along the West bank on 30th October 1986 remains the only known Kirklees locality.

Leiodes obesa (Schmidt,W.L.E.,1841) Local. A round fungus beetle.
A small brownish beetle whose ecology is unknown. Possibly associated with underground fungi, and seemingly occurring particularly in woodland. Widely distributed but local throughout Britain.

Males were found in Orange Wood on 17th August 2003. Known to occur at one other Kirklees locality.

Agathidium atrum (Paykull,1798) Local. A round fungus beetle.
4.0mm long very shiny black beetle that is capable of rolling into a ball when disturbed. In moss, often in *Sphagnum*. Widespread but local.

Recorded from two subsites: Edge Moor (in stable refuse) and Orange Wood (first record: Orange Wood 11th June 1986). Known to occur at one other Kirklees locality.

Agathidium laevigatum Erichson,1845 Local. A round fungus beetle.
2.0-2.5mm long shiny black beetle, capable of rolling into a ball when disturbed. Lives in moss and litter.

Located at three subsites: Edge Moor (regularly in stable refuse), Orange Wood and South waterworks (first record: Orange Wood 1st September 1986). Known to occur at three other Kirklees localities.

Agathidium nigrinum Sturm,1807* Local. A round fungus beetle.
Shining black beetle, rolling into ball when disturbed. Under dead bark of broad-leaved trees. Widespread but local.

Recorded from two subsites: West bank and Edge Moor (first record: West bank 15th November 1986). Known to occur at four other Kirklees localities.

Agathidium nigripenne (Fabricius,1792)* Local. A round fungus beetle.
Small beetle found under dead bark and in fungi on trees, mainly in old woodland. Widespread but local, becoming more so in the north.

The only record remains that of specimens located along the West bank on 20th March 1998. Known to occur at six other Kirklees localities.

Ptomaphagus subvillosus (Goeze,1777) Common. A round fungus beetle.
2.5-3.5mm long brown beetle living at roots of grass, in litter etc, sometimes in carrion. Predatory.

Recorded from three subsites: West bank (on numerous occasions), East bank and Edge Moor (first record: West bank 30th June 1994). Common and widely distributed in Kirklees.

Nargus velox (Spence,1813) Common. A round fungus beetle.
3.0mm long grey-brown carrion beetle, mostly found in decaying plant material, compost and dung heaps etc.

Located at three subsites: West bank, East bank and South waterworks (first record: East bank 20th February 1982). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Nargus wilkini (Spence,1813) Common. A round fungus beetle.
The only record remains that of males located along the West bank on 31st October 1987. Widely distributed in Kirklees.

Choleva fagniezi Jeannel,1922 Local. A round fungus beetle.
A single male located along the West bank on 31st October 1987 is the only record. Known to occur at one other Kirklees locality.

Choleva oblonga Latreille,1807 Local. A round fungus beetle.
Beetle found in litter, sometimes in moles' nests.

Males located along the West bank on 17th February 1982 remain the only Kirklees record.

Sciodrepoides fumata (Spence,1813) Common. A round fungus beetle.
2.5-3.5mm long blackish brown beetle living in plant litter, carrion etc. Generally common species.

Recorded from two subsites: West bank and South embankment (first record: West bank 29th August 1999). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Sciodrepoides watsoni (Spence,1813) Common. A round fungus beetle.
2.5-3.5mm long black beetle living among decaying vegetable litter and sometimes in carrion. Not tied to any particular habitat.

Located at two subsites: West bank (on numerous occasions) and inflow (first record: West bank 1st July 1983). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Catops chrysomeloides (Panzer,1798) Common. A round fungus beetle.
Recorded from the West bank on two occasions (first record: 7th May 1982). Widely distributed in Kirklees.

Catops fuliginosus Erichson,1837 Common. A round fungus beetle.
6.0mm long black carrion beetle, living mainly in very rotten animal corpses, but sometimes also in dung, rotting vegetation and in grass tussocks. Very common.

Located at two subsites: West bank and Edge Moor (first record: West bank 12th November 1981). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Catops grandicollis Erichson, 1837 Common. A round fungus beetle.
5.0-6.0mm long black beetle living in carrion.

Recorded from two subsites: West bank and Edge Moor (first record: West bank 16th September 1981). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Catops kirbii (Spence, 1813) Common. A round fungus beetle.
3.0-3.5mm long black carrion beetle living in carrion, decaying plant material, moss and litter. Widespread and common.

Located along the West bank on two occasions (first record: 16th September 1981). Known to occur at four other Kirklees localities.

Catops morio (Fabricius, 1787) Common. A round fungus beetle.
Recorded from two subsites: West bank and Edge Moor (first record: West bank 11th August 1981). Known to occur at five other Kirklees localities.

Catops nigricans (Spence, 1813) Common. A round fungus beetle.
6.0mm long blackish brown carrion beetle living in animal corpses and sometimes in other dead organic material.

Located along the West bank on four occasions (first record: 20th August 1981). Known to occur at five other Kirklees localities.

Catops nigrita Erichson, 1837 Common. A round fungus beetle.
Males located along the West bank on 13th May 1998 remains the only record. Common and widely distributed in both Kirklees and the rest of Yorkshire.

Catops tristis (Panzer, 1793) Common. A round fungus beetle.
Located along the West bank on numerous occasions (first record: 19th February 1982). Common and widely distributed in both Kirklees and the rest of Yorkshire.

SILPHIDAE

Although carrion is the preferred habitat of most members of this family, some are predacious upon snails and some upon lepidopteran larvae. On the other hand, *Aclypea* species are vegetarian and may damage root crops. *Nicrophorus* includes the well-known burying beetles, the adults bury the bodies of small vertebrates by excavating beneath them and then lay eggs near the corpse upon which the larvae feed.

Nicrophorus humator (Gleditsch, 1767) Common. Black Sexton Beetle.
Large (to 30.0mm) black sexton beetle. Fairly common in carrion and readily comes to light. Opportunist species, not tied to any particular habitat.

Recorded along the West bank on three occasions (first record: 19th July 1989). Widely distributed in Kirklees.

Nicrophorus investigator Zetterstedt, 1824 Common. A sexton beetle.
Large (to 25.0mm long) red and black banded sexton beetle. Fairly common in carrion and readily comes to light. Opportunistic species, not tied to particular habitat.

The only record remains that of a single located along the West bank on 18th September 1978. Widely distributed in Kirklees.

Nicrophorus vespilloides Herbst, 1783 Local. A sexton beetle.
10.0-17.0mm long black and red sexton beetle. Pairs of beetles co-operate to bury items of carrion. Widespread but somewhat local. Not associated with any particular habitat type.

Recorded from four subsites: West bank, West bank road, East bank and Orange Wood (first record: West bank 26th July 1979). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Thanatophilus rugosus (Linnaeus, 1758) Common. A sexton beetle.
10.0-14.0mm long dull black carrion beetle with numerous bumps and granules on the elytra. Found in corpses and decaying fungi. Opportunistic species, not tied to any particular habitat. Generally common.

Located at two subsites: West bank and SW corner overflow field (first record: West bank 8th October 1979). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Thanatophilus sinuatus (Fabricius, 1775) Common. A sexton beetle.
12.0mm long dull black carrion beetle, feeding on suppurating animal flesh. Widespread and common.

A single female under a dead Fox *Vulpes vulpes* in the SW corner overflow field on 12th June 2006 remains the only Kirklees record.

SCYDMAENIDAE

Scydmaenids are generally very small (less than 2mm in length), sluggish species of vegetable refuse and other putrefying material. They generally remain unseen unless diligently searched for in the right habitat.

Scydmaenus tarsatus Muller, P.W.J. & Kunze, 1822 Local. A small antlike beetle.
Tiny dark red beetle living in vegetable litter. Widespread but local.

Recorded from six subsites: West bank (in flood refuse), East bank (in flood refuse), Edge Moor (on numerous occasions in stable refuse), Jubilee Quarries, South embankment and South waterworks (first record: East bank 2nd May 1981). Widely distributed in Kirklees.

STAPHYLINIDAE

Commonly known as "rove beetles", the most obvious feature being the very short elytra which usually conceal the well-developed wings that are very intricately folded. Many species are small, inconspicuous, black in colour and have cryptic habits. Habitats vary widely in this diverse group, species abounding where there is decaying organic matter of any kind. Many are carnivorous on live insects at some stage in their life cycle, and some are associated with ants, either as tolerated guests or preying on them directly. In such cases many examples of mimicry are known.

Of the 53 species of Pselaphinae (formerly considered as a separate family, Pselaphidae) several bear a superficial resemblance to ants, many being found in the nests of such species. Other species inhabit moss, compost heaps and decaying vegetation.

Micropeplus fulvus Erichson, 1840 Local. A rove beetle.
Specimens were located in stable refuse on Edge Moor on 8th March 2007 (along with *Micropeplus staphylinoides*). Known to occur at one other Kirklees locality.

Micropeplus staphylinoides (Marsham, 1802) Local. A rove beetle.
Small black, grotesquely ridged slow moving rove beetle of decaying vegetation, grass tussocks, sometimes on bare mud. Widespread but local.

Specimens were located in stable refuse on Edge Moor on 8th March 2007 (along with *Micropeplus fulvus*). Known to occur at two other Kirklees localities.

Metopsia clypeata (Muller, P.W.J., 1821) Local. A rove beetle.
Small dark reddish rove beetle living in moss, grass tussocks, decaying vegetation etc.

Recorded in stable refuse on Edge Moor on two occasions (first record: 25th June 2009). This is the only known Kirklees locality for the species.

Megarthus bellevoeyi (Saulcy, 1862) Common. A rove beetle.
3.0mm long brownish black rove beetle living in dung. Very common.

Located at two subsites: West bank and Edge Moor (in stable refuse) (first record: West bank 28th October 1984). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Megarthus denticollis (Beck, 1817) Common. A rove beetle.
Recorded from five subsites: West bank, East bank, Edge Moor (in stable refuse), South embankment and South waterworks (first record: East bank 11th July 1998). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Megarthus prosseni Schatzmayr, 1904 (= *depressus* auct.) Common. A rove beetle.
2.0-2.5mm long broad black rove beetle living in carrion, decaying fungi, grass and leaf litter, and in particular in dung. Widespread and very common.

Located at five subsites: West bank, East bank, Edge Moor (in stable refuse), South embankment and South waterworks (first record: West bank 15th September 1996). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Megarthus depressus (Paykull, 1789) = *sinuatocollis* (Lacordaire, 1835) Common. A rove beetle.
Recorded from two subsites: West bank and inflow (in flood refuse) (first record: inflow 28th October 1984). Known to occur at nine other Kirklees localities.

Proteinus atomarius Erichson, 1840 Local. A rove beetle.
Small rove beetle living in fungus, carrion and rotting vegetation. Widespread but local.

Specimens were located in flood refuse along the West bank on 29th January 1984. Known to occur at three other Kirklees localities.

Proteinus brachypterus (Fabricius, 1792) Common. A rove beetle.
2.0mm long black rove beetle living in decaying fungi, carrion, dead leaves etc, also visiting willow *Salix* spp. catkins. Widespread and very common, particularly in spring and autumn.

Recorded from three subsites: West bank, South plantation and Orange Wood (first record: West bank 25th December 1983). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Proteinus crenulatus Pandelle, 1867 Notable/Nb. A rove beetle.
Small rove beetle found in decaying litter, fungi, carrion etc. Also on catkins in the spring.

A single male was located in flood refuse along the West bank on 21st October 1982. Known to occur at two other Kirklees localities.

Proteinus ovalis Stephens, 1834 Common. A rove beetle.
Small rove beetle living in rotting fungi, dead leaves etc. Very common species.

Recorded from five subsites: West bank, East bank, South embankment, South plantation and Orange Wood (first record: West bank 25th December 1983). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Anthobium atrocephalum (Gyllenhal,1827) Common. A rove beetle.
Small rove beetle living in litter.

Located at four subsites: West bank, East bank, Edge Moor and South plantation (first record: West bank 20th March 1998). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Anthobium unicolor (Marsham,1802) Common. A rove beetle.
Small (3.0mm) rove beetle. No particular habitat specificity. Common more or less everywhere.

Recorded from five subsites: West bank, East bank, Edge Moor, Orange Wood and inflow (first record: West bank 10th November 1979). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Olophrum fuscum (Gravenhorst,1806) Local. A rove beetle.
Small rove beetle of northern uplands, also occurring in East Anglia but absent from the south. Often among grass litter.

Specimens located in flood refuse along the West bank on 18th November 1986 remain the only Kirklees record.

Olophrum piceum (Gyllenhal,1810) Common. A rove beetle.
5.0mm long shiny red-brown rove beetle living in grass tussocks, leaf litter and under bark. Locally common species in woodland, grassland and on moorland.

Recorded from five subsites: West bank, East bank, Edge Moor, SW corner overflow field and inflow (first record: West bank 26th December 1979). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Deliphrum tectum (Paykull,1789) Unknown. A rove beetle.
Small rove beetle found in dung and carrion. A northern species which is local outside Scotland.

Located at two subsites: West bank and Edge Moor (first record: West bank 27th September 2004). Known to occur at two other Kirklees localities.

Phyllodrepoidea crenata Ganglbauer,1895* Notable/Nb. A rove beetle.
Small dark yellow rove beetle living under stones and under dead bark, often feeding at sap of wounded trees. A northern and western species.

The only record remains that of specimens found under bark in Orange Wood on 6th November 2003. Known from a further nine Kirklees localities.

Lesteva sicula Erichson,1840 Common. A rove beetle.
3.5mm long reddish yellow rove beetle living in moss, especially beside streams and waterfalls.

Recorded from four subsites: West bank, Orange Wood, South waterworks (in grass cuttings) and inflow (first record: Orange Wood 1st July 1988). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Lesteva longoelytrata (Goeze,1777) Common. A rove beetle.
3.0-4.0mm long greyish rove beetle, common in wet places throughout Great Britain, most frequent in moss by rivers but also in grass tussocks, reed litter etc.

Located along the West bank on four occasions (first record: 19th June 1980). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Lesteva monticola Kiesenwetter, 1847 Local. A rove beetle.
Small greyish rove beetle living in moss beside streams in mountainous areas. Widely distributed but local in Scotland, northern England and Wales.

Recorded from flood refuse along the West bank on two occasions (first record: 26th October 1981). This is the only known Kirklees locality for the species.

Lesteva pubescens Mannerheim, 1830 Local. A rove beetle.
Small rove beetle living among moss in wet places. Widespread but local, commoner in the north.

Located in flood refuse along the West bank on 16th February 1984. Known to occur at one other Kirklees locality.

Eusphalerum primulae (Stephens, 1834) Local. A rove beetle.
Small yellow rove beetle found in yellow flowers in spring, particularly in primroses *Primula* spp. but also in other flowers. Widespread but local.

Recorded along the West bank on three occasions (first record: 3rd August 1981). Known to occur at two other Kirklees localities.

Acrulia inflata (Gyllenhal, 1813)* Local. A rove beetle.
Small rove beetle found under bark and in leaf litter in woods, particularly oak *Quercus* spp. Northern England, Scotland and Wales. Very local.

Found under bark in Orange Wood on 15th August 2003. Known to occur at six other Kirklees localities.

Phyllodrepa floralis (Paykull, 1789) Common. A rove beetle.
3.0-3.8mm long black rove beetle living in vegetable litter, grass tussocks etc, also often swept from flowers. Locally common.

Located in stable refuse on Edge Moor on 19th April 2011. Known to occur at five other Kirklees localities.

Dropephylla ioptera (Stephens, 1832)* Common. A rove beetle.
3.0mm long brown rove beetle mainly living under bark but often found on flowers. Local, sometimes common in the south becoming rarer north to Scotland.

Two specimens found in stable refuse on Edge Moor on 8th March 2007 remains the only Kirklees record.

Dropephylla vilis (Erichson, 1840)* Common. A rove beetle.
2.0-3.0mm long brown rove beetle living under moist loose bark. Widespread and common, not restricted to woodland.

Recorded from two subsites: West bank and Orange Wood (first record: West bank 1st September 1991). Known to occur at three other Kirklees localities.

Omalius allardi Fairmaire & Brisout, 1859 Notable/Nb. A rove beetle.
Rove beetle found in tussocks and decaying plant litter. Widespread but rare.

Located in flood refuse along the West bank on three occasions (first record: 13th October 1983). This is the only known Kirklees locality for the species.

Omalium caesum Gravenhorst,1806 Local. A rove beetle.
Dark brown rove beetle living in litter, grass tussocks etc.

Recorded from three subsites: West bank, East bank and Edge Moor (first record: East bank 28th March 1981). Known to occur at two other Kirklees localities.

Omalium excavatum Stephens,1834 Common. A rove beetle.
6.0mm long brown rove beetle living in decaying plant material, moss, leaf litter etc.

Located along the West bank on four occasions (first record: 4th April 1988). Known to occur at two other Kirklees localities.

Omalium exiguum Gyllenhal,1810 Notable/Nb. A rove beetle.
A small black rove beetle, less than 2.0mm long, found in decaying vegetable material and fungi.

Recorded from flood refuse along the West bank on 21st August 1999. This is the only known Kirklees locality for the species.

Omalium italicum Bernhauer,1902 Common. A rove beetle.
A small black rove beetle, found in decaying vegetable material and fungi.

Located in flood refuse along the West bank on 27th September 2004. Known to occur at five other Kirklees localities.

Omalium oxyacanthae Gravenhorst,1806 Unknown. A rove beetle.
A small black rove beetle, up to 2.5mm long, found in decaying vegetable matter and fungi. Widely distributed but rather local.

Recorded from three subsites: West bank, South embankment and South waterworks (first record: West bank 21st August 1999). Known to occur at two other Kirklees localities.

Omalium rivulare (Paykull,1789) Common. A rove beetle.
6.0mm long brownish black rove beetle living in grass litter, tussocks and occasionally in dung, carrion or on bare mud at the side of freshwater. Very common.

Located at five subsites: West bank (regularly found in flood refuse), Edge Moor, Jubilee Quarries (in Birch Polypore *Piptoporus betulinus*), South embankment and Orange Wood (first record: West bank 28th November 1979). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Omalium rugatum Mulsant & Rey,1880 Notable/Nb. A rove beetle.
Small rove beetle of fungi, plant litter etc in damp places.

Recorded from flood refuse along the West bank on 28th August 1999. Known to occur at one other Kirklees locality.

Xylodromus concinnus (Marsham,1802) Local. A rove beetle.
Small black rove beetle living in grass and leaf litter and other decaying vegetation.

Located along the West bank on six occasions (first record: 29th July 1981). Known to occur at one other Kirklees locality.

Philorinum sordidum (Stephens,1834) Local. A rove beetle.
Small rove beetle found in flowers, particularly gorse *Ulex* spp. Widespread but local, abundant where found.

Recorded from three subsites: West bank, Edge Moor (regularly on Broom *Cytisus scoparius*) and Jubilee Quarries (first record: West bank 26th May 1997). Known to occur at three other Kirklees localities.

Siagonium quadricorne Kirby, 1815* Local. A rove beetle.
5.0-6.0mm long brown and black rove beetle found under bark in old woodland. Widespread but local.

Located under bark along the West bank on 7th August 1994. Known to occur at three other Kirklees localities.

Phloeocharis subtilissima Mannerheim, 1830* Local. A rove beetle.
Small rove beetle living in moss on tree bark and under dead bark. Usually in woodland. Widespread but not common.

Recorded under bark at two subsites: East bank and Orange Wood (first record: East bank 7th July 1984). This is the only known Kirklees locality for the species.

Syntomium aeneum (Muller, P.W.J., 1821) Local. A rove beetle.
2.0-3.0mm long dumpy bronze rove beetle, usually living in moss or grass litter. Fairly local throughout Britain, usually encountered as isolated individuals.

Located in flood refuse along the West bank on three occasions (first record: 1st April 1978). Widely distributed in Kirklees.

Carpelimus corticinus (Gravenhorst, 1806) Common. A rove beetle.
A single male was located in grass cuttings at the South waterworks on 24th July 2010. Known from one other Kirklees locality.

Carpelimus elongatulus (Erichson, 1839) Common. A rove beetle.
2.0-2.4mm long blackish rove beetle living on mud at the side of water.

Recorded along the West bank on 23rd June 1999. Known from one other Kirklees locality (the record being pre-1950).

Platystethus arenarius (Fourcroy, 1785) Common. A rove beetle.
4.0-5.0mm long black rove beetle living mainly in herbivore dung. Very common.

Located at five subsites: West bank, East bank, NE corner, Edge Moor (regularly found in stable refuse) and South embankment (first record: East bank 5th November 1981). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Anotylus complanatus (Erichson, 1839) Unknown. A rove beetle.
Recorded from two subsites: West bank and Edge Moor (in stable refuse) (first record: West bank 20th August 1983). Known to occur at two other Kirklees localities.

Anotylus mutator (Lohse, 1963) Notable/Nb. A rove beetle.
Small rove beetle found in dung, carrion, etc. Probably under-recorded as it can only be distinguished from the very common *Anotylus sculpturatus* by dissection of the male genitalia.

Located at two subsites: West bank (in flood refuse) and Edge Moor (in stable refuse) (first record: West bank 28th July 1983). Known to occur at five other Kirklees localities.

Anotylus rugosus (Fabricius,1775) Common. A rove beetle.
5.0mm shiny black rove beetle living in dung, leaf litter, moss, carrion etc. Flies readily, often occurring in swarms in towns on warm days in early summer. One of the most common beetles in Britain.

Recorded from seven subsites: West bank, East bank, Edge Moor, Jubilee Quarries, Orange Wood, South waterworks and inflow (first record: West bank 4th July 1986). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Anotylus sculpturatus (Gravenhorst,1806) Common. A rove beetle.
4.0-6.0mm long shiny black rove beetle. Most habitat types, occurring in grass tussocks, leaf litter, reed litter, moss, dung etc and also on bare mud by water. Very common throughout Britain.

Located at six subsites: West bank, East bank, NE corner (in horse dung), Edge Moor, South embankment (in grass cuttings) and inflow (first record: East bank 9th June 1988). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Anotylus tetracarinatus (Block,1799) Common. A rove beetle.
2.0mm long dull black rove beetle living in litter, moss, dung, carrion, tussocks etc. Flies readily and swarms on sunny days – often becoming a nuisance by getting into people’s eyes! Extremely common, possibly Britain’s commonest beetle.

Recorded from seven subsites: West bank, East bank, Edge Moor (in stable refuse and horse dung), NE corner (in horse dung), South embankment, South waterworks and inflow (first record: West bank 11th June 1990). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Oxytelus laqueatus (Marsham,1802) Common. A rove beetle.
5.0mm long black rove beetle with yellowish elytra. Lives in animal dung. Very common.

Located at eight subsites: West bank, East bank, Edge Moor (in horse dung and stable refuse), NE corner (in horse dung), South embankment (in horse dung), Orange Wood, South waterworks (in grass cuttings) and inflow (in flood refuse) (first record: West bank 26th December 1984). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Oxytelus migrator Fauvel,1904 Unknown. A rove beetle.
A single in stable refuse on Edge Moor on 25th June 2010 added this immigrant species to the Yorkshire list.

Oxytelus sculptus Gravenhorst,1806 Common. A rove beetle.
Recorded from two subsites: West bank and Edge Moor (in stable refuse) (first record: West bank 4th April 1981). This is the only known Kirklees locality for the species.

Stenus aceris Stephens,1833 Common. A rove beetle.
5.0mm long black rove beetle with large bulbous eyes and yellowish brown legs. Predatory. No apparent habitat association. Widespread and very common throughout Britain, occurring in drier places than most of the rest of the genus *Stenus* as well as in wetland.

A single male was located in stable refuse on Edge Moor on 8th August 2010. Recorded from three other Kirklees localities (two of which are pre-1950).

Stenus bimaculatus Gyllenhal,1810 Common. A rove beetle.
5.0mm long black rove beetle with reddish spots on the elytra. Huge eyes, a predator on springtails (Collembola). Common in wet places.

A male located in flood refuse at the inflow on 12th June 2006 remains the only record. Known to occur at one other Kirklees locality.

Stenus boops Ljungh,1810 Common. A rove beetle.
A black rove beetle, 4.0 to 5.0mm long, widely distributed and common in wet places.

Recorded from four subsites: West bank, East bank, South waterworks and inflow (first record: West bank 29th November 1981). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Stenus brevipennis Thomson,C.G.,1851 Local. A rove beetle.
Very local rove beetle of marshy places.

Located at two subsites: West bank and East bank (first record: both subsites 10th March 1986). Known to occur at one other Kirklees locality.

Stenus brunripes Stephens,1833 Common. A rove beetle.
Recorded from six subsites: West bank, East bank (in flood refuse), Edge Moor, Orange Wood, South waterworks and inflow (first record: West bank 5th November 1990). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Stenus canaliculatus Gyllenhal,1827 Local. A rove beetle.
5.0mm long black rove beetle with large eyes. Predatory, probably on springtails (Collembola). Local in marshy places, usually among lush vegetation or among sweet-grass *Glyceria* spp. or Common Reed *Phragmites australis* litter etc.

Located at two subsites: West bank and East bank (first record: West bank 18th May 2000). Known to occur at two other Kirklees localities.

Stenus cincidoides (Schaller,1783) Local. A rove beetle.
Small rove beetle living on the ground and climbing vegetation in marshy places. Common in southern England, becoming more local in the north.

A single male was located at the South waterworks on 5th July 2010. Known from a further six Kirklees localities.

Stenus clavicornis (Scopoli,1763) Common. A rove beetle.
5.0mm long black rove beetle with bulging eyes. Common in marshy places.

Recorded from eight subsites: West bank, East bank, Edge Moor, Jubilee Quarries, Orange Wood, South embankment, South waterworks and SW corner overflow field (first record: West bank 23rd September 1982). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Stenus crassus Stephens,1833 Local. A rove beetle.
Located along the East bank on three occasions (first record: 26th July 1981). Known to occur at seven other Kirklees localities.

Stenus europaeus Puthz,1966 Notable/Nb. A rove beetle.
Rove beetle of marshy places. Mainly recorded from southern England.

There are two records, both from the West bank (first record: 24th October 1987). Known to occur at two other Kirklees localities.

Stenus fulvicornis Stephens,1833 Common. A rove beetle.
3.0-4.0mm long black rove beetle with large bulbous eyes. Predatory, probably on springtails (Collembola). Locally common in marshy places.

Recorded from five subsites: West bank, East bank, Edge Moor, South waterworks and South plantation (first record: West bank 10th February 1982). Known to occur at eight other Kirklees localities.

Stenus geniculatus Gravenhorst, 1806 Local. A rove beetle.
4.0-4.5mm long matt black rove beetle with bulging eyes, a specialist predator on springtails (Collembola). Unlike other members of the genus, which occur in marshy places, this is a species of dry grassland. Widespread but very local.

Located on Edge Moor on 13th November 2005. This is the only known Kirklees locality for the species.

Stenus guttula Muller, P.J.W., 1821 Local. A rove beetle.
4.5mm long black rove beetle with large, bulbous eyes and an orange spot on each elytron. Predatory, mainly on springtails (Collembola). Lives in wet places, especially where there is bare open sand or mud. Marshes, river and lake margins and on sea cliffs by trickles, Widespread and locally common.

Recorded from Edge Moor on 2nd April 1987. This is the only known Kirklees locality for the species.

Stenus impressus Germar, 1824 Common. A rove beetle.
4.0mm long black rove beetle with bulging eyes. Very common, most often in marshy places, but less restricted to wet places than most other members of the genus.

Located at six subsites: West bank, East bank, Edge Moor, Orange Wood, inflow and South waterworks (first record: West bank 4th July 1989). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Stenus incrassatus Erichson, 1839 Local. A rove beetle.
4.0mm long black rove beetle with large bulbous eyes. Widespread but local in marshy places, mainly in the south.
A single male was located in grass cuttings at the South waterworks on 9th July 2010. This is the only known Kirklees locality for the species.

Stenus juno (Paykull, 1789) Common. A rove beetle.
A black rove beetle, 6.0 to 7.0mm long, widely distributed and common in wet places.

Recorded from four subsites: West bank, East bank, South waterworks and inflow (first record: West bank 16th December 1979). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Stenus latifrons Erichson, 1839 Common. A rove beetle.
Small rove beetle of wet places. Common in most of England, becoming rare in the north.

A single male found in stable refuse on Edge Moor on 18th April 2010 remains the only record. Common and widely distributed in both Kirklees and the rest of Yorkshire.

Stenus ossium Stephens, 1833 Common. A rove beetle.
Small rove beetle found in vegetable litter, moss etc. Common in most of Britain, becoming local in the north.

Recorded along the West bank on three occasions (first record: 7th May 1999). Known to occur at one other Kirklees locality.

Stenus nanus Stephens,1833 Common. A rove beetle.
Small rove beetle of marshy places. Common in most of southern Britain, becoming more local in the north.

Located at three subsites: West bank, East bank and SW corner overflow field (first record: East bank 26th March 1999). Known to occur at five other Kirklees localities.

Stenus nitidiusculus Stephens,1833 Common. A rove beetle.
Recorded from four subsites: West bank, East bank, Orange Wood and inflow (first record: West bank 6th September 1993). Widely distributed in Kirklees.

Stenus nitens Stephens,1833 Local. A rove beetle.
Small rove beetle found in marshy places, mainly in East Anglia but with scattered records elsewhere.

A single male found in flood refuse along the West bank on 11th October 1987 remains the only Kirklees record.

Stenus ochropus Kiesenwetter,1858 Unknown. A rove beetle.
A single male found in flood refuse along the West bank on 22nd October 1981 remains the only Kirklees record.

Stenus oscillator Rye,1870 Notable/Nb. A rove beetle.
First recorded along the West bank on 1st December 1981 and fairly regularly thereafter until 5th January 1990. Despite diligent searching the species has only been located under grass roots and in moss along the top of a wall and, even though the wall extends for 700m, it has only been found along a 30m length to the north of the Huddersfield Birdwatchers' Club hide. This is the only known locality for the species in Yorkshire.

Stenus picipennis Erichson,1840 Local. A rove beetle.
Small rove beetle of marshy places. Widespread but local.

Recorded from three subsites: West bank, South embankment and South waterworks (first record: West bank 25th June 2001). Known to occur at six other Kirklees localities.

Stenus picipes Stephens,1833 Common. A rove beetle.
Located at four subsites: West bank, Edge Moor, Orange Wood and South embankment (first record: West bank 16th December 1979). Widely distributed in Kirklees.

Stenus providus Erichson,1839 Common. A rove beetle.
4.0-4.5mm long black rove beetle with brown legs and very bulbous eyes. Leaf litter, bare mud, tussocks etc, usually but not always in wet places.

Recorded from three subsites: West bank, East bank and Orange Wood (first record: East bank 1st October 1991). Widely distributed in Kirklees.

Stenus pusillus Stephens,1833 Common. A rove beetle.
Located along the West bank on two occasions (first record: 11th October 1987). This is the only known Kirklees locality for the species.

Stenus similis (Herbst,1784) Common. A rove beetle.
5.0mm long black rove beetle with large bulbous eyes. Predatory, most likely on springtails (Collembola) and mites (Acari). Common under stones and in litter in many habitats, less associated with wetland than other members of the genus.

Recorded from seven subsites: West bank, East bank, Edge Moor, NE corner, Jubilee Quarries, South embankment and inflow (first record: West bank 2nd September 1989). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Stenus subaeneus Erichson, 1840 Local. A rove beetle.
Small rove beetle of marshy places. Widespread but local.

Located in flood refuse at the inflow on 22nd October 2006. This is the only known Kirklees locality for the species.

Stenus tarsalis Ljungh, 1810 Common. A rove beetle.
Small rove beetle of marshy places. Common in most of southern Britain, becoming more local in the far north.

Males were located along the West bank on 16th December 1979 and 7th August 1981. Externally this species is indistinguishable from *Stenus oscillator* (which has a very restricted range along the West bank). It is to be regretted that at the time of capture the exact locations of the *Stenus tarsalis* specimens were not recorded in more detail as it would be interesting to know if the two species occur in the same microhabitat. Known to occur at one other Kirklees locality.

Lathrobium brunnipes (Fabricius, 1792) Common. A rove beetle.
Elongate black rove beetle with brown legs. Lives under stones and in grass tussocks. Not confined to a particular habitat type. Widespread and common over much of the British Isles.

Recorded from five subsites: West bank, East bank, Jubilee Quarries, Edge Moor and inflow (first record: West bank 10th March 1997). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Lathrobium elongatum (Linnaeus, 1767) Local. A rove beetle.
Rove beetle living in grass tussocks and under stones. No apparent habitat specificity.

A single located in flood refuse along the West bank on 17th April 1986 remains the only record. Common and widely distributed in both Kirklees and the rest of Yorkshire.

Lathrobium fulvipenne (Gravenhorst, 1806) Common A rove beetle.
Recorded along the West bank on five occasions (first record: 1st April 1989). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Lathrobium geminum Kraatz, 1857 Common. A rove beetle.
The only record remains that of males located in flood refuse along the West bank on 6th August 1996. Common and widely distributed in both Kirklees and the rest of Yorkshire.

Lathrobium quadratum (Paykull, 1789) Local. A rove beetle.
Rove beetle living under stones, in grass tussocks etc. No apparent habitat associations. Widespread, but fairly local.

Located along the West bank on 30th September 1987. Known to occur at one other Kirklees locality.

Lathrobium terminatum Gravenhorst, 1802 Common. A rove beetle.
A small rove beetle, up to 6.5mm long, black with pale marks on the wings and with reddish legs. Found in grass tussocks, moss, leaf litter etc. Widely distributed and often common.

Recorded along the West bank on two occasions (first record: 25th December 1987). Known to occur at four other Kirklees localities.

Ochtheophilum fracticorne (Paykull,1800) Local. A rove beetle.
Located in flood refuse along the West bank on 26th October 1986. Known to occur at one other Kirklees locality.

Sunius propinquus (Brisout,1867) Local. A rove beetle.
Recorded from flood refuse along the West bank on two occasions (first record: 3rd January 1987). Known to occur at two other Kirklees localities.

Lithocharis nigriceps Kraatz,1859 Naturalised. A rove beetle.
Small rove beetle found in manure heaps. Recent colonist first recorded in 1962

Located at three subsites: West bank, East bank (in flood refuse) and Edge Moor (in stable refuse) (first record: East bank 5th November 1981). Known to occur at three other Kirklees localities.

Lithocharis ochracea (Gravenhorst,1802) Common. A rove beetle.
Common rove beetle in vegetable litter.

Recorded from three subsites: West bank (in flood refuse), Edge Moor (in stable refuse) and South waterworks (in grass cuttings) (first record: West bank 5th November 1981). Known to occur at seven other Kirklees localities.

Scopaeus sulcicollis (Stephens,1833) Local. A rove beetle.
A single female located in Orange Wood on 26th September 2007 remains the only Kirklees record.

Astenus pulchellus (Heer,1839) Local. A rove beetle.
Rove beetle found in damp litter. Widespread in southern England. Rare in the north.

Recorded from two subsites: West bank (in flood refuse) and Edge Moor (regularly located in stable refuse) (first record: Edge Moor 31st August 2005). Known to occur at one other Kirklees locality.

Rugilus erichsoni (Fauvel,1867) Common. A rove beetle.
3.0-4.0mm long black, somewhat angular rove beetle living in leaf litter, tussocks and moss.

Located in stable refuse on Edge Moor on four occasions (first record: 20th May 2007). Known to occur at four other Kirklees localities.

Rugilus orbiculatus (Paykull,1789) Common. A rove beetle.
4.0-5.0mm long black, somewhat angular rove beetle living in leaf litter, tussocks and moss.

Recorded from four subsites: West bank, East bank, Edge Moor (regularly located in stable refuse) and South waterworks (first record: East bank 26th July 1981). Known to occur at nine other Kirklees localities.

Rugilus rufipes Germar,1836 Common. A rove beetle.
Specimens were located in stable refuse on Edge Moor on 17th May 2009. Known to occur at four other Kirklees localities.

Othius angustus Stephens,1833 Common. A rove beetle.
Recorded from three subsites: West bank, Edge Moor and Orange Wood (first record: West bank 10th October 1987). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Othius subuliformis Stephens,1833 Common. A rove beetle.
4.0-6.0mm long orange to dark brown rove beetle. Occasionally found in ants (Aculeate Hymenoptera) nests, otherwise in grass or leaf litter or under stones.

Located at three subsites: West bank, Edge Moor (in stable refuse) and Orange Wood (first record: West bank 28th November 1979). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Othius punctulatus (Goeze,1777) Common. A rove beetle.
8.0-9.0mm long black rove beetle with conspicuous red elytra. Lives in moss, under stones, in tussocks and leaf litter. Flies and regularly comes to light.

Recorded from stable refuse on Edge Moor on two occasions (first record: 8th March 2007). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Atrecus affinis (Paykull,1789)* Common. A rove beetle.
Small red and black rove beetle found under loose damp bark of deciduous trees. Locally common in woodland.

Located at two subsites: West bank and Orange Wood (first record: West bank 8th June 1997). Widely distributed in Kirklees.

Leptacinus batychnus (Gyllenhal,1827) Unknown. A rove beetle.
Recorded from two subsites: West bank and Edge Moor (in stable refuse) (first record: West bank 26th October 1981). Known to occur at five other Kirklees localities.

Leptacinus pusillus (Stephens,1833) Common. A rove beetle.
Located at three subsites: West bank, Edge Moor (in stable refuse) and South waterworks (in grass cuttings) (first record: West bank 23rd June 1999). Known to occur at twelve other Kirklees localities.

Phacophallus parumpunctatus (Gyllenhal,1827) Unknown. A rove beetle.
A single found in flood refuse along the West bank on 9th September 1986 remains the only Kirklees record.

Gyrohypnus angustatus Stephens,1833 Common. A rove beetle.
5.0-7.0mm elongate reddish brown rove beetle living in leaf litter, under stones etc, sometimes in ant (Aculeate Hymenoptera) nests. Widespread and common.

Recorded from three subsites: West bank, East bank and Edge Moor (regularly in stable refuse) (first record: West bank 7th May 1999). Known to occur at thirteen other Kirklees localities.

Gyrohypnus fracticornis (Muller,O.F.,1776) Unknown. A rove beetle.
Located at five subsites: West bank, East bank, Edge Moor (regularly in stable refuse), South embankment and SW corner overflow field (first record: East bank 28th March 1981). Widely distributed in Kirklees.

Gyrohypnus punctulatus (Paykull,1789) Local. A rove beetle.
5.0-7.0mm long bronze-black rove beetle living in moss, under stones, in leaf litter, under bark etc.

Recorded from two subsites: West bank and Edge Moor (in stable refuse) (first record: West bank 1st October 1994). Known to occur at four other Kirklees localities.

Megalinus glabratus (Gravenhorst,1802) Common. A rove beetle.
Located along the West bank on 10th August 1998. Known to occur at eleven other Kirklees localities.

Xantholinus linearis (Olivier,1795) Common. A rove beetle.
8.0mm long shiny bronze black rove beetle. Leaf litter, in tussocks, under loose bark etc.

Recorded from six subsites: West bank, East bank, Edge Moor (in stable refuse), Orange Wood, South embankment and South waterworks (first record: West bank 1st November 1990). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Xantholinus longiventris Heer,1839 Common. A rove beetle.
6.0-8.0mm long shiny black rove beetle. Grass tussocks, leaf litter, loose bark etc.

Located at five subsites: West bank, East bank, South embankment, SW corner overflow field and inflow (first record: West bank 16th April 1998). Widely distributed in Kirklees.

Bisnius cephalotes (Gravenhorst,1802) Unknown. A rove beetle.
Recorded from four subsites: West bank, East bank (in flood refuse), Edge Moor (in stable refuse) and South embankment (first record: East bank 28th March 1981). Widely distributed in Kirklees.

Bisnius fimetarius (Gravenhorst,1802) Common. A rove beetle.
4.0-5.0mm long bronze black rove beetle living in dung.

Located at nine subsites: West bank, East bank, Edge Moor (in stable refuse), Jubilee Quarries, Orange Wood, South embankment, South plantation, South waterworks and SW corner overflow field (first record: West bank 9th March 1978). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Bisnius nigriventris (Thomson,C.G.,1867) Local. A rove beetle.
Black predatory rove beetle living in dung and carrion. Widespread but rare.

Recorded from flood refuse along the West bank on 7th August 1984. Known to occur at one other Kirklees locality.

Bisnius parcus (Sharp,1874) Unknown. A rove beetle.
A single male along the West bank on 30th April 1982 remains the only record for Kirklees.

Bisnius puella (Nordmann,1837) Local. A rove beetle.
Coppery black rove beetle living in dung, litter and under stones. Local species, particularly in the north.

Recorded from two subsites: West bank and Edge Moor (in stable refuse) (first record: West bank 19th September 1990). Known to occur at six other Kirklees localities.

Bisnius sordidus (Gravenhorst,1802) Common. A rove beetle.
5.0-6.5mm long black rove beetle living in moss and leaf litter etc.

Recorded from four subsites: West bank, Edge Moor (in stable refuse), South embankment and South waterworks (first record: West bank 25th July 1981). Known to occur at four other Kirklees localities.

Bisnius subuliformis (Gravenhorst,1802)* Local. A rove beetle.
Small rove beetle found in litter in birds nests. Possibly predator on fly or flea larvae. Mainly southern England becoming rarer northwards.

Located along the West bank on three occasions (all in October/November 1986) (two of these in the nests of Tree Sparrows *Passer montanus*). This is the only known Kirklees locality for the species.

Philonthus albipes (Gravenhorst,1802) Local. A rove beetle.
Recorded in stable refuse on Edge Moor on five occasions (first record: 8th March 2007). Known from a further five Kirklees localities.

Philonthus spinipes Sharp,1874 Naturalised. A rove beetle.
An immigrant species that was first recorded in Britain from Dorset in 1997 (Allen & Owen, 1997).

Two specimens located in stable refuse on Edge Moor on 8th March 2007 remain the only known Kirklees locality.

Philonthus cognatus Stephens,1832 Common. A rove beetle.
8.0-10.0mm long metallic black rove beetle. Under stones, in leaf litter, tussocks etc, usually in woodland. Generally common species.

Recorded from five subsites: West bank, East bank, Edge Moor (in stable refuse), South embankment and South waterworks (first record: West bank 2nd July 1985). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Philonthus concinnus (Gravenhorst,1802) Unknown. A rove beetle.
Located at two subsites: East bank and Edge Moor (regularly in stable refuse) (first record: East bank 28th March 1981). Known from a further two Kirklees localities.

Philonthus debilis (Gravenhorst,1802) Unknown. A rove beetle.
A small rove beetle, up to 5.5mm long, black with elytra sometimes reddish, typically found in damp moss. Widely distributed but generally uncommon.

Recorded from four subsites: West bank, East bank, Edge Moor (commonly in stable refuse) and South waterworks (first record: West bank 2nd December 1981). Known from a further four Kirklees localities.

Philonthus decorus (Gravenhorst,1802) Common. A rove beetle.
Fairly large bronze rove beetle. Common among leaf litter, under stones etc, particularly in woodland.

Located at two subsites: West bank and South embankment (first record: West bank 15th May 1985). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Philonthus rufipes (Stephens,1832) Unknown. A rove beetle.
Recorded from flood refuse along the West bank on two occasions (first record: 24th February 1991). This is the only known Kirklees locality for the species.

Philonthus intermedius (Lacordaire,1835) Common. A rove beetle.
Located at three subsites: West bank, Edge Moor (in stable refuse) and South embankment (first record: West bank 16th April 1982). Known from a further four Kirklees localities.

Philonthus laminatus (Creutzer,1799) Common. A rove beetle.
8.0-11.0mm long greenish black metallic rove beetle living in dung, carrion, decaying fungi, also in leaf litter and moss. Predatory. Common, not specific to any habitat type.

Recorded from four subsites: West bank, Edge Moor, South embankment and inflow (first record: West bank 3rd June 1990). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Philonthus longicornis Stephens, 1832 Common. A rove beetle.
Located at two subsites: West bank (in flood refuse) and South embankment (first record: West bank 21st January 1990). Known to occur at one other Kirklees locality.

Philonthus marginatus (Muller, O.F., 1764) Common. A rove beetle.
7.0-9.0mm long black rove beetle with conspicuous yellow sides to the pronotum. Common in dung, decaying plant material etc.

Recorded from three subsites: West bank (in flood refuse), Edge Moor (in stable refuse) and South waterworks (in grass cuttings) (first record: West bank 15th May 1985). Widely distributed in Kirklees.

Philonthus nigrita (Gravenhorst, 1806) Local. A rove beetle.
6.0-7.0mm long black rove beetle living among moss and litter in marshy places. Widespread but local.

Males located in Orange Wood on 21st July 1986 remain the only Kirklees record.

Philonthus politus (Linnaeus, 1758) Common. A rove beetle.
10.0-12.0mm long metallic green/black rove beetle. Leaf litter, carrion, decaying fungi etc. Common, not restricted to any particular habitat.

Recorded from three subsites: West bank, East bank and Edge Moor (in stable refuse) (first record: West bank 6th September 1980). Known from a further six Kirklees localities.

Philonthus quisquiliarius (Gyllenhal, 1810) Common. A rove beetle.
A single male was located in flood refuse along the West bank on 30th September 1987. Known from a further seven Kirklees localities.

Philonthus rectangulus Sharp, 1874 Naturalised. A rove beetle.
Recorded from four subsites: West bank, East bank (in flood refuse), Edge Moor (in stable refuse) and SW corner overflow field (first record: East bank 26th July 1981). Known from three other Kirklees localities.

Philonthus sanguinolentus (Gravenhorst, 1802) Common. A rove beetle.
A 7.0-9.0mm long black rove beetle with red marks on the wing cases. Commonly in dung but also in grass litter etc. Regularly turns up in pitfall traps.

Located at two subsites: Edge Moor (in stable refuse and horse dung) and Orange Wood (in cow dung) (first record: Orange Wood 11th April 1988). Known from a further eight Kirklees localities

Philonthus splendens (Fabricius, 1793) Common. A rove beetle.
A moderately-sized (8.0-12.0mm) rove beetle, black with bronze-green elytra. Found in a wide range of decaying organic materials, including rotting vegetation, dung and carrion. Widely distributed and common.

Recorded from two subsites: West bank (in flood refuse) and Edge Moor (in stable refuse) (first record: West bank 21st April 1982). Known from a further five Kirklees localities.

Philonthus succicola Thomson, C.G., 1860 Local. A rove beetle.
A shiny black 10.0-12.0mm long rove beetle, found under rotting vegetable matter, carrion, etc. Rather local.

Located at two subsites: West bank and Edge Moor (in stable refuse) (first record: West bank 5th June 1980). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Philonthus tenuicornis Mulsant & Rey, 1853 Local. A rove beetle.
Recorded from three subsites: West bank, East bank and Edge Moor (in stable refuse) (first record: East bank 26th July 1981). Known from a further five Kirklees localities.

Philonthus umbratilis (Gravenhorst, 1802) Unknown. A rove beetle.
Located at three subsites: West bank, East bank and Edge Moor (in stable refuse) (first record: East bank 28th March 1981). Known from a further five Kirklees localities.

Philonthus varians (Paykull, 1789) Common. A rove beetle.
5.0-6.0mm long black rove beetle living in plant litter, under stones etc and frequently in animal dung.

Recorded from five subsites: West bank, East bank, Edge Moor (in stable refuse and horse dung), South embankment (in horse dung) and South waterworks (first record: West bank 15th May 1985). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Philonthus carbonarius (Gravenhorst, 1802) Common. A rove beetle.
6.0-7.0mm long black rove beetle. Moss, leaf litter, carrion, dung etc. Very common in most habitats.

Located at eight subsites: West bank, East bank, Edge Moor (in stable refuse), Jubilee Quarries, Orange Wood, South waterworks (in grass cuttings), South embankment and SW corner overflow field (first record: West bank 22nd July 1980). Widely distributed in Kirklees.

Philonthus ventralis (Gravenhorst, 1802) Common. A rove beetle.
5.5-6.5mm long dark reddish black rove beetle living in decaying plant litter, grass tussocks and in moss. Predatory.

Recorded along the West bank on three occasions (first record: 4th April 1981). This is the only known Kirklees locality for the species.

Gabrius appendiculatus Sharp, 1910 Common. A rove beetle.
A small black rove beetle of obscure ecology. Widely distributed but local.

A single male found in stable refuse on Edge Moor on 18th April 2010 remains the only record. Known to occur at one other Kirklees locality.

Gabrius nigritulus (Gravenhorst, 1802) Common. A rove beetle.
Males in horse dung along the South embankment on 3rd April 2005 remain the only record. Known to occur at two other Kirklees localities.

Gabrius breviventer (Sperk, 1835) Common. A rove beetle.
Located at four subsites: West bank, East bank, Edge Moor (in stable refuse) and Orange Wood (first record: West bank 20th March 1998). Known to occur at ten other Kirklees localities.

Gabrius piliger Mulsant & Rey, 1876 Common. A rove beetle.
Recorded from four subsites: West bank, Edge Moor (in stable refuse), South waterworks (in grass cuttings) and South embankment (in horse dung) (first record: West bank 24th September 1999). Known to occur at three other Kirklees localities.

Gabrius splendidulus (Gravenhorst, 1802)* Common. A rove beetle.
4.0mm long shiny black rove beetle with yellowish legs. Widespread and common throughout Britain, usually, but not always, found under bark.

Located under bark in Orange Wood on six occasions (first record: 1st May 2001). Known to occur at nine other Kirklees localities.

Gabrius trossulus (Nordmann,1837) Local. A rove beetle.
Recorded from two subsites: West bank and Edge Moor (in stable refuse) (first record: West bank 10th October 1986). Known to occur at two other Kirklees localities.

Cafius xantholoma (Gravenhorst,1806) Common. A rove beetle.
Located in flood refuse along the West bank on 31st October 1986. Known to occur at one other Kirklees locality.

Ocypus aeneocephalus (De Geer,1774) Local. A rove beetle.
A quite large (to 15.0mm) bronze rove beetle usually found under stones, in leaf litter etc, usually on drier soils. Widely distributed and sometimes numerous.

Recorded from the South waterworks on 10th August 2007. Known to occur at five other Kirklees localities.

Ocypus olens (Muller,O.F.,1764) Common. Devil's Coach-horse.
Spectacular matt black rove beetle up to 2.5cm long. Voracious predator, living under stones and among litter in grassland and waste ground, less commonly in other habitats. Widespread and common. Has a powerful bite!

Located at three subsites: West bank, Jubilee Quarries and NE corner (first record: West bank 1st May 1983). Known to occur at five other Kirklees localities.

Tasgius melanarius (Heer,1839) Unknown. A rove beetle.
Recorded from three subsites: West bank, Edge Moor (in stable refuse) and South waterworks (first record: West bank 1st August 1987). Common and widely distributed in Kirklees. Common and widely distributed in Kirklees.

Tasgius winkleri Bernhauer,1906 Common. A rove beetle.
Located in Orange Wood on 10th September 1998. This is the only known Kirklees locality for the species.

Creophilus maxillosus (Linnaeus,1758) Common. Carrion Beetle.
15.0-20.0mm long shiny black rove beetle with patches of yellow and grey hairs. Primarily in carrion and very rotten vegetation. Most habitats, common.

Recorded from the West bank on 8th August 1983. Widely distributed in Kirklees.

Ontholestes tessellatus (Geoffroy,1785) Common. A rove beetle.
Located along the West bank on four occasions (first record: 24th April 1982). Widely distributed in Kirklees.

Heterothops minutus Wollaston,1860 Unknown. A rove beetle.
Recorded from four subsites: West bank, East bank, Edge Moor (regularly in stable refuse) and South waterworks (first record: East bank 4th April 1981). Known to occur at one other Kirklees locality.

Heterothops praeivus Erichson,1839 Unknown. A rove beetle.
Located in stable refuse on Edge Moor on two occasions (first record: 25th July 2008). This is the only known Kirklees locality for the species.

Quedius boopoides Munster,1923 Common. A rove beetle.
Recorded in flood refuse along the West bank on two occasions (first record: 2nd August 1990). This is the only known Kirklees locality for the species.

Quedius boops (Gravenhorst,1802) Common. A rove beetle.
5.0mm long bronze brown rove beetle living in moss and litter. Common, but older records are suspect as this species was split into several in the 1930s.

Located at three subsites: West bank, Edge Moor (in stable refuse) and Orange Wood (first record: Orange Wood 1st May 1983). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Quedius cinctus (Paykull,1790) Common. A rove beetle.
Recorded from three subsites: West bank, Edge Moor (in stable refuse) and SW corner overflow field (first record: West bank 4th November 1981). Known to occur at five other Kirklees localities.

Quedius cruentus (Olivier,1795) Common. A rove beetle.
8.0-10.0mm long reddish rove beetle living in decaying plant litter, tussocks and under bark and in rotting wood. Predatory.

Located at four subsites: West bank, East bank, Edge Moor (in stable refuse) and Orange Wood (first record: East bank 28th March 1981). Known to occur at six other Kirklees localities.

Quedius curtipennis Bernhauer,1908 Common. A rove beetle.
Recorded from four subsites: West bank, East bank, Edge Moor (in stable refuse) and Orange Wood (first record: West bank 4th May 1978). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Quedius fuliginosus (Gravenhorst,1802) Common. A rove beetle.
10.0-12.0mm long black rove beetle with red legs. Common in moss, under stones and bark.

Located at two subsites: West bank and Edge Moor (in stable refuse) (first record: West bank 30th August 1989). Widely distributed in Kirklees.

Quedius longicornis Kraatz,1857 Notable/Nb. A rove beetle.
Pitch-red rove beetle living in moles' nests. Widespread but apparently local, although probably under-recorded.

A single male found along the West bank on 17th May 1985 remains the only Kirklees record.

Quedius maurorufus (Gravenhorst,1806) Common. A rove beetle.
5.0-8.0mm long reddish black rove beetle living in litter and moss in damp places. Widespread and fairly common.

Recorded from two subsites: East bank and Edge Moor (in stable refuse) (first record: East bank 10th May 2001). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Quedius maurus (Sahlberg,C.R.,1830)* Local. A rove beetle.
Shining blue-black rove beetle living under dead bark. Widespread but local.

Located under bark along the West bank on 4th May 1998. Known to occur at five other Kirklees localities.

Quedius mesomelinus (Marsham,1802) Common. A rove beetle.
8.0-10.0mm long black rove beetle living in plant litter, tussocks etc.

Recorded from four subsites: West bank (in flood refuse), East bank (in flood refuse), Edge Moor (in stable refuse) and Orange Wood (first record: West bank 28th March 1981). Widely distributed in Kirklees.

Quedius molochinus (Gravenhorst,1806) Common. A rove beetle.
8.0-12.0mm long shiny black rove beetle. Common under stones, in litter, grass tussocks etc in most habitats.

Located at two subsites: West bank and Edge Moor (in stable refuse) (first record: West bank 1st March 1980). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Quedius nigriceps Kraatz,1857 Local. A rove beetle.
A black rove beetle with red elytra, up to 9.0mm long. Found amongst low vegetation, in plant debris, etc. Widely distributed but local.

Recorded from three subsites: West bank, East bank and Orange Wood (first record: East bank 28th March 1981). Known to occur at two other Kirklees localities.

Quedius nitipennis (Stephens,1833) Common. A rove beetle.
5.5-7.0mm long brownish black rove beetle living in leaf litter and moss. Can only be separated from a number of similar species by dissection. Widespread and common.

Located at two subsites: East bank and SW corner overflow field (first record: East bank 2nd July 2001). Known to occur at six other Kirklees localities.

Quedius plagiatus Mannerheim,1843* Local. A rove beetle.
Black and dull red rove beetle under bark, often of conifers. A northern species, fairly common in parts of Scotland, rare in northern and eastern England.

Located under the bark of a dead deciduous tree in Orange Wood on 27th May 2012. Known to occur at three other Kirklees localities.

Quedius schatzmayri Gridelli,1922 Local. A rove beetle.
A black rove beetle with reddish elytra, up to 6.0mm long. Found amongst low vegetation, in plant debris, under stones, etc. Widely distributed, but largely southern and local.

Recorded along the West bank on four occasions (first record: 28th January 1988). Known to occur at one other Kirklees locality.

Quedius scintillans (Gravenhorst,1806) Common. A rove beetle.
Located at three subsites: West bank (in flood refuse), Edge Moor (regularly in stable refuse) and Jubilee Quarries (first record: West bank 7th May 1999). Known to occur at three other Kirklees localities.

Quedius semiaeneus (Stephens,1833) Common. A rove beetle.
A black rove beetle with reddish elytra, up to 6.5mm long. Found on the ground amongst low vegetation, in plant debris, under stones, etc. Particularly frequent on the coast.

Recorded from flood refuse along the West bank on two occasions (first record: 17th September 1985). Known to occur at one other Kirklees locality.

Quedius semiobscurus (Marsham,1802) Common. A rove beetle.
Located at three subsites: West bank, Edge Moor (in stable refuse) and inflow (first record: West bank 10th October 1986). Known to occur at four other Kirklees localities.

Quedius levicollis (Brulle,1832) Common. A rove beetle.
8.0-12.0mm long black rove beetle living in moss, leaf and grass litter, tussocks and under bark. Predatory.

Recorded from four subsites: West bank, East bank, Edge Moor and SW corner overflow field (first record: West bank 19th September 1980). Widely distributed in Kirklees.

Quedius umbrinus Erichson, 1839 Local. A rove beetle.
9.0mm long brown rove beetle living in damp moss beside waterfalls, springs and on rock faces. Widespread but restricted by habitat.

Specimens from stable refuse on Edge Moor on 20th May 2007 remain the only Kirklees record.

Habrocerus capillaricornis (Gravenhorst, 1806) Local. A rove beetle.
Small fusiform dark orange rove beetle living in moss and plant litter, sometimes under bark. Widespread but nowhere common.

Recorded from flood refuse along the West bank on two occasions (first record: 19th May 1992). Widely distributed in Kirklees.

Trichophya pilicornis (Gyllenhal, 1810) Notable/Nb. A rove beetle.
2.5-3.0mm long dark red brown rove beetle living in leaf litter and moss, mainly in woodland, often in coniferous woodland. Very local and rare but widespread records.

A single located in flood refuse along the West bank on 3rd October 1986 remains the only Kirklees record.

Mycetoporus clavicornis (Stephens, 1832) Common. A rove beetle.
Recorded from two subsites: West bank and South plantation (first record: West bank 12th May 2001). Known to occur at three other Kirklees localities.

Mycetoporus despectus Strand, A., 1969 Notable/Nb. A rove beetle.
3.5-5.0mm long fusiform reddish black rove beetle. In moss and litter etc. Only recently described as a species, separated from *Mycetoporus lepidus*, a common species. Apparently much less common than that species.

Located at three subsites: West bank (in flood refuse), East bank (in flood refuse) and Edge Moor (in stable refuse) (first record: West bank 7th May 1998). Known to occur at one other Kirklees locality.

Mycetoporus lepidus (Gravenhorst, 1806) Common. A rove beetle.
A black or reddish rove beetle, up to 5.0mm long, found on the ground amongst low vegetation, in moss, plant debris etc. Widely distributed and sometimes common.

Recorded from four subsites: West bank, East bank, Edge Moor and South embankment (first record: West bank 2nd June 1989). Known to occur at seven other Kirklees localities.

Mycetoporus longulus Mannerheim, 1830 Common. A rove beetle.
A reddish to black rove beetle, up to 5.0mm long, found on the ground in moss, dead leaves, etc. Widely distributed and sometimes common.

Located at five subsites: West bank, East bank, NE corner, Orange Wood and inflow (first record: West bank 7th April 1985). Known to occur at five other Kirklees localities.

Mycetoporus rufescens (Stephens, 1832) Local. A rove beetle.
4.0-5.5mm long reddish yellow rove beetle living in moss, dead leaves etc. Widespread but local.

Recorded along the West bank on 11th September 1987. Known to occur at one other Kirklees locality.

Ischnosoma splendidum (Gravenhorst,1806) Common. A rove beetle.
A 4.5-5.5mm long rove beetle, black with reddish-brown thorax and elytra. Found amongst moss, leaf litter, etc. Widely distributed and generally common.

Located along the West bank on 3rd September 1985. Known to occur at one other Kirklees locality.

Lordithon thoracicus (Fabricius,1777) Common. A rove beetle.
4.0mm long brown and black torpedo shaped rove beetle living in rotting fungi. Widely distributed and common.

Recorded from two subsites: West bank and orange Wood (first record: West bank 9th April 1981). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Lordithon trinotatus (Erichson,1839) Common. A rove beetle.
4.0-5.0mm long brown rove beetle living in decaying gill fungi.

Located at two subsites: West bank (in fungi) and Orange Wood (in fungi) (first record: West bank 27th February 1983). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Bolitobius castaneus (Stephens,1832) Common. A rove beetle.
Recorded along the West bank on 1st March 1991. Known to occur at two other Kirklees localities.

Bolitobius cingulatus (Mannerheim,1830) Local. A rove beetle.
9.0mm long red and black rove beetle living in leaf litter, under stones etc.

Located at two subsites: West bank and East bank (first record: East bank 12th November 1985). Known to occur at thirteen other Kirklees localities.

Sepedophilus immaculatus (Stephens,1832) Local. A rove beetle.
Fusiform dark red rove beetle found in moss and leaf litter.

Recorded from flood refuse along the West bank on 18th June 2007. Known to occur at one other Kirklees locality.

Sepedophilus marshami (Stephens,1832) Common. A rove beetle.
4.0mm long fusiform grey and brown rove beetle living mainly in leaf mould, grass litter and moss. Very common, often in gardens.

Located at four subsites: West bank (in flood refuse), Edge Moor (regularly in stable refuse), Orange Wood and South embankment (first record: Orange Wood 7th May 1992). Known to occur at eleven other Kirklees localities.

Sepedophilus nigripennis (Stephens,1832) Common. A rove beetle.
Small fusiform yellow rove beetle in grass tussocks, leaf litter, moss etc. Very common in England but apparently rare in Scotland.

Recorded from four subsites: East bank (in flood refuse), Edge Moor (regularly in stable refuse), South waterworks (in grass cuttings) and South embankment (first record: East bank 10th May 2001). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Tachyporus atriceps Stephens,1832 Local. A rove beetle.
Small dark brown rove beetle found in litter and moss.

A single was found in grass cuttings on the South embankment on 13th July 2010. Known from four other Kirklees localities.

Tachyporus chrysomelinus (Linnaeus,1758) Common. A rove beetle.
Small orange and black fusiform rove beetle. Moss, leaf litter, grass tussocks etc. Recently split into two species, *Tachyporus chrysomelinus* and *Tachyporus dispar* on elytral chaetotaxy (Booth, 1988). Both are very common, although *Tachyporus chrysomelinus* seems to be more common in the east and on heavier or less well drained soils.

Located along the West bank on four occasions (first record: 15th May 1985). Known from two other Kirklees localities.

Tachyporus dispar (Paykull,1789) Common. A rove beetle.
Recently split from *Tachyporus chrysomelinus* (see above).

Recorded from nine subsites: West bank, East bank, Edge Moor, NE corner, Jubilee Quarries, South embankment, South waterworks, SW corner overflow field and inflow (first record: West bank 4th November 1989). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Tachyporus hypnorum (Fabricius,1775) Common. A rove beetle.
3.0-4.0mm long fusiform black and red rove beetle. In moss, leaf litter, grass tussocks etc. Very common in most habitats.

Located at six subsites: West bank, East bank, Edge Moor, South embankment, South waterworks and inflow (first record: West bank 15th May 1985). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Tachyporus nitidulus (Fabricius,1781) Common. A rove beetle.
Small reddish fusiform rove beetle. Moss, leaf litter and grass tussocks etc. Very common in most habitats.

Recorded from seven subsites: West bank, Edge Moor, Orange Wood, South embankment (in grass cuttings), SW corner overflow field, inflow and South waterworks (in grass cuttings) (first record: Orange Wood 1st March 1985). Common and widely distributed in Kirklees.

Tachyporus pallidus Sharp,1871 Local. A rove beetle.
Small fusiform rove beetle found in moss, leaf litter etc.

Located at five subsites: West bank (regularly), Edge Moor, Jubilee Quarries, South waterworks (in grass cuttings) and South embankment (first record: West bank 21st June 1996). Widely distributed in Kirklees.

Tachyporus pusillus Gravenhorst,1806 Common. A rove beetle.
3.0-4.0mm long brown fusiform rove beetle usually found among moss and leaf litter. Very common in most of Britain, but apparently more local in the north.

Recorded from the West bank on 15th May 1985. Known from three other Kirklees localities.

Tachinus elongatus Gyllenhal,1810 Local. A rove beetle.
6.0-8.0mm long black rove beetle living in grass tussocks, litter etc.

Located in flood refuse along the West bank on 8th September 1988. Known from five other Kirklees localities.

Tachinus humeralis Gravenhorst,1802 Unknown. A rove beetle.
Recorded from two subsites: West bank (in flood refuse) and South embankment (first record: West bank 8th June 1985). Widely distributed in Kirklees.

Tachinus laticollis Gravenhorst,1802 Local. A rove beetle.
3.5-5.0mm long blackish red rove beetle living in leaf mould, carrion, dung etc. Locally common, most often recorded by pitfall trapping.

Located at seven subsites: West bank, East bank, Edge Moor (in stable refuse), Orange Wood, South embankment, South waterworks and inflow (first record: West bank 4th September 1980). Known from nine other Kirklees localities.

Tachinus marginellus (Fabricius,1781) Common. A rove beetle.
Recorded from six subsites: West bank, Edge Moor (in stable refuse), Orange Wood, South waterworks (in grass cuttings), South embankment and SW corner overflow field (first record: West bank 25th April 1980). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Tachinus pallipes (Gravenhorst,1806) Common. A rove beetle.
Located at four subsites: West bank, Edge Moor (in stable refuse), South waterworks (in grass cuttings) and South embankment (in horse dung) (first record: West bank 19th August 1999). Known from five other Kirklees localities.

Tachinus proximus Kraatz,1855 Unknown. A rove beetle.
Recorded from stable refuse on Edge Moor on two occasions (first record: 26th July 2008). Known from ten other Kirklees localities.

Tachinus rufipes (Linnaeus,1758) Common. A rove beetle.
4.5-6.5mm long reddish black rove beetle living in grass litter, tussocks also in dung. Very common, often turning up in hundreds in pitfall traps.

Located at nine subsites: West bank, East bank, Edge Moor, NE corner, Orange Wood, South embankment, South waterworks, SW corner overflow field and inflow (first record: West bank 23rd April 1980). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Tachinus subterraneus (Linnaeus,1758) Unknown. A rove beetle.
Recorded from flood refuse along the West bank on three occasions (first record: 29th January 1984). Widely distributed in Kirklees.

Cilea siphoides (Linnaeus,1767) Local. A rove beetle.
Small fusiform rove beetle. Local, sometimes in compost and manure heaps.

Located at two subsites: East bank (in flood refuse) and Edge Moor (in stable refuse) (first record: East bank 26th July 1981). Known from six other Kirklees localities.

Cypha laeviuscula (Mannerheim,1830) Common. A rove beetle.
Recorded from two subsites: West bank (in a grass pile) and Edge Moor (in stable refuse) (there are also two other records not attributed to subsites) (first record: site only 15th May 1984). Widely distributed in both Kirklees and the rest of Yorkshire.

Cypha longicornis (Paykull,1800) Common. A rove beetle.
Located at three subsites (there is also a record not attributed to a subsite): East bank, Edge Moor (regularly in stable refuse) and South embankment (in grass cuttings) (first record: site only 16th August 1988). Common and widely distributed in Kirklees. Widespread throughout the rest of Yorkshire.

Oligota apicata (Erichson,1837)* Notable/Nb. A rove beetle.
Tiny rove beetle living in fungi on trees, occasionally in dead eaves. Possibly a predatory arboreal species. Widespread but local.

A single male was found in Birch Polypore *Piptoporus betulinus* in Jubilee Quarries on 30th June 2010. Known from one further Kirklees locality and twelve other Yorkshire localities (YNU database, 2010).

Oligota inflata (Mannerheim,1830) Unknown. A rove beetle.
Recorded from two subsites: Edge Moor (in stable refuse) and South embankment (in grass cuttings) (first record: South embankment 3rd April 2005). Known from a further four Kirklees localities (one of which is pre-1950). Widely distributed in Yorkshire.

Oligota picipes (Stephens,1832) Unknown. A rove beetle.
Specimens located in grass cuttings on the South embankment on 26th May 2005 remain the only Kirklees record. Known from five Yorkshire localities, the record from Blackmoorfoot being the fifth (YNU database, 2010).

Oligota punctulata Heer,1839 Unknown. A rove beetle.
Recorded from three subsites: Edge Moor (in stable refuse), South embankment (in grass cuttings) and South waterworks (in grass cuttings) (first record: South embankment 26th May 2005). Known from four other Kirklees localities. Widely distributed in the southern half of Yorkshire.

Myllaena brevicornis (Matthews,A.H.,1838) Common. A rove beetle.
Recorded from one subsite (there is also a record not attributed to a subsite): South waterworks (in grass cuttings) (first record: site only 21st December 1987). Known from eight other Kirklees localities. Widely distributed in Yorkshire.

Encephalus complicans Stephens,1832 Local. A rove beetle.
A black rove beetle with reddish markings. Found in moss etc. Widely distributed but local.

Recorded from stable refuse on Edge Moor on 29th May 2009. Known from ten other Kirklees localities. Widely distributed in Yorkshire.

Gyrophaena manca Erichson,1839* Notable/Nb. A rove beetle.
Recorded from two subsites: West bank and Jubilee Quarries (in Birch Polypore *Piptoporus betulinus*) (first record: West bank 25th September 1992). Despite the national status of Notable B, the species has been recorded from a further seven Kirklees localities and is widely distributed and frequently recorded in Yorkshire (Denton, 2003).

Leptusa fumida (Erichson,1839)* Common. A rove beetle.
2.0-2.5mm long black rove beetle living under bark.

Located at two subsites: West bank and Orange Wood (under bark) (first record: West bank 24th May 1996). Common and widely distributed in Kirklees. Widely distributed in Yorkshire.

Leptusa ruficollis (Erichson,1839)* Unknown. A rove beetle.
Found under bark in Orange Wood on 19th March 2003. Known from ten other Kirklees localities. Widely, but thinly, distributed in Yorkshire.

Bolitochara obliqua Erichson,1837 Common. A rove beetle.
3.0mm long shiny black rove beetle with reddish elytra. Fairly common in fungi throughout Britain.

Recorded from three subsites (there are also a further three records not attributed to subsites): West bank, East bank and Orange Wood (first record: site only 14th November 1985). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Autalia impressa (Olivier,1795) Common. A rove beetle.
Small reddish rove beetle living in decaying gill fungi.

Located at four subsites: West bank, East bank, Orange Wood and Jubilee Quarries (in Birch Polypore *Piptoporus betulinus*) (first record: East bank 24th September 1984). Widely distributed in Kirklees. Common and widely distributed throughout the rest of Yorkshire.

Autalia rivularis (Gravenhorst,1802) Common. A rove beetle.
Small black rove beetle living in herbivore dung and decaying plant material.

Recorded from five subsites (there is also a record not attributed to a subsite): West bank, Edge Moor (in stable refuse), South waterworks (in grass cuttings), South embankment (in grass cuttings) and South plantation (first record: site only 9th September 1985). Widely distributed in Kirklees. Widespread and common in Yorkshire.

Falagria caesa Erichson,1837 Unknown. A rove beetle.
Located at two subsites (there is also a record not attributed to a subsite): West bank and Edge Moor (first record: site only 9th September 1985). Known from two other Kirklees localities. Widely distributed but not common in Yorkshire, with most records stemming from the southern half.

Falagria sulcatula (Gravenhorst,1806) Notable/Nb. A rove beetle.
A small dark rove beetle found on the ground amongst litter, under stones, etc.

A record from the West bank on 9th September 1985 was the second for Kirklees and Yorkshire (Denton, 2003).

Thinonoma atra (Gravenhorst,1806) Local. A rove beetle.
3.0mm long black rove beetle. Lives mainly on sandy riverbanks, running rapidly over bare sand in the sun. Local throughout Britain.

Located along the West bank (mainly in flood refuse) on numerous occasions (there are also a further two records not attributed to subsites) (first record: site only 22nd February 1983). Known from one other Kirklees locality. Widely distributed in Yorkshire.

Ischnopoda leucopus (Marsham,1802) Local. A rove beetle.
Small blackish blue rove beetle with yellow tarsi. Runs rapidly over wet silt, sand and shingle beside clean moving water. Widely distributed but local. Abundant where found.

Specimens located on 23rd April 1983 were not attributed to a specific subsite. Known from one other Kirklees locality. Widely, but thinly, distributed in Yorkshire.

Gnypeta carbonaria (Mannerheim,1830) Local. A rove beetle.
2.6-3.2mm long black rove beetle living on muddy banks of rivers and ponds. Widespread but local.

Specimens located on 13th February 1987 were not attributed to a specific subsite. Known from two other Kirklees localities. Widely distributed in Yorkshire.

Gnypeta rubrior Tottenham,1939 Local. A rove beetle.
2.6-3.2mm long black rove beetle living on muddy banks of rivers. Widespread but local.

Located at two subsites: East bank and South waterworks (first record: East bank 20th October 1984). This is the only known Kirklees locality for the species. Known from nine Yorkshire localities, the 1984 record from Blackmoorfoot being the third (YNU database, 2010).

Schistoglossa curtipennis (Sharp,1869) Unknown. A rove beetle.
Recorded along the West bank on 16th April 1998. Known from three other Kirklees localities and eight Yorkshire localities, the record from Blackmoorfoot being the eighth (YNU database, 2010).

Boreophilia eremita (Rye,1866) Local. A rove beetle.
Located at two subsites: West bank and Orange Wood (first record: Orange Wood 13th August 1990). Widely distributed in both Kirklees and the rest of Yorkshire.

Aloconota gregaria (Erichson,1839) Common. A rove beetle.
3.0-3.4mm long black rove beetle living in plant litter.

Recorded from three subsites: West bank, East bank and South embankment (first record: West bank 15th May 1985). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Aloconota insecta (Thomson,C.G.,1856) Common. A rove beetle.
A small dark rove beetle, up to 4.0mm long, of obscure ecology. Widely distributed and often common.

Located along the West bank on 27th April 2001. Recorded from a further four Kirklees localities (one of which is pre-1950). Despite the national status of 'Common' the species has only been recorded from nineteen widely scattered Yorkshire localities (YNU database, 2010).

Aloconota sulcifrons (Stephens,1832) Unknown. A rove beetle.
Recorded along the West bank on two occasions (first record: 4th May 1998). Recorded from a further three Kirklees localities. Widely, but thinly, distributed in Yorkshire.

Amischa analis (Gravenhorst,1802) Common. A rove beetle.
Located at seven subsites: West bank, East bank, Edge Moor, Orange Wood, South embankment, South waterworks and SW corner overflow field (first record: East bank 27th April 1984). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Amischa decipiens (Sharp,1869) Local. A rove beetle.
Recorded from two subsites: West bank (in flood refuse) and East bank (in flood refuse) (first record: West bank 12th April 2001). Known from a further two Kirklees localities. Widely distributed in Yorkshire, especially in the east and south.

Amischa nigrofusca (Stephens,1829) Unknown. A rove beetle.
2.0-2.5mm long reddish yellow rove beetle living in moss and litter. Relatively recently split from a common species *Amischa analis* and status and distribution not yet apparent.

Two females located in stable refuse on Edge Moor on 23rd March 2011 remains the only record. Known from one other Kirklees locality and 12 others in Yorkshire.

Nehemitropia lividipennis (Mannerheim,1830) Common. A rove beetle.
Located at three subsites: West bank, Edge Moor (regularly in stable refuse) and SW corner overflow field (first record: West bank 23rd June 1999). Known from a further four Kirklees localities. Common and widely distributed in Yorkshire.

Geostiba circellaris (Gravenhorst,1806) Common. A rove beetle.
Recorded from six subsites: West bank, East bank, Edge Moor, Orange Wood, South waterworks (in grass cuttings) and South embankment (first record: West bank 26th February 1983). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Dinaraea aequata (Erichson,1837)* Common. A rove beetle.
Located at two subsites: West bank and Orange Wood (under bark) (first record: West bank 15th February 2000) (there are also two other records not attributed to subsites). Known from a further thirteen Kirklees localities. Common and widely distributed in Yorkshire.

Dinaraea angustula (Gyllenhal,1810) Local. A rove beetle.
3.0-3.5mm long dull reddish rove beetle living in plant litter.

Located along the West bank on 23rd June 1999. Known from a further six Kirklees localities. Widely distributed in Yorkshire.

Plataraea brunnea (Fabricius,1798) Local. A rove beetle.
A black rove beetle with yellowish elytra, up to 4.5mm long, found on the ground amongst plant debris, etc. Widely distributed in England at least, but local.

Recorded from flood refuse along the West bank on 10th May 1999. Known from a further three Kirklees localities. Widely distributed, but not common, in Yorkshire.

Liogluta longiuscula (Gravenhorst,1802) Unknown. A rove beetle.
Specimens located on 4th May 1987 were not attributed to a specific subsite. Known from one other Kirklees locality. Widely distributed, but not common, in Yorkshire.

Liogluta microptera Thomson,C.G.,1867 Unknown. A rove beetle.
A black rove beetle with reddish elytra, up to 4.0mm long. Widely distributed but local.

Recorded from two subsites: West bank and Orange Wood (first record: West bank 1st August 1991). Known from six other Kirklees localities. Widely distributed in Yorkshire.

Philhygra debilis (Erichson,1837) Local. A rove beetle.
A small rove beetle of obscure ecology.

Located in flood refuse along the West bank on two occasions (first record: April 1985). Known from two other Kirklees localities. Recorded from eleven Yorkshire localities, most of which are in the southern half.

Philhygra elongatula (Gravenhorst,1802) Common. A rove beetle.
Recorded from two subsites: West bank and Orange Wood (first record: Orange Wood 5th May 1985). Known from three other Kirklees localities. Common and widely distributed in Yorkshire.

Philhygra hygrobia (Thomson,C.G.,1856) Notable/Nb. A rove beetle.
Small rove beetle. Ecology apparently unknown.

A single male found in flood refuse along the West bank on 1st February 1989 was the first record for Kirklees and the fifth for Yorkshire (YNU database, 2010).

Philhygra hygrotopora (Kraatz,1856) Unknown. A rove beetle.
A single male was located at the South waterworks on 5th July 2010. Known from a further nine Kirklees localities. Widely, but thinly, distributed in Yorkshire (Denton, 2003).

Philhygra luridipennis (Mannerheim,1830) Local. A rove beetle.
3.5-4.0mm long dark red brown rove beetle, usually recorded from flood refuse.

Recorded from flood refuse along the East bank on 1st May 2001. Known from one other Kirklees locality. Widely, but thinly, distributed in Yorkshire.

Philhygra malleus (Joy,1913) Local. A rove beetle.
Located in flood refuse along the West bank on two occasions (first record: 16th April 1998). Widely distributed in both Kirklees and the rest of Yorkshire.

Philhygra melanocera (Thomson,C.G.,1856) Common. A rove beetle.
Recorded from two subsites (there are also a further two records not attributed to subsites): West bank (in flood refuse and a grass pile) and East bank (in flood refuse) (first record: West bank 30th April 1983). Known from nine other Kirklees localities. Common and widely distributed in Yorkshire.

Philhygra obtusangula (Joy,1913) Local. A rove beetle.
Located along the West bank on four occasions (there is also a further record not attributed to a subsite) (first record: West bank 30th April 1983). Known from two other Kirklees localities. Widely, but thinly, distributed in Yorkshire.

Philhygra palustris (Kiesenwetter,1844) Unknown. A rove beetle.
Recorded from the South embankment on 7th June 2005. Known from two other Kirklees localities. Recorded from twenty-two Yorkshire localities, most of which are in the southern half of the county (YNU database, 2010).

Philhygra volans (Scriba,1859) Unknown. A rove beetle.
Located at two subsites: West bank and South waterworks (first record: West bank 4th May 1998). Known from one other Kirklees locality. Recorded from fifteen Yorkshire localities, most of which are in the southern half of the county (YNU database, 2010).

Enalodroma hepatica (Erichson,1839) Unknown. A rove beetle.
Recorded from stable refuse on Edge Moor on 1st June 2009. Known from one other Kirklees locality. Recorded from fourteen Yorkshire localities, most of which are in the southern half of the county (YNU database, 2010).

Bessobia excellens (Kraatz,1856) Local. A rove beetle.
Specimens located in flood refuse along the West bank on 28th October 1984 remain the only Kirklees record. Widely distributed in Yorkshire, especially in the north.

Bessobia monticola (Thomson,C.G.,1852) Unknown. A rove beetle.
A small rove beetle of obscure ecology. Widely distributed but local.

Recorded along the West bank on 6th August 1983. Known from three other Kirklees localities. Widely, but thinly, distributed in Yorkshire.

Microdota amricula (Stephens,1832) Common. A rove beetle.
Located at three subsites: West bank, Edge Moor (in stable refuse) and South waterworks (in grass cuttings) (first record: West bank 3rd August 1983). Recorded from a further four Kirklees localities (one of which is pre-1950). Common and widely distributed in Yorkshire.

Microdota atricolor (Sharp,1869) Unknown. A rove beetle.
Recorded from two subsites: West bank and Edge Moor (in stable refuse) (first record: West bank 4th August 1992). Known from a further three Kirklees localities. Widely, but thinly, distributed in Yorkshire.

Microdota boreella (Brundin,1948) Local. A rove beetle.
Located in a grass pile along the West bank on 12th May 1990. This was the first record for Yorkshire, there being two others since, one of which stems from Kirklees.

Microdota excelsa (Bernhauer,1911) Notable/Nb. A rove beetle.
A single female was located in horse dung on Edge Moor on 13th June 2012. Known from one other Kirklees locality.

Microdota indubia (Sharp,1869) Local. A rove beetle.
Recorded from three subsites: West bank, East bank and Edge Moor (in stable refuse) (first record: West bank 8th August 1983). Known from a further three Kirklees localities. Widely distributed in Yorkshire.

Microdota liliputana (Brisout,1860) Local. A rove beetle.
Small rove beetle. Biology little known, but few records.

Located along the West bank on 11th October 1987. Known from one other Kirklees locality (in 1990). These are the only Yorkshire records (YNU database, 2010).

Cadaverota cadaverina (Brisout,1860) Local. A rove beetle.
2.3-2.6mm long black rove beetle.

Recorded along the West bank on two occasions (first record: 9th September 1990). Known from six other Kirklees localities. There are Yorkshire records from seventeen localities, all in the southern half of the county (YNU database, 2010).

Alaobia sodalis (Erichson,1837) Unknown. A rove beetle.
A dark rove beetle with yellow legs, up to 3.0mm long, of obscure ecology. Widespread but local.

Specimens located on 28th October 1984 were not attributed to a specific subsite. Known from seven other Kirklees localities. Widely distributed in Yorkshire.

Alaobia trinotata (Kraatz,1856) Common. A rove beetle.
Recorded from three subsites (there are also a further six records not attributed to subsites): West bank (numerous records), Edge Moor (regularly in stable refuse) and South embankment (first record: West bank 12th February 1984). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Mocyta amplicollis (Mulsant & Rey,1873) Unknown. A rove beetle.
Located along the West bank on 5th June 2004. Known from a further four Kirklees localities. Widely distributed in Yorkshire with most records stemming from the southern half.

Mocyta clientula (Erichson,1839) Local. A rove beetle.
A small rove beetle of obscure ecology. Widespread but local.

Specimens located in flood refuse along the East bank on 16th August 1984 constituted the second county record and remain the only one for Kirklees. The species is known from eight localities in Yorkshire (YNU database, 2010).

Mocyta fungi (Gravenhorst,1806) Common. A rove beetle.
Recorded from nine subsites: West bank, East bank, Edge Moor, Jubilee Quarries, Orange Wood, South embankment, South waterworks, SW corner overflow field and inflow (first record: East bank 23rd April 1982). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Acrotona aterrima (Gravenhorst,1802) Common. A rove beetle.
Located at four subsites: West bank, Edge Moor (regularly in stable refuse and horse dung), South embankment (in horse dung) and South waterworks (first record: West bank 27th December 1989). Known from a further nine Kirklees localities. Common and widely distributed in Yorkshire.

Acrotona muscorum (Brisout,1860) Common. A rove beetle.
1.6-1.9mm long black rove beetle living in plant litter.

Recorded from two subsites: West bank and SW corner overflow field (first record: West bank 21st August 1999). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Acrotona parvula (Mannerheim,1830) Common. A rove beetle.
1.6-1.9mm long black rove beetle living in dung.

Located at three subsites: West bank (numerous occasions), Edge Moor (in horse dung) and Orange Wood (first record: West bank 20th March 1998). Known from three other Kirklees localities. Common and widely distributed in Yorkshire.

Acrotona pygmaea (Gravenhorst,1802) Local. A rove beetle.
Tiny black rove beetle living in dead vegetation. Widespread but local.

Located at three subsites: West bank, Edge Moor (in stable refuse) and South waterworks (in grass cuttings) (first record: West bank 26th October 1999). Known from a further three Kirklees localities. Recorded from twenty-one Yorkshire localities, most of which are in the southern half of the county (YNU database, 2010).

Rhagochneme subsinuata (Erichson,1839) Unknown. A rove beetle.
Recorded from two subsites: West bank (in flood refuse) and Edge Moor (in stable refuse) (first record: West bank 14th August 1999). Known from a further two Kirklees localities. Only recorded from seven in Yorkshire localities (YNU database, 2010).

Datomicra canescens (Sharp,1869) Common. A rove beetle.
1.2-1.5mm long rove beetle living in dung.

Specimens located in stable refuse on Edge Moor on 9th June 2007 remain the only Kirklees locality for the species. Despite the national status of 'Common' this was only the third county record (YNU database, 2010).

Datomicra celata (Erichson,1837) Local. A rove beetle.
1.7-2.0mm long rove beetle. Widespread but local.

Recorded from seven subsites: West bank (regularly), East bank, Jubilee Quarries, Edge Moor (regularly in stable refuse), South embankment, South waterworks (in grass cuttings) and inflow (in flood refuse) (first record: West bank 26th February 1983). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Datomicra dadopora (Thomson,C.G.,1867) Local. A rove beetle.
Easily confused with a commoner species (*Datomicra celata*) and hence possibly over-recorded.

Located at two subsites: West bank and Edge Moor (in stable refuse) (first record: West bank 30th June 1999). Widely distributed in Kirklees. Widely, but thinly, distributed in Yorkshire.

Datomicra nigra (Kraatz,1856) Common. A rove beetle.
Recorded from six subsites (there is also a record not attributed to a subsite): West bank, Edge Moor (in stable refuse), Jubilee Quarries, South embankment, South waterworks (in grass cuttings) and inflow (in flood refuse) (first record: site only 9th September 1990). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Datomicra sordidula (Erichson,1837) Local. A rove beetle.
1.2-1.5mm long black rove beetle living in dung.

Located at two subsites: West bank and Edge Moor (in stable refuse) (first record: West bank 26th January 1990). Known from a further five Kirklees localities. Widely distributed in Yorkshire.

Atheta aquatica (Thomson,C.G.,1852) Common. A rove beetle.
Recorded from two subsites (there are also a further two records not attributed to subsites): West bank and East bank (first record: West bank 21st May 1983). Known from a further nine Kirklees localities. Widely distributed in Yorkshire.

Atheta aquatilis (Thomson,C.G.,1867) Notable/Nb. A rove beetle.
Very small rove beetle found in litter.

Recorded from two subsites (there are also a further three records not attributed to subsites): West bank (numerous records) and South embankment (first record: site only 19th June 1984).

Recorded from a further ten Kirklees localities. Despite the national status of Notable B, the species is widely distributed in Yorkshire VC's 62, 63 and 65 (Denton, 2003).

Atheta brunneipennis (Thomson, C.G., 1852) Local. A rove beetle.
3.0-3.5mm long rove beetle.

Located at two subsites: West bank and South waterworks (in grass cuttings) (first record: West bank 10th September 1999). Recorded from a further two Kirklees localities. Widely distributed in the southern half of Yorkshire.

Atheta castanoptera (Mannerheim, 1830) Common. A rove beetle.
3.5-4.0mm long black rove beetle.

Recorded along the West bank on two occasions (first record: 13th November 1985). Known from a further nine Kirklees localities. Common and widely distributed in Yorkshire.

Atheta graminicola (Gravenhorst, 1806) Common. A rove beetle.
Located at five subsites: West bank (regularly), East bank, Orange Wood, South waterworks and inflow (first record: West bank 14th April 1983). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Atheta harwoodi (Williams, 1930) Local. A rove beetle.
2.0-2.5mm long black rove beetle.

Recorded from four subsites (there are also a further seven records not attributed to subsites): West bank (regularly), Edge Moor, South embankment and South waterworks (first record: West bank 8th August 1983). Widely distributed in both Kirklees and the rest of Yorkshire.

Atheta vaga (Heer, 1839)* Local. A rove beetle.
2.0-2.5mm long black rove beetle.

Located at four subsites: West bank, Edge Moor, South waterworks (in grass cuttings) and NE corner (first record: site only 30th September 1986). Widely distributed in both Kirklees and the rest of Yorkshire.

Atheta hypnorum (Kiesenwetter, 1850) Local. A rove beetle.
4.0mm long black rove beetle.

Recorded along the West bank on two occasions (first record: 29th August 1990). Widely distributed in both Kirklees and Yorkshire, where it is mainly confined to the southern half.

Atheta aeneicollis (Sharp, 1869) Unknown. A rove beetle.
3.0-3.5mm long black rove beetle with metallic sheen. Specific ecology appears to be unknown but other members of the genus tend to occur in leaf litter and moss.

Located at four subsites (there are also a further two records not attributed to subsites): West bank, Edge Moor (in stable refuse), South embankment (in grass cuttings) and inflow (in flood refuse) (first record: site only 29th September 1988). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Atheta triangulum (Kraatz, 1856) Local. A rove beetle.
Recorded from stable refuse on Edge Moor on 17th October 1984 (there are also a further two records not attributed to subsites). Widely distributed in Kirklees. Common and widely distributed in Yorkshire.

Atheta crassicornis (Fabricius,1793) Common. A rove beetle.
Located at six subsites: West bank (regularly in flood refuse etc), East bank, Jubilee Quarries (in Birch Polypore *Piptoporus betulinus*), Edge Moor (in stable refuse), South embankment (in horse dung and grass cuttings) and South plantation (first record: East bank 3rd June 1982). Common and widely distributed in Kirklees. Ubiquitous in Yorkshire, being found in a wide variety of habitat types.

Atheta fungicola (Thomson,C.G.,1852) Common. A rove beetle.
Recorded along the West bank on two occasions (first record: 4th November 1989). The only other Kirklees record is pre-1950. Despite the national status of 'Common' the species is only known from seven Yorkshire localities (YNU database, 2010).

Atheta intermedia (Thomson,C.G.,1852) Unknown. A rove beetle.
A small rove beetle occurring in dung.

Specimens located in horse dung along the South embankment on 7th June 2005 remain the only Kirklees locality for the species. Only known from five Yorkshire localities (YNU database, 2010).

Atheta ravilla (Erichson,1839) Unknown. A rove beetle.
2.4-2.8mm long rove beetle living in carrion.

Recorded from three subsites: West bank, Edge Moor and South waterworks (first record: West bank 6th August 1989). Known from nine other Kirklees localities. Widely distributed in Yorkshire.

Atheta britanniae (Bernhauer & Scheerpeltz,1926) Unknown. A rove beetle.
Specimens located on 1st September 1987 were not attributed to a specific subsite. Known from four other Kirklees localities. Widely distributed in Yorkshire.

Dalotia coriaria (Kraatz,1856) Common. A rove beetle.
Recorded from three subsites: West bank, Edge Moor (in stable refuse) and South waterworks (in grass cuttings) (first record: West bank 16th October 1986). Widely distributed in both Kirklees and the rest of Yorkshire.

Mycetota laticollis (Stephens,1832) Common. A rove beetle.
Located at four subsites: West bank, Edge Moor, South embankment and South waterworks (first record: West bank 1st August 1983). Recorded from a further seven Kirklees localities. Widely distributed and common in Yorkshire.

Dimetrota atramentaria (Gyllenhal,1810) Common. A rove beetle.
Small black rove beetle living in dung.

Recorded from seven subsites: West bank, East bank, Edge Moor (regularly in horse dung), Orange Wood, South waterworks, NE corner and inflow (first record: West bank 21st February 1983). Common and widely distributed in Kirklees. Ubiquitous in Yorkshire.

Dimetrota cauta (Erichson,1837) Common. A rove beetle.
Located in horse dung on Edge Moor on 13th June 2012. This is the only known Kirklees locality for the species which, despite having the national status of 'Common', is only known from six Yorkshire localities (YNU database, 2012).

Dimetrota cinnamoptera (Thomson,C.G.,1856) Unknown. A rove beetle.
Located at three subsites: Edge Moor, South embankment and South waterworks (first record: South embankment 7th June 2005). Recorded from a further six Kirklees localities. Widely distributed in Yorkshire.

Dimetrota ischnocera (Thomson,C.G.,1870) Unknown. A rove beetle.
Recorded from three subsites: East bank, NE corner (in horse dung) and Edge Moor (first record: East bank 16th August 1985). Known from a further three Kirklees localities. Widely distributed in Yorkshire.

Dimetrota laevana (Mulsant & Rey,1852) Local. A rove beetle.
2.2-2.5mm long yellowish black rove beetle living in dung.

Located along the West bank on two occasions (first record: 4th July 1999). Known to occur at two other Kirklees localities. Widely, but thinly, distributed in Yorkshire.

Dimetrota nigripes (Thomson,C.G.,1856) Common. A rove beetle.
Recorded from two subsites: West bank and Edge Moor (first record: West bank 9th March 1990). Recorded from a further six Kirklees localities. Widely distributed in Yorkshire.

Dimetrota setigera (Sharp,1869) Common. A rove beetle.
Located at three subsites: West bank, Edge Moor (regularly in horse dung and stable refuse) and South embankment (in horse dung) (first record: West bank 20th August 1999). Known from one other Kirklees locality. Widely, but thinly, distributed in Yorkshire.

Badura puncticollis (Benick,1938) Notable/Nb. A rove beetle.
A single female found in moss on a dead oak in Orange Wood on 19th June 2012 was the first record for Yorkshire.

Chaetida longicornis (Gravenhorst,1802) Common. A rove beetle.
Recorded from six subsites (there is also a record not attributed to a subsite): West bank, East bank, Jubilee Quarries (in Birch Polypore *Piptoporus betulinus*), Edge Moor (regularly in horse dung and stable refuse), South embankment and South waterworks (first record: site only 10th August 1980). Widely distributed in Kirklees. Widespread and common in Yorkshire.

Thamiaraea cinnamomea (Gravenhorst,1802)* Local. A rove beetle.
Described by Atty (1983, Coleoptera of Gloucestershire) as occurring in Goat Moth *Cossus cossus* infected oaks *Quercus* spp.

A single found under bark in Orange Wood on 11th November 1985 was the first county record (Denton, 2003). The Goat Moth is not known to occur in Kirklees.

Trichiusa immigrata Lohse,1984 Unknown. A rove beetle.
A small (2.0mm) aleocharine rove beetle which holds its abdomen curled over its back. First recorded from Britain in Kent during 1992 (Heal, 1993), it has now been recorded as far north as Raasay (Moore, 2004): found in rotting vegetation and compost.

Recorded from three subsites: West bank, Edge Moor (in stable refuse) and Jubilee Quarries (first record: West bank 10th May 1999). Known from a further four Kirklees localities. First recorded in Yorkshire in May 1996 (not from Kirklees), the species has now been found at eighteen widely scattered localities (YNU database, 2010).

Phloeopora testacea (Mannerheim,1830)* Common. A rove beetle.
2.0-2.5mm long yellowish red rove beetle living under bark.

Found under bark in Orange Wood on 12th September 1999. Known to occur at six other Kirklees localities. Widely distributed in Yorkshire with most records stemming from the southern.

Calodera aethiops (Gravenhorst,1802) Common. A rove beetle.
A dark reddish to black rove beetle, 2.0 to 2.3mm long, found on the ground amongst low vegetation and plant debris.

Specimens located on 26th December 1984 were not attributed to a specific subsite. Known from two other Kirklees localities. Widely distributed in Yorkshire.

Ocalea picata (Stephens,1832) Common. A rove beetle.
A dull yellowish rove beetle, 3.5 to 4.8mm long, typically found in damp places in moss etc.

Recorded from flood refuse along the West bank on two occasions (first record: April 1985). Known from a further seven Kirklees localities. Widely distributed and common in Yorkshire.

Mniusa incrassata (Mulsant & Rey,1852) Local. A rove beetle.
2.5-3.0mm long black rove beetle living among dead leaves etc.

Located at two subsites: West bank and Orange Wood (first record: Orange Wood 23rd July 1987). Known to occur at ten other Kirklees localities. Widely distributed in Yorkshire.

Oxypoda alternans (Gravenhorst,1802) Common. A rove beetle.
3.2-3.5mm long reddish yellow rove beetle living in decaying fungi.

Recorded from two subsites: West bank and Jubilee Quarries (in Birch Polypore *Piptoporus betulinus*) (first record: West bank 13th October 1999). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Oxypoda annularis Mannerheim,1830 Unknown. A rove beetle.
Specimens located on 17th March 1988 were not attributed to a specific subsite. Known from four other Kirklees localities. Widely distributed in Yorkshire.

Oxypoda elongatula Aube,1850 Common. A rove beetle.
Recorded from six subsites (there are also six records not attributed to subsites): West bank, East bank, Jubilee Quarries (in Birch Polypore *Piptoporus betulinus*), Edge Moor, South waterworks and inflow (in flood refuse) (first record: site only 14th April 1983). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Oxypoda haemorrhoea (Mannerheim,1830) Unknown. A rove beetle.
Recorded from five subsites (there is also a record not attributed to a subsite): West bank, East bank, Edge Moor, Jubilee Quarries and South embankment (in grass cuttings) (first record: West bank 27th September 1983). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Oxypoda lentula Erichson,1837 Common. A rove beetle.
Specimens located in stable refuse on Edge Moor on 15th April 2006 remain the only Kirklees record. Despite the national status of 'Common' the species has only been recorded from nine Yorkshire localities (YNU database, 2010).

Oxypoda acuminata (Stephens,1832) Common. A rove beetle.
Recorded from stable refuse on Edge Moor on 15th April 2006. Known from two other Kirklees localities. Widely distributed in Yorkshire.

Oxypoda opaca (Gravenhorst,1802) Common. A rove beetle.
Recorded from four subsites: West bank, Edge Moor (regularly in stable refuse), Orange Wood and SW corner overflow field (first record: Orange Wood 21st September 1987). Known from a further ten Kirklees localities. Widely distributed and common in Yorkshire.

Oxypoda procerula Mannerheim,1830 Local. A rove beetle.
Small rove beetle living in litter and moss in wet places. Widespread but very local.

Located at two subsites: West bank and Edge Moor (in stable refuse) (first record: West bank April 1985). Known from a further seven Kirklees localities. Widely distributed in Yorkshire.

Oxypoda brevicornis (Stephens,1832) Local. A rove beetle.
Specimens located on 28th May 1986 were not attributed to a specific subsite. Known from six other Kirklees localities. Widely distributed and common in Yorkshire.

Ischnoglossa prolixa (Gravenhorst,1802)* Unknown. A rove beetle.
A dull reddish rove beetle, 2.8 to 3.5mm long, found under bark. Widely distributed but local.

Found under bark in Orange Wood on 21st September 1987. Known from a further five Kirklees localities. There are Yorkshire records from eleven localities (YNU database, 2010).

Thiasophila angulata (Erichson,1837) Unknown. A rove beetle.
Located under bark in Orange Wood on 21st September 1987. Known from one other Kirklees locality. There are Yorkshire records from fourteen localities (YNU database, 2010).

Tinotus morion (Gravenhorst,1802) Common. A rove beetle.
2.0-3.0mm long, black rove beetle living in moss and leaf litter.

Recorded from Edge Moor on two occasions (once in stable refuse and once in horse dung) (first record: 9th September 2007). Known from three other Kirklees localities. Widely, but thinly, distributed in Yorkshire.

Aleochara bipustulata (Linnaeus,1761) Common. A rove beetle.
4.0-6.0mm long black and red rove beetle, usually found in dung or carrion but also often in leaf litter, moss etc.

Located at two subsites: West bank (in flood refuse) and South embankment (in horse dung) (first record: West bank 12th March 2002). Known from a further eight Kirklees localities. Widely distributed in Yorkshire.

Aleochara_cuniculorum Kraatz,1858 Local. A rove beetle.
3.0-5.5mm long rove beetle usually found in or in the vicinity of Rabbit *Oryctolagus cuniculus* holes, possibly associated with Rabbit dung. Widespread but local.

Recorded from flood refuse along the West bank on 29th October 1987. This remains the only Kirklees record. The species is known from six widely scattered Yorkshire localities (YNU database, 2010).

Aleochara curtula (Goeze,1777) Common. A rove beetle.
5.0-9.0mm long reddish rove beetle living in litter, decaying vegetable matter etc. Status unclear, but probably common.

Located at two subsites: West bank and inflow (in flood refuse) (first record: West bank 20th June 1984). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Aleochara funebris Wollaston,1864 Unknown. A rove beetle.
Recorded from two subsites: West bank and South waterworks (first record: West bank 13th August 1983). Known from five other Kirklees localities. There are Yorkshire records from thirteen widely scattered localities (YNU database, 2010).

Aleochara lanuginosa Gravenhorst,1802 Common. A rove beetle.
Located at seven subsites: West bank, East bank, Edge Moor (regularly in horse dung and stable refuse), NE corner (in horse dung), Orange Wood, South embankment (in horse dung) and inflow

(in flood refuse) (first record: West bank 8th May 1983). Common and widely distributed in Kirklees. Ubiquitous in Yorkshire.

Aleochara verna Say, 1836 pRDBK. A rove beetle.
Recorded along the West bank on three occasions (first record: 20th April 1998). This is the only known Kirklees locality for the species which is known from seven Yorkshire localities (YNU database, 2010).

A revision of the subgenus *Coprochara* (Welch, 1997) has indicated that the species is far more widespread in the British Isles than previously thought. The national status of pRDBK obviously requires revising.

Euplectus karsteni (Reichenbach, 1816)* Local. A short-winged mould beetle.
Very small beetle found under bark and in rotten timber of broad-leaved trees, mainly in old woodland. Widespread throughout Great Britain, but common only in the south.

A single found under bark on the West bank on 1st October 1986 was the first record for Kirklees and only the fourth for the county.

Euplectus signatus (Reichenbach, 1816) Local. A short-winged mould beetle.
Recorded from two subsites: Edge Moor (in stable refuse) and Orange Wood (first record: Orange Wood 1st October 1986). Known from a further two Kirklees localities.

Bythinus macropalpus Aube, 1833 Local. A short-winged mould beetle.
Tiny beetle living in moss, among rotten wood and occasionally in damp litter in small mammal nests. Scattered records north to Westmorland.

Specimens located in Orange Wood on 30th June 1987 remain the only Kirklees record.

LUCANIDAE

This group contains the well-known Stag Beetle *Lucanus cervus* (Linnaeus), common in the south of Britain but much more localised in the north.

Sinodendron cylindricum (Linnaeus, 1758)* Common. Rhinoceros Beetle.
Larvae bore into firm dead timber of broad-leaved trees in early stages of decay. Widespread but local. Occurs in most ancient woodlands but also common in secondary woods, old trees in hedges, etc.

Located in dead wood in Orange Wood on two occasions (first record: 29th June 1991). Widely distributed in Kirklees.

GEOTRUPIDAE

The seven British members of this family have fairly short, powerful legs; the front pair of tibiae being toothed along the outer margin to aid digging.

Geotrupes stercorarius (Linnaeus, 1758) Common. Dor Beetle.
18.0-25.0mm long shiny blue or violet black dor beetle. Adults co-operate in pairs to bury dung, particularly cow dung, sometimes to a depth of 30cm, for the larvae to develop in. Widespread and common in pastures.

Recorded from four subsites: West bank, East bank, Edge Moor and SW corner overflow field (first record: SW corner overflow field 13th June 1979). Known from a further nine Kirklees localities.

SCARABAEIDAE

This group contains the most familiar of the dung beetles. These beetles form an important part of the ecology of the countryside as they break down herbivore dung via their feeding actions.

Aphodius ater (De Geer,1774) Common. A dung beetle or chafer.
6.0mm long black dung beetle. Very common in cow, horse and sheep dung.

Located at six subsites: West bank, East bank, Edge Moor (in horse dung), Orange Wood (in cow dung), South embankment (in horse dung) and inflow (in flood refuse) (first record: West bank 1st June 1982). Widely distributed and common in both Kirklees and the rest of Yorkshire.

Aphodius borealis Gyllenhal,1827 Local. A dung beetle or chafer.
A dark red and black dung beetle, 3.5 to 5.0mm long. Found in various sorts of dung, including deer and sheep. Prefers wooded areas, but has also been recorded in open situations. Widely distributed and locally common.

Specimens located in cow dung in Orange Wood on 23rd August 2007 remain the only Kirklees record.

Aphodius conspurcatus (Linnaeus,1758) Notable/Nb. A dung beetle or chafer.
A black and yellow dung beetle. Widely distributed but very local.

Recorded from flood refuse along the West bank on 9th September 1985. Known from a further two Kirklees localities.

Aphodius contaminatus (Herbst,1783) Common. A dung beetle or chafer.
A small dung beetle with dark head and thorax and straw coloured elytra. Common in a variety of habitats in all types of mammalian dung. Frequently caught on the wing and has a tendency to land in, and drown in, ponds and puddles.

Located at three subsites: West bank, Edge Moor and South embankment (first record: West bank 11th October 1986). Widely distributed and common in both Kirklees and the rest of Yorkshire.

Aphodius depressus (Kugelann,1792) Common. A dung beetle or chafer.
8.0mm long shiny black dung beetle, most frequent in sheep dung but also occurring in dung of other species. Very common in northern and upland Britain, much more local in the south.

Recorded from three subsites: Edge Moor (in stable refuse and horse dung), SW corner overflow field and South embankment (first record: SW corner overflow field 7th July 1989). Widely distributed in Kirklees.

Aphodius fimetarius/pedellus agg. A dung beetle or chafer.
Located at three subsites: West bank (in flood refuse), Edge Moor (in stable refuse) and South embankment (first record: West bank 25th April 1988). Widely distributed in Kirklees.

The realisation that two species were masquerading under the name of *Aphodius fimetarius* has meant that all Kirklees records can only be attributed to the aggregate as no voucher specimens exist.

Aphodius foetens (Fabricius,1787) Local. A dung beetle or chafer.
6.0-9.0mm long orange-brown and black dung beetle. In a variety of herbivore dung, but most commonly in cow dung. Widespread but local.

Specimens located in flood refuse along the West bank on 1st September 1991 remain the only Kirklees record.

Aphodius fossor (Linnaeus,1758) Common. A dung beetle or chafer.
8.0-10.0mm long black or dark red dung beetle. Larvae in large-herbivore dung. Very common throughout Britain.

Recorded from three subsites: West bank, Edge Moor (in stable refuse and horse dung) and SW corner overflow field (first record: West bank 29th July 1983). Widely distributed in both Kirklees and the rest of Yorkshire.

Aphodius lapponum Gyllenhal, 1808 Nr.

Northern Dung Beetle.

Common in Scotland but found only at high altitude in the rest of Great Britain, south to Brecon Beacons.

Located along the West bank on two occasions (first record: 7th June 1992). Known from a further five Kirklees localities.

Aphodius prodromus (Brahm, 1790) Common.

A dung beetle or chafer.

6.0mm long yellow-brown and black dung beetle living in most types of larger herbivore dung. Very common. A spring and autumn species.

Recorded from four subsites: West bank, East bank, Edge Moor (in stable refuse and horse dung) and South embankment (in horse dung) (first record: East bank 2nd April 1999). Known from a further nine Kirklees localities.

Aphodius rufipes (Linnaeus, 1758) Common.

A dung beetle or chafer.

A shiny dark brown dung beetle, about 1.5cm long, mainly living in fresh cow dung. Adults fly at night and the species readily comes to light. Very common all over Britain.

Located at five subsites: West bank, Edge Moor, Orange Wood, South embankment and inflow (in flood refuse) (first record: West bank 11th June 1982). Known from a further seven Kirklees localities. Common and widely distributed in Yorkshire.

Aphodius rufus (Moll, 1782) Common.

A dung beetle or chafer.

A small dung beetle without affinity for any particular kind of dung. Common in a variety of habitats throughout Britain. Found from July to October.

Recorded from two subsites: West bank (in flood refuse) and East bank (in flood refuse) (first record: East bank 31st October 1981). Known from a further five Kirklees localities.

Aphodius sordidus (Fabricius, 1775) Na.

A dung beetle or chafer.

5.5-8.0mm long brownish yellow and black dung beetle. Various sorts of dung in dry, sandy or chalky areas, most often near the coast. Local and declining in southern England, rare in the north.

Located along the West bank on two occasions (first record: 5th May 1988). Known from a further three Kirklees localities.

Aphodius sphacelatus (Panzer, 1798) Common.

A dung beetle or chafer.

6.0mm long yellowish brown and black dung beetle. Very common in most sorts of herbivore dung. A spring and autumn species.

Recorded from seven subsites: West bank, East bank, Edge Moor, NE corner, South embankment, SW corner overflow field and inflow (first record: West bank 6th May 1978). Widely distributed and common in both Kirklees and the rest of Yorkshire.

CLAMBIDAE

Minute beetles, less than 1.8mm in length, characterised in the field by their general shape and their habit of curling up into a tiny ball. In this position they resemble a seed and are almost impossible to detect in the ground litter and detritus which they frequent. The larvae certainly, and the adults probably, feed on fungal hyphae and spores. Most of the species in this group are probably under-recorded because of their small size, cryptic habits and the paucity of interested coleopterists.

Calyptromerus dubius (Marsham,1802) Unknown. An armadillo beetle.
A very small yellowish beetle, up to 1.6mm long. Usually found in the bottoms of haystacks and amongst decaying straw. Widely distributed but rather local, much more frequent in the south.

Located in stable refuse on Edge Moor on 17th May 2009. Known to occur at one other Kirklees locality.

SCIRTIDAE

This group is characterised by the general facies of the adults which have a rather soft upper surface and are generally found by sweeping vegetation near water, in or near which the larvae of most species live.

Cyphon coarctatus Paykull,1799 Common. A marsh beetle.
2.5-3.5mm long brown beetle. Common in wet places, the larvae developing in soggy moss.

Recorded from five subsites: West bank, Edge Moor, Orange Wood, South embankment and inflow (first record: Orange Wood 30th May 2001). Known to occur at ten other Kirklees localities.

BYRRHIDAE

A group of beetles with a characteristic appearance which are generally to be found on the ground beneath stones, at the roots of grass or in moss. The species are notable for their habit of withdrawing their appendages into grooves on the underside of the body and remaining motionless, where they become hard to detect and blend in admirably with their surroundings. The larvae occur beneath moss or turf.

Simplocaria semistriata (Fabricius,1794) Common. A pill beetle.
A small bronze-black to reddish beetle, found on the ground amongst low vegetation, chiefly in rather dry places. Widely distributed and generally not uncommon.

Located in flood refuse along the West bank on 5th March 1989. Widely distributed in Kirklees.

Byrrhus pilula (Linnaeus,1758) Common. Pill Beetle.
7.0-11.0mm long rounded blackish beetle, withdrawing its legs when disturbed and strongly resembling a Rabbit *Oryctolagus cuniculus* dropping. Found on the ground amongst low plants in fairly open situations, feeding on moss both as an adult and larva. Widespread and generally not uncommon.

Recorded from two subsites: West bank and South embankment (first record: West bank 15th June 1982). Known to occur at nine other Kirklees localities.

DRYOPIDAE

A small group of beetles, aquatic in all but the pupal stage, the adults are usually poor swimmers and tend to crawl along the river bottom. Dryopids are often found under submerged stones in rivers or in flood refuse.

Dryops ernesti des Gozis,1886 Local. A long-toad water beetle.
Water beetle found in shallow pools in acid areas, locally common on moorland in the north and west of Britain.

Located in flood refuse along the West bank on 6th May 1981. Known to occur at two other Kirklees localities.

ELMIDAE

These aquatic insects, of which 12 species are present in the British Isles, are not provided with modified swimming legs and cannot swim. They do, however, have very strongly developed tarsi and claws which allow them to hold on firmly to objects in fast flowing water. The species involved

breath by plastron respiration - a film of air is held around the body by a dense coat of extremely fine hairs and so acts as a gill.

Elmis aenea (Muller,P.W.J.,1806) Common. A riffle beetle.
Small bronze black riffle beetle living under stones in moving water. Common in fairly unpolluted water over most of Britain.

Recorded from the inflow channel on 12th June 2006. Known to occur at six other Kirklees localities.

Oulimnius tuberculatus (Muller,P.W.J.,1806) Common. A riffle beetle.
Water beetle found in fast flowing, clean rivers.

Recorded from the inflow channel on 12th June 2006. Known to occur at two other Kirklees localities.

ELATERIDAE

This group comprises the "click-beetles", so called because of their ability to right themselves after having fallen (or having been placed) upside down. This they achieve by utilising a mobile joint and peg situated between the first and second thoracic segments on the underside. If the insect falls upside down, it arches its back and the peg slips off the edge and springs into a cavity. This produces an audible 'click' and the energy produced throws the beetle into the air by as much as several inches in an attempt to correct its position.

Hypnoidus riparius (Fabricius,1793) Common. A click beetle.
5.0mm long bronze black click beetle, living under stones, often beside rivers and on mountain tops. Common in northern, western and upland Britain but local elsewhere.

Located at seven subsites: West bank, East bank, Edge Moor, South waterworks, Orange Wood, SW corner overflow field and inflow (in flood refuse) (first record: West bank 4th May 1979). Widely distributed and common in Kirklees.

Ctenicera cuprea (Fabricius,1775) Common. A click beetle.
Dimorphic metallic purple and orange click beetle developing at roots of moorland grasses. An upland, northern and western species where it sometimes becomes a pest of sheep pasture. Rather local in the lowlands.

Recorded from six subsites: West bank, East bank, Edge Moor, NE corner, Orange Wood and South embankment (first record: West bank 1st July 1988). Widely distributed in Kirklees.

Ctenicera pectinicornis (Linnaeus,1758) Na. A click beetle.
Spectacular large metallic green/black click beetle, mainly of flowery meadows. Larvae at grass roots.

A single male flying in the large open area in Orange Wood on 23rd April 2011 remains the only record. Although recorded from a further 10 Kirklees localities these are all old records - the only other recent record being from Boothroyd Wood in 1984.

Aplotarsus incanus (Gyllenhal,1827) Common. A click beetle.
7.0-8.0mm long dull black (or black with brownish yellow wing cases) click beetle. Larvae develop at grass roots in the soil. Widespread and common, especially in the uplands, north and west.

Located at two subsites: West bank and South embankment (first record: West bank 7th June 1983). Known to occur at twelve other Kirklees localities.

Prosternon tessellatum (Linnaeus,1758) Local. Chequered Click Beetle.
A black click beetle with a pattern of pale yellow pubescence, 9.0 to 11.0mm long. Found amongst low vegetation, particularly on dry ground, heathland, dunes and calcareous grassland. Larvae are wireworms at roots of grass. Widely distributed but local.

A single along the South embankment on 8th May 2008 remains the only Kirklees record.

Selatosomus aeneus (Linnaeus,1758) Local. A click beetle.
Large metallic click beetle. Larvae at grass roots on moorland. Northern and western. Local but can be abundant where found.

Specimens located in Orange Wood on 31st May 2004 remain the only Kirklees record.

Kibunea minuta (Linnaeus,1758) Local. A click beetle.
A black click beetle of dry grassland. Larvae are wireworms at grass roots. Widespread but local.

Recorded from three subsites: West bank, NE corner and Orange Wood (first record: Orange Wood 31st May 2004). Known to occur at a further four Kirklees localities.

Denticollis linearis (Linnaeus,1758)* Common. A click beetle.
A click beetle usually red and black in colour, though other colour forms occur. Larvae develop in rotting timber. Widespread and not uncommon.

Located at three subsites: West bank, Edge Moor and Orange Wood (first record: Orange Wood 13th June 1998). Widely distributed in Kirklees. Widespread and common in Yorkshire.

Athous haemorrhoidalis (Fabricius,1801) Common. A click beetle.
A medium-sized (10.0-15.0mm) brown and black click beetle which occurs in all type of grassland, including woodland rides. The larvae are common wireworm pests which feed at grass roots. They live in loams and sands which are not too dry and may go deep into the soil.

Recorded from eight subsites: West bank, East bank, Edge Moor, Jubilee Quarries, NE corner, Orange Wood, South embankment and inflow (first record: West bank 4th June 1989). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Adrastus pallens (Fabricius,1793) Common. A click beetle.
4.0-5.0mm long brown and black click beetle. Actual ecology uncertain, probably developing in soil. Common in grassland and hedgerows in most of lowland Britain.

Located along the West bank on two occasions (first record: 1st September 1981). Recorded from a further four Kirklees localities (one of which is pre-1950).

Agriotes acuminatus (Stephens,1830) Common. A click beetle.
Recorded from two subsites: Orange Wood and South embankment (first record: Orange Wood 4th June 2001). Widely distributed in both Kirklees and the rest of Yorkshire.

Agriotes obscurus (Linnaeus,1758) Common. A click beetle.
A small, brown click beetle whose larva is a common wireworm pest in arable land, pasture and lawns. It attacks the roots, especially in spring and autumn, and may live in grassland for four or five years. The adult appears early in the year and is nocturnal, spending the day under clods or at grass roots.

Located at seven subsites: West bank, East bank, Edge Moor, Orange Wood, South embankment, SW corner overflow field and inflow (first record: West bank 15th May 1985). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Agriotes pallidulus (Illiger,1807) Common.

A click beetle.

A small (4.0-5.0mm) brown click beetle which is extremely common in grassy places throughout Britain. The larvae are wireworms living in soil at grass roots. They prefer moist loams and sands and may go deep into the soil during the summer.

Recorded from nine subsites: West bank, East bank, Jubilee Quarries, NE corner, Orange Wood, South waterworks, South embankment, South plantation and inflow (first record: West bank 17th September 1994). Widely distributed and common in both Kirklees and the rest of Yorkshire.

Agriotes sputator (Linnaeus,1758) Common.

A click beetle.

A brown click beetle which develops at the roots of grasses. Common in the south becoming very local north of the Midlands.

A single was located in Orange Wood on 19th June 2012. Recorded from a further three Kirklees localities (one of which is pre-1950).

Dalopius marginatus (Linnaeus,1758) Common.

A click beetle.

A small (5.0-6.0mm) brown and black click beetle. Its wireworm larvae occur in sandy soils which remain moist throughout the year and may be found in river banks, lakesides, damp hillsides and in woodlands. Widespread and very common.

Located at eight subsites: West bank, East bank, Edge Moor, NE corner, Jubilee Quarries, Orange Wood, South plantation and inflow (first record: West bank 23rd June 1989). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Melanotus castanipes (Paykull,1800) Unknown.

A click beetle.

15.0-20.0mm long black click beetle. Larvae develop in rotten wood of various broad-leaved trees, in particular in red rotted birch *Betula* spp. Recently split from *Melanotus villosus*.

A single male was found in Orange Wood on 27th May 2012. Known from two other Kirklees localities.

A recorded from Orange Wood on 11th March 2011 refers to this species or *Melanotus villosus*.

Zoroachros minimus (Boisduval & Lacordaire,1835) Local.

A click beetle.

A local click beetle very typical of upland river gravels.

Recorded along the West bank on 30th July 1985. Known from one other Kirklees locality.

THROSCIDAE

The five British species are all very small, 3.0mm at most, and occur on flowers, among herbage, at the roots of grass etc. When disturbed they keep their legs tucked in and then appear seed like.

Trixaqus dermestoides (Linnaeus,1767) Local.

A small false click beetle.

Small beetle similar to a click beetle. Larvae in dead wood. Local but not uncommon.

Located along the South embankment on 25th June 2001. Known from twelve other Kirklees localities.

CANTHARIDAE

Commonly known as "soldier beetles", this group has a characteristic facies, being very elongate and possessing soft elytra. They are probably always predacious on smaller arthropods in both their adult and larval stages.

Cantharis cryptica Ashe,1947 Common. A soldier beetle.
7.0-8.0mm long red and red-brown soldier beetle. Adults commonly on flowers, the larvae among grass and low herbage. Very common in most habitats in Britain.

Recorded from nine subsites: West bank, East bank, Edge Moor, NE corner, Jubilee Quarries, Orange Wood, South waterworks, South embankment and inflow (first record: West bank 17th August 1990). Widely distributed and common in both Kirklees and the rest of Yorkshire.

Cantharis decipiens Baudi,1871 Common. A soldier beetle.
7.0-10.0mm long grey and yellow-brown soldier beetle. Very common on flowers, especially umbellifers, in the early summer, the larvae developing among grass and low herbage, in grassy places, hedgerows etc. Carnivorous.

Located at three subsites: West bank, Orange Wood and NE corner (first record: West bank 29th July 1992). Widely distributed and common in both Kirklees and the rest of Yorkshire.

Cantharis figurata Mannerheim,1843 Local. A soldier beetle.
9.0-11.0mm long reddish brown soldier beetle. Larval biology unknown, though presumably predatory in leaf and grass litter. Adults are often found on flowers. Most frequently recorded in marshland, including saltmarshes, although also recorded elsewhere. Apparently very local, although difficulties in identification between this and the common *Cantharis rufa* and *Cantharis decipiens* mean that it is likely to be under-recorded.

A single female located at the inflow on 12th June 2006 remains the only Kirklees record.

Cantharis lateralis Linnaeus,1758 Local. A soldier beetle.
Small soldier beetle of marshy places. Local, becoming more so in the north.

Recorded along the West bank on two occasions (first record: 16th August 1993). Known to occur at a further two Kirklees localities.

Cantharis livida Linnaeus,1758 Common. A soldier beetle.
Large, reddish orange soldier beetle. Adults on flowers, especially umbellifers, larvae at soil surface among grass etc. Carnivorous. Common in meadows and hedgerows.

Located at seven subsites: West bank, Edge Moor, NE corner, Jubilee Quarries, Orange Wood, South embankment and inflow (first record: West bank 17th June 1984). Widely distributed in Kirklees.

Cantharis nigra (De Geer,1774) Common. A soldier beetle.
A black or red and black soldier beetle 5.0 to 7.0mm long. Adults are found on vegetation and flowers in early summer. Larvae develop in the soil and amongst litter.

Recorded from nine subsites: West bank, East bank, Edge Moor, NE corner, Jubilee Quarries, Orange Wood, South embankment, South waterworks and inflow (first record: West bank 5th August 1994). Widely distributed in Kirklees.

Cantharis nigricans (Muller,O.F.,1776) Common. A soldier beetle.
8.0-11.0mm long grey and black soldier beetle. Predatory. Adults most frequently on umbelliferous flowers, larvae in grass litter, under stones etc. Very common in most habitats throughout Britain.

Located at nine subsites: West bank, East bank, Edge Moor, NE corner, Jubilee Quarries, Orange Wood, South embankment, South waterworks and inflow (first record: West bank 1st July 1989). Widely distributed and common in both Kirklees and the rest of Yorkshire.

Cantharis pallida Goeze,1777 Local. A soldier beetle.
Predatory soldier beetle found on flowers, most often in damp places. Widely distributed but local.
It can be confused with the much commoner *Cantharis cryptica*.

A single female along the West bank on 22nd June 2010 remains the only record. Known from a further two Kirklees localities.

Cantharis paludosa Fallen,1807 Local. A soldier beetle.
Small red predatory soldier beetle. Adults on flowers in marshy places. Larvae in soil, litter, grass tussocks etc.

Recorded along the West bank on 5th August 1992. Known from a further ten Kirklees localities.

Cantharis pellucida Fabricius,1792 Common. A soldier beetle.
Large black/grey and red soldier beetle. Mainly grassland, road verges etc. Adults on flowers, especially Hogweed *Heracleum sphondylium*. Larvae are carnivorous among the grass litter.

Located at six subsites: West bank, Edge Moor, NE corner, Orange Wood, South waterworks and inflow (first record: West bank 17th June 1997). Widely distributed in Kirklees.

Cantharis rufa Linnaeus,1758 Common. A soldier beetle.
Large reddish soldier beetle with variable markings. Common on flowers in early summer throughout Britain. Larvae predatory, probably among plant litter.

Recorded from three subsites: West bank, Edge Moor and inflow (first record: West bank 30th June 1993). Widely distributed in Kirklees.

Cantharis rustica Fallen,1807 Common. A soldier beetle.
12.0mm long black and red soldier beetle. Predatory, feeding on other insects, the adults frequenting umbelliferous flowers, the larvae developing on the ground among leaf litter and grass tussocks.

Located at three subsites: West bank, South embankment and South waterworks (first record: West bank 17th June 1997). Known from a further eight Kirklees localities.

Rhagonycha fulva (Scopoli,1763) Common. Common Red Soldier Beetle.
7.0-10.0mm long orange red soldier beetle with black tips to the wing cases. Adults very common on umbelliferous flowers in late July, predatory on other insects. Larvae predatory at base of grasses etc.

Recorded from nine subsites: West bank, East bank, Edge Moor, NE corner, Orange Wood, South waterworks, South embankment, South plantation and inflow (first record: West bank July 1993). Widely distributed and common in both Kirklees and the rest of Yorkshire.

Rhagonycha lignosa (Muller,O.F.,1764) Common. A soldier beetle.
Small black and light brown soldier beetle. Adults on flowers and often also found on foliage of scrub. Carnivorous. Very common in most habitats.

Located at five subsites: West bank, Edge Moor, NE corner, Jubilee Quarries and Orange Wood (first record: West bank 6th July 1994). Widely distributed in Kirklees. Widespread and common in Yorkshire.

Rhagonycha limbata Thomson,C.G.,1864 Common. A soldier beetle.
6.0mm long yellowish brown and black soldier beetle. Predatory, usually found on umbelliferous and composite flowers. Larvae predatory, probably in soil or among grass roots. Very common throughout Britain.

Recorded from eight subsites: West bank, East bank, Edge Moor, Orange Wood, NE corner, Jubilee Quarries, South waterworks and South embankment (first record: East bank 11th July 1998). Widely distributed in Kirklees. Widespread and common in Yorkshire.

Rhagozycha testacea (Linnaeus,1758) Common. A soldier beetle.
6.0mm long black and pale brown soldier beetle. Usually met with on flowers. Predatory. Larvae most likely among grass litter or under stones.

Located along the West bank on 29th May 1998. Widely distributed in Kirklees.

Malthinus flaveolus (Herbst,1786)* Common. A soldier beetle.
Small grey and yellow soldier beetle. Adults often on foliage rather than flowers and possibly therefore overlooked. Larva carnivorous, possible under bark of dead twigs or branches. Locally common throughout Britain.

Located at two subsites: South waterworks and Edge Moor (first record: South waterworks 5th July 2010). Widely distributed in Kirklees.

Malthodes marginatus (Latreille,1806)* Common. A soldier beetle.
Small grey and yellow soldier beetle. Adults on flowers or tree foliage, larvae predatory under bark.

Recorded from two subsites: West bank and Orange Wood (first record: West bank 21st June 1996). Widely distributed in Kirklees. Widespread and common in Yorkshire.

Malthodes mysticus Kiesenwetter,1852* Local. A soldier beetle.
Small grey and yellow soldier beetle found in woodland rides, glades and edges, on flowers and foliage. Larvae under dead bark, predacious.

Located along the West bank on 11th July 1996. Widely distributed in Kirklees.

Malthodes pumilus (Brebisson,1835)* Local. A soldier beetle.
Small black soldier beetle living on tree foliage as adult and under bark as larva. Predatory. Widespread but local.

A single was swept from vegetation in Jubilee Quarries on 24th June 2010. Known from three other Kirklees localities.

ANOBIIDAE

This family contains the "spider-beetles", so-called on account of their general appearance - small size, long antennae and legs, concealed head and globular shape. They are all scavengers and some are synanthropic, being pests of stored products. Some specialise in excrement and others are associated with dead insect remains. Some of our 53 species are introductions. Those which occur in the wild seem to favour the nests of birds and mammals.

Niptus hololeucus (Faldermann,1835) Synanthropic. Golden Spider Beetle.
Specimens were located in Lake House (in the north-west corner of the reservoir) on 1st June 1994. Widely distributed in Kirklees. Widespread in Yorkshire.

CLERIDAE

The members of this family, both in their adult and larval form, are predacious. Some species are found on flowers or wood, while one group (*Necrobia*) occurs on old bones and carrion.

Necrobia rufipes (De Geer,1775) Unknown. Copra Beetle.
Recorded, along with *Necrobia violacea*, from a long dead Rabbit *Oryctolagus cuniculus* along the West bank on 11th October 1986. The only other Kirklees record is pre-1950.

Necrobia violacea (Linnaeus, 1758) Common. A chequered beetle.
5.0mm long bright metallic blue carrion beetle, more frequent in very old, often dry carrion, than in fresh or very wet carrion. Occasionally also in old bones, dried meat, or animal skins indoors. Common throughout Britain.

Recorded, along with *Necrobia rufipes*, from a long dead Rabbit *Oryctolagus cuniculus* along the West bank on 11th October 1986. Known from a further nine Kirklees localities.

NITIDULIDAE

A group of beetles of a generally characteristic appearance but which occupy a very wide variety of habitats. Some are carrion specialists, some sub-cortical, and others closely associated with particular plant species.

Kateretes pedicularius (Linnaeus, 1758) Local. A pollen or sap beetle.
A small beetle found in marshy places. The larvae probably feed on rushes *Juncus* spp., sedges *Carex* spp. and grasses and the adults can often be found on flowers. Local in England and the eastern lowlands of Scotland.

Specimens located along the West bank on 1st July 1995 remain the only Kirklees record.

Brachypterus glaber (Newman, 1834) Common. A pollen or sap beetle.
1.0-2.0mm long shiny black beetle living on nettle *Urtica* spp. flowers and feeding on the pollen. Very common wherever nettles grow.

Recorded from three subsites: West bank, Edge Moor and Jubilee Quarries (first record: West bank 25th June 2001). Widely distributed and common in both Kirklees and the rest of Yorkshire.

Brachypterus urticae (Fabricius, 1792) Common. Nettle Pollen Beetle.
2.0mm long black beetle feeding on pollen in nettle *Urtica* spp. flowers.

Located at six subsites: West bank, East bank, Jubilee Quarries, Edge Moor, Orange Wood and South waterworks (first record: West bank 7th August 1994). Widely distributed and common in both Kirklees and the rest of Yorkshire.

Carpophilus marginellus Motschulsky, 1858 Unknown. A pollen or sap beetle.
Located in flood refuse along the West bank on 16th June 1989. Known from two other Kirklees localities, one of which was found under synanthropic conditions.

Meligethes aeneus (Fabricius, 1775) Common. Common Pollen Beetle.
2.0mm long pollen beetle. Very common species, feeding in a very wide variety of flowers from spring to late autumn. Particularly favours yellow species. Some dispute as to whether it is a pest or major pollinator of Oilseed Rape *Brassica napus*.

Recorded from seven subsites: West bank, East bank, Edge Moor, Orange Wood, Jubilee Quarries, South embankment and inflow (first record: West bank April 1985). Widely distributed and common in both Kirklees and the rest of Yorkshire.

Meligethes atratus (Olivier, 1790) Common. A pollen or sap beetle.
2.5-3.5mm long pollen beetle. Apparently feeds in a fairly wide variety of flower species, although probably most frequently found on tree species.

Beaten from Hawthorn *Crataegus monogyna* blossom in Orange Wood on 4th June 2001. Known from a further seven Kirklees localities.

Meligethes carinulatus Forster, 1849 Common. A pollen or sap beetle.
1.4-2.0mm long black pollen beetle living in the flowers of Common Bird's-foot-trefoil *Lotus corniculatus*. Widespread and common.

Swept from Common Bird's-foot-trefoil on Edge Moor and the South embankment (both records 21st June 2010). Known from one other Kirklees locality.

Meligethes nigrescens Stephens, 1830 Common. A pollen or sap beetle.
Recorded from three subsites: West bank, Edge Moor (beaten from Hawthorn *Crataegus monogyna* blossom) and South waterworks (first record: Edge Moor 20th May 2007). Recorded from a further two Kirklees localities (one of which is pre-1950).

Meligethes obscurus Erichson, 1845 Local. A pollen or sap beetle.
Specimens located along the West bank on 14th April 2000 remain the only Kirklees record.

Epuraea aestiva (Linnaeus, 1758) Common. A pollen or sap beetle.
2.0-3.0mm long reddish beetle. Larval ecology apparently unknown, although has been found in bumble bee (Aculeate Hymenoptera) nests. Adults on flowers, at sap runs and in fungi.

Recorded from four subsites: West bank, Edge Moor (beaten from Hawthorn *Crataegus monogyna* blossom), NE corner and Orange Wood (beaten from Hawthorn blossom) (first record: West bank 13th June 1986). Widely distributed and common in both Kirklees and the rest of Yorkshire.

Epuraea biguttata (Thunberg, 1784)* Local. A pollen or sap beetle.
Located at four subsites: West bank, Edge Moor, NE corner and South embankment (first record: West bank 16th September 1996). Known from a further five Kirklees localities.

Epuraea melanocephala (Marsham, 1802) Common. A pollen or sap beetle.
2.5mm long variable coloured beetle, red-brown to black or bi-coloured red and black. Usually found on flowers in the spring, although often also swept from tree foliage.

Recorded from four subsites: West bank, East bank, Orange Wood and South embankment (first record: East bank 2nd April 1999). Widely distributed in Kirklees. Widespread and common in Yorkshire.

Nitidula bipunctata (Linnaeus, 1758) Common. Two Spotted Carrion Beetle.
3.0-5.0mm long black beetle with a red spot on each elytron. Fairly common on old, dry carrion, old bones etc, also visiting flowers. Not restricted to any particular habitat.

Located along the West bank on 27th May 1979. Known from a further nine Kirklees localities.

Omosita colon (Linnaeus, 1758) Common. A pollen or sap beetle.
2.0-3.2mm long carrion beetle, black with variegated pattern of reddish yellow marks. Fairly common in carrion, usually dry carrion and especially in old bones and skins.

Recorded along the West bank on two occasions (first record: 14th May 1983). This is the only known Kirklees locality for the species.

Omosita depressa (Linnaeus, 1758) Common. A pollen or sap beetle.
3.0mm long mottled black, orange and cream carrion beetle. Frequent in old bones, dry carrion etc, less commonly in fungi.

Located along the West bank on two occasions (first record: 19th August 1983). Known from two other Kirklees localities.

Omosita discoidea (Fabricius, 1775) Local. A pollen or sap beetle.
An attractively marked brown and black beetle found in dry bones.

Recorded along the West bank on four occasions (first record: 23rd April 1980). Known from a further four Kirklees localities.

Glischrochilus hortensis (Geoffroy in Fourcroy,1785) Common. A pollen or sap beetle. Red and black spotted beetle. Found in fungi, at tree sap, under bark and sometimes with ants (Aculeate Hymenoptera). Common species, sometimes in gardens but most often in woodland.

Located in Orange Wood on two occasions (first record: 11th April 1986). Widely distributed in Kirklees. Widespread and common in Yorkshire.

RHIZOPHAGIDAE

A small group of characteristically shaped beetles, usually associated with fungal growths under bark, but some *Rhizophagus* are believed to be predators of small insects, whilst *Monotoma* species are considered to be mould feeders in man-made habitats such as compost heaps.

Rhizophagus bipustulatus (Fabricius,1793)* Common. A narrow bark beetle. Small (3.0-4.0mm) reddish elongate beetle living under bark, in fungi and at tree sap.

Recorded from two subsites: West bank and Orange Wood (under bark) (first record: West bank 3rd June 1979). Widely distributed in Kirklees.

Rhizophagus dispar (Paykull,1800)* Common. A narrow bark beetle. Small (3.0-5.0mm) reddish beetle living under bark, in fungi and at sap.

Located at two subsites: West bank and Orange Wood (under bark) (first record: West bank 24th May 1996). Widely distributed and common in both Kirklees and the rest of Yorkshire.

Rhizophagus perforatus Erichson,1845* Local. A narrow bark beetle. Small beetle found under bark of broad-leaved trees and occasionally in soil or vegetable litter. Widespread but local.

Recorded from two subsites: West bank and East bank (first record: West bank 21st March 1981). Known from a further ten Kirklees localities.

Monotoma bicolor Villa & Villa,1835 Common. A narrow bark beetle. 2.0-2.4mm long brown beetle living in decaying vegetable matter. Commonest in south-east England.

Located at four subsites: West bank, Edge Moor (in stable refuse), Jubilee Quarries and South waterworks (first record: Edge Moor 9th June 2007). Known from a further three Kirklees localities, one of which was found under synanthropic conditions.

Monotoma picipes Herbst,1793 Common. A narrow bark beetle. 1.7-2.6mm long brown beetle living in decaying vegetable matter, under bark, in moss, in rotting seaweed and sometimes in ant (Aculeate Hymenoptera) nests. Common throughout Great Britain.

Recorded from two subsites: East bank (in flood refuse) and Edge Moor (in stable refuse) (first record: East bank 4th April 1981). Known from seven other Kirklees localities.

CRYPTOPHAGIDAE

Certain members of the Cryptophagidae are essentially fungus-feeders but some of the *Cryptophagus* are found in the nests of bees or wasps. *Antherophagus* species occur on flowers but develop in the nests of bumblebees, the adults being carried to the nests by clinging to the bees (a well-known phenomenon called phoresy). Some, such as our *Telmatophilus*, are associated with water plants.

Cryptophagus acutangulus Gyllenhal, 1827 Unknown. A silken fungus beetle.
Located in stable refuse on Edge Moor on three occasions (first record: 2nd June 2007). Known from three other Kirklees localities (one of which is pre-1950 whilst another was found under synanthropic conditions).

Cryptophagus dentatus (Herbst, 1793)* Unknown. A silken fungus beetle.
Recorded from two subsites: West bank and Edge Moor (first record: West bank 23rd June 1999). Widely distributed in Kirklees.

Cryptophagus distinguendus Sturm, 1845 Unknown. A silken fungus beetle.
Located at two subsites: West bank (in flood refuse) and Edge Moor (in stable refuse) (first record: Edge Moor 18th October 2005). The only other Kirklees record is pre-1950 and from a site which is no longer extant (Kirkburton Tip).

Cryptophagus laticollis Lucas, 1846 Common. A silken fungus beetle.
Recorded from two subsites: West bank and Edge Moor (in stable refuse) (first record: West bank 10th May 1999). Known from a further seven Kirklees localities.

Cryptophagus puncticollis Lucas, 1846 Unknown. A silken fungus beetle.
Specimens located in stable refuse on Edge Moor on 18th April 2010 remain the only Kirklees record.

Cryptophagus punctipennis Brisout de Barneville, 1863 Unknown. A silken fungus beetle.
Located at two subsites: West bank and Edge Moor (regularly in stable refuse) (first record: Edge Moor 8th March 2007). Known from two other Kirklees localities.

Cryptophagus denticulatus Heer, 1841 Common. A silken fungus beetle.
Specimens located in stable refuse on Edge Moor on 8th March 2007 remain the only Kirklees record.

Cryptophagus saginatus Sturm, 1845 Unknown. A silken fungus beetle.
Recorded from two subsites: West bank and Edge Moor (in stable refuse) (first record: West bank 16th August 1999). This is the only known Kirklees locality for the species.

Cryptophagus scanicus (Linnaeus, 1758) Common. A silken fungus beetle.
2.0-2.5mm long brown beetle living in grass litter, vegetable refuse etc.

Located at two subsites: Edge Moor (in stable refuse) and Jubilee Quarries (in Birch Polypore *Piptoporus betulinus*) (first record: Edge Moor 25th April 2008). Known from one other Kirklees locality.

Cryptophagus scutellatus Newman, 1834 Local. A silken fungus beetle.
1.2-1.8mm long brown beetle. Specific ecology appears to be unrecorded.

Located in stable refuse on Edge Moor on 9th June 2007. The only other Kirklees records (2) concerns specimens found in the same Crosland Moor house.

Micrambe ulicis (Stephens, 1830) Common. A silken fungus beetle.
Recorded from five subsites: West bank, East bank, Edge Moor (on Broom *Cytisus scoparius*), NE corner and Jubilee Quarries (first record: East bank 19th June 1989). Widely distributed and common in both Kirklees and the rest of Yorkshire.

Antherophagus pallens (Linnaeus, 1758) Local. A silken fungus beetle.
Small brown beetle living in bumble bee (Aculeate Hymenoptera) nests. Dispersed phoretically by clinging to bees' legs, often changing hosts in flowers from where it is most often recorded. Widespread but local.

Located along the West bank on three occasions (first record: 10th August 1978). Known from a further eight Kirklees localities.

Antherophagus similis Curtis, 1835 Local. A silken fungus beetle.
Small brown beetle living in bumble bee (*Aculeate Hymenoptera*) nests. Dispersed phoretically by clinging to bees in flight, changing bees in flowers where the species is most often recorded. Widespread but local.

Recorded along the West bank on two occasions (first record: 3rd June 1993). Known from a further twelve Kirklees localities.

Atomaria apicalis Erichson, 1846 Common. A silken fungus beetle.
Located at four subsites: West bank (in flood refuse), East bank (in flood refuse), Edge Moor (in stable refuse) and South embankment (in grass cuttings) (first record: West bank 20th October 1984). Widely distributed and common in both Kirklees and the rest of Yorkshire.

Atomaria atricapilla Stephens, 1830 Common. A silken fungus beetle.
1.5mm long black and brown beetle living in grass litter, tussocks, moss etc.

Recorded from four subsites: West bank, Edge Moor (in stable refuse), Jubilee Quarries (in grass cuttings) and SW corner overflow field (first record: West bank 10th August 1998). Known from a further eight Kirklees localities. Widely distributed in Yorkshire.

Atomaria basalis Erichson, 1846 Unknown. A silken fungus beetle.
A single located along the West bank on 17th September 1982 remains the only Kirklees record.

Atomaria rubella Heer, 1841 Common. A silken fungus beetle.
1.5mm long brown beetle. Specific ecology unknown. Most members of the group inhabit leaf litter, moss, birds' nests etc.

A single was located in *Sphagnum* at the South waterworks on 15th July 2012. Known from a further five Kirklees localities. Widely distributed in Yorkshire, especially in the southern half.

Atomaria fuscata (Schonherr, 1808) Common. A silken fungus beetle.
Recorded from five subsites: West bank, Edge Moor (in stable refuse), Jubilee Quarries (in grass cuttings), South embankment (in grass cuttings) and South waterworks (in grass cuttings) (first record: West bank 7th June 1984). Common and widely distributed in Kirklees. Widespread in Yorkshire.

Atomaria lewisi Reitter, 1877 Common. A silken fungus beetle.
Located at seven subsites: West bank, East bank, Edge Moor (regularly in stable refuse), Jubilee Quarries (in grass cuttings), South embankment (in grass cuttings), South waterworks (in grass cuttings) and SW corner overflow field (first record: East bank 4th April 1981). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Atomaria nigripennis (Kugelann, 1794) Notable/Nb. A silken fungus beetle.
A minute brown beetle of uncertain ecology, recorded from haystack refuse and from fungi growing in cellars. Widely distributed but uncommon.

Recorded from stable refuse on Edge Moor on two occasions (first record: 6th August 2009). This is the only known Kirklees locality for the species.

Atomaria nitidula (Marsham, 1802) Common. A silken fungus beetle.
Recorded from six subsites: West bank (in flood refuse), East bank (regularly in flood refuse), Edge Moor (in stable refuse), Jubilee Quarries (in grass cuttings), South embankment (in grass

cuttings) and South waterworks (in grass cuttings) (first record: West bank 30th August 1979). Common and widely distributed in Kirklees. Common in Yorkshire, especially in the southern half.

Atomaria testacea Stephens, 1830 Common. A silken fungus beetle.
Located at five subsites: West bank, Edge Moor (in stable refuse), Jubilee Quarries (in grass cuttings), South embankment (in grass cuttings) and South waterworks (in grass cuttings) (first record: West bank 17th September 1982). Known from a further ten Kirklees localities. Widely distributed in Yorkshire.

Atomaria nigrirostris Stephens, 1830 Common. A silken fungus beetle.
1.5mm long brown beetle. Specific ecology unknown. Most members of the group inhabit leaf litter, moss, birds' nests etc.

Recorded from two subsites: West bank and Orange Wood (first record: West bank 16th December 1984). Known from one other Kirklees locality. Widely, but thinly, distributed in Yorkshire.

Ootypus globosus (Waltl, 1838) Local. A silken fungus beetle.
Tiny (1.4-1.5mm) reddish black beetle living in vegetation litter and dung. Widespread but apparently very local, although possibly under-recorded as it is similar to a much commoner species (*Ephistemus globulus*).

Located in stable refuse on Edge Moor on 15th April 2006. Known from two other Kirklees localities.

Ephistemus globulus (Paykull, 1798) Common. A silken fungus beetle.
Recorded from six subsites: West bank (in flood refuse), Edge Moor (in stable refuse), Orange Wood, Jubilee Quarries, South embankment (in grass cuttings) and South waterworks (in grass cuttings) (first record: West bank 23rd June 1999). Widely distributed in Kirklees. Widely, but thinly, distributed in Yorkshire.

BYTURIDAE

The two British representatives of this family are to be found on flowers; the larvae live in ripe raspberries and the fruit of other *Rubus* species.

Byturus tomentosus (De Geer, 1774) Common. Raspberry Beetle.
4.0mm long brown beetle with conspicuous ochreous yellow hair. Larvae develop in fruits of bramble *Rubus* spp. and Raspberry *Rubus idaeus* - the common white grub found in wild fruit. Adults on flowers, particularly umbellifers. Very common, often a pest of cultivated fruit.

Located at seven subsites: West bank, Edge Moor, NE corner, Jubilee Quarries, Orange Wood, South waterworks and inflow (first record: West bank 5th April 1989). Widely distributed in Kirklees. Widespread and common in Yorkshire.

EROTYLIDAE

Both the adults and larvae of the seven British species are to be found in wood fungi.

Triplax aenea (Schaller, 1783)* Local. A shiny fungus beetle.
A red and black beetle found in bracket fungi on trees, especially birch *Betula* spp. Widely distributed and fairly common, but indicative of older woodland in the northern part of its range.

Found in bracket fungi along the West bank on 21st June 1996. Widely distributed in Kirklees.

PHALACRIDAE

A small group with 15 British species, all being of a similar appearance. The larvae of *Phalacrus* develop on smuts on various grasses, whilst *Olibrus* are associated with flowers, the larvae

mining the stems of their host plant. Both these genera contain very closely allied species where genitalic examination is often required for a positive identification.

Phalacrus substriatus Gyllenhal, 1813 Local. A smut beetle.
2.0-2.5mm long shiny black beetle associated with the fruiting bodies of rusts and smuts growing on various sedges *Carex* spp., although the species has also been associated with the flowers of Bog Asphodel *Narthecium ossifragum*, presumably adults feeding on pollen. Widespread but local.

Specimens located along the West bank on 22nd February 1987 remain the only Kirklees record.

CERYLONIDAE

The five British species live under loose bark of both deciduous and coniferous trees or in mouldy wood. All species are carnivorous, the food consisting mainly of bark beetles.

Cerylon ferrugineum Stephens, 1830* Local. A cerylonid beetle.
A small reddish beetle living under dead bark of deciduous trees. Very common in southern England but indicative of old woodland in the north.

Recorded from three subsites: West bank, Jubilee Quarries (in Birch Polypore *Piptoporus betulinus*) and Orange Wood (first record: West bank 13th February 1982). Widely distributed in Kirklees.

CORYLOPHIDAE

The members of this family are very small (barely over 2.0mm), the head being invisible from above as it is hidden under the thorax. The species concerned are to be found on mouldy wood, under bark, on rotting vegetation, in fungi and in wet, marshy situations.

Orthoperus atomus (Gyllenhal, 1808)* Unknown. A minute fungus beetle.
A single located in stable refuse on Edge Moor on 18th April 2010 remains the only Kirklees record.

COCCINELLIDAE

This group contains the familiar ladybirds. Many are carnivorous and predacious, feeding on aphids and coccids, and are of very great importance in controlling populations of these economically important pests.

Coccidula rufa (Herbst, 1783) Common. A ladybird.
A small, red ladybird which is widespread and common in England and Ireland but not in northern Scotland. It is found in marshy places such as reed beds and, unlike most ladybirds it has no spots.

Located at six subsites: West bank, East bank, Edge Moor, South waterworks, SW corner overflow field and inflow (first record: West bank 15th May 1985). Widely distributed in Kirklees. Common and widely distributed in Yorkshire.

Rhyzobius litura (Fabricius, 1787) Common. A ladybird.
A small pale orange-brown ladybird, widespread and generally common low down on vegetation in a wide range of habitats.

Recorded from two subsites: Edge Moor and South waterworks (first record: South waterworks 3rd September 2005). Known from a further eight Kirklees localities. Widely distributed and common in Yorkshire.

Chilocorus bipustulatus (Linnaeus, 1758) Local. Heather Ladybird.
Ladybird found in dry places and on conifers.

Located at two subsites: West bank and Edge Moor (first record: West bank 15th May 1985). Known from a further nine Kirklees localities.

Chilocorus renipustulatus (Scriba,1791) Common. Kidney-spot Ladybird.
Strongly domed shiny black ladybird with two red spots. Feeds on aphids (Homoptera) on trees, especially willows *Salix* spp. Widespread and common, most often in wet places.

Recorded from three subsites: West bank, East bank and South embankment (first record: West bank 19th May 1992). Known from a further six Kirklees localities. Common and widely distributed in Yorkshire.

Exochomus quadripustulatus (Linnaeus,1758) Common. Pine Ladybird.
5.0mm long strongly domed black ladybird with four irregular shaped red spots. Feeds on aphids (Homoptera) on conifers. Common in plantations throughout Britain.

Located at four subsites: West bank, East bank, Edge Moor and South embankment (first record: West bank 15th May 1985). Known from a further four Kirklees localities.

Hippodamia variegata (Goeze,1777) Notable/Nb. Adonis' Ladybird.
Red and black ladybird, predatory on aphids (Homoptera). Scarce and restricted mainly to dry sandy places, in particular to heathlands and the coast. Widespread scattered records around southern Britain but only frequent in the Thames area, in south Wales and in Staffordshire. The species has recently undergone a range expansion and is now commoner than formerly.

Found on Broom *Cytisus scoparius* on Edge Moor on 5th June 2006. Known from one other Kirklees locality.

Aphidecta obliterated (Linnaeus,1758) Common. Larch Ladybird.
Small light brown ladybird with no spots but a 'w' shaped mark on the thorax. Aphidophagous and generally common, although not usually a garden or arable ground species.

Located at two subsites: Orange Wood and South waterworks (beaten from Sitka Spruce *Picea sitchensis*) (first record: Orange Wood 22nd October 2006). Widely distributed in Kirklees.

Adalia bipunctata (Linnaeus,1758) Common. Two-spot Ladybird.
4.0-5.5mm long very variable coloured ladybird. Commonest form red with two black spots. Most habitats. Often vast migrations from the Continent. Feeds on aphids (Homoptera).

Recorded from eight subsites: West bank, East bank, Edge Moor, NE corner, Jubilee Quarries, South waterworks, South embankment and inflow (first record: West bank 15th May 1985). Widely distributed and common in both Kirklees and the rest of Yorkshire.

Adalia decempunctata (Linnaeus,1758) Common. Ten-spot Ladybird.
A small (5.0mm) ladybird. It is a very variable insect, the most common form being orange-yellow with black spots and can be separated from similar forms of the Two-spot Ladybird *Adalia bipunctata* by always having pale legs and a brown underside with a small part of the sternum whitish. Generally common in most habitats though it has a preference for trees and bushes in woods where the larvae feed on aphids (Homoptera).

Located at eight subsites: West bank, East bank, Edge Moor, Orange Wood, South embankment, South plantation, South waterworks and inflow (first record: West bank 10th September 1979). Widely distributed and common in both Kirklees and the rest of Yorkshire.

Coccinella septempunctata Linnaeus,1758 Common. Seven-spot Ladybird.
6.5-8.0mm long red ladybird with seven black spots. Gardens, hedgerows etc. Larvae aphidophagous. Very common, often with vast immigrations from the Continent.

Recorded from eight subsites: West bank, East bank, Edge Moor, Jubilee Quarries, Orange Wood, South embankment, South waterworks and inflow (first record: West bank 15th May 1985). Widely distributed and common in both Kirklees and the rest of Yorkshire.

Coccinella undecimpunctata Linnaeus, 1758 Local. 11-spot Ladybird.
5.0mm long red ladybird with 11 black spots. Locally common in certain habitats, particularly on the coast and on heathland, but migratory so can occur well away from typical habitat.

Located at two subsites: West bank and South embankment (first record: West bank 15th May 1985). Known from one other Kirklees locality.

Harmonia axyridis (Pallas, 1773) Naturalised. Harlequin Ladybird.
This species originated in Asia but has been used as a biological control agent in the USA and mainland Europe. The first British records came from south-east England in 2004 and the species rapidly spread northwards, being recorded in Yorkshire in 2006.

Single adults have been recorded from the South waterworks on three occasions (first record: 4th July 2010). Known from three other Kirklees localities (first record: Honley 6th September 2009).

Anatis ocellata (Linnaeus, 1758) Common. Eyed Ladybird.
A large distinctive aphidophagous ladybird associated with conifers but also found on other trees.

A single found on the parapet at the southern end of the West bank on 15th May 1985 remains the only record. An explanation as to how this, and other conifer associated ladybirds i.e. *Chilocorus bipustulatus* and *Exochomus quadripustulatus*, arrived at the site on this date is discussed in Denton (1986). Known from a further ten Kirklees localities.

Calvia quattuordecimguttata (Linnaeus, 1758) Common. Cream-spot Ladybird.
5.0mm long orange ladybird with white spots. Larvae aphidophagous. Locally common throughout Britain.

Located at two subsites: West bank and Jubilee Quarries (first record: West bank 5th September 1988). Widely distributed and common in both Kirklees and the rest of Yorkshire.

Propylea quattuordecimpunctata (Linnaeus, 1758) Common. 14-spot Ladybird.
3.5-5.0mm long black and yellow angular spotted ladybird. Larvae aphidophagous. Very common in most habitats, including gardens.

Recorded from five subsites: West bank, East bank, Edge Moor, Orange Wood and South waterworks (first record: West bank 17th June 1987). Widely distributed and common in both Kirklees and the rest of Yorkshire.

Halysia sedecimguttata (Linnaeus, 1758) Local. Orange Ladybird.
White spotted orange ladybird. Grassland, wood margins etc. Very local but spreading.

A single located in the NE corner on 22nd June 2010 remains the only record. Known from six other Kirklees localities.

Psyllobora vigintiduopunctata (Linnaeus, 1758) Common. 22-spot Ladybird.
A ladybird which is yellow with black spots. Widely distributed and generally common on low vegetation, but it does not occur in Scotland. Its colour pattern varies very little and both adult and larva feed on mildews. It can be found from April until August.

Located at four subsites: West bank, Edge Moor, Jubilee Quarries and South waterworks (first record: West bank 22nd August 1983). Widely distributed in Kirklees. Common and widespread in Yorkshire.

ENDOMYCHIDAE

The eight British members of this family, both in their adult and larval form, live on fungi, in particular puff-balls and moulds.

Mycetaea subterranea (Fabricius,1801)* Local. Hairy Cellar Beetle.
Small yellow beetle found under dead bark and in rotten wood. Widespread but local.

Recorded from two subsites: West bank (in flood refuse) and Edge Moor (regularly in stable refuse) (first record: West bank 23rd June 1999). Known from a further seven Kirklees localities.

LATRIDIIDAE

All members of this group, both larvae and adults, would appear to feed on various fungi, especially moulds. Numerous species are synanthropic, feeding on mouldy stored products in warehouses and cellars, presumably being attracted to fungal growths.

Stephostethus lardarius (De Geer,1775) Common. A mould beetle.
3.0-4.0mm long reddish brown 'plaster' beetle, usually living in leaf litter and grass tussocks. Very common, very occasionally a pest indoors.

Located at five subsites: West bank, Edge Moor, Jubilee Quarries, South waterworks and South plantation (first record: West bank 21st June 1996). Widely distributed and common in both Kirklees and the rest of Yorkshire.

Cartodere bifasciatus (Reitter,1877) Naturalised. A mould beetle.
1.5-2.0mm long mottled brown beetle found in leaf litter, compost, grass tussocks etc. Introduced and now one of the commonest species of beetle in Britain.

Recorded from nine subsites: West bank, East bank, Edge Moor, Jubilee Quarries, Orange Wood, South embankment, South waterworks, SW corner overflow field and inflow (first record: Orange Wood 4th September 1983). Widely distributed and common in both Kirklees and the rest of Yorkshire.

Cartodere nodifer (Westwood,1839) Common. A mould beetle.
1.5-2.0mm long knobbly brown beetle. Lives in fungi, grass litter etc. Very common in most habitat types.

Located at seven subsites: West bank, Edge Moor (in stable refuse), Jubilee Quarries, Orange Wood, South embankment, South waterworks and inflow (first record: West bank 4th June 1980). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Latridius porcatus Herbst,1793 Local. A mould beetle.
Recorded from three subsites: West bank (in flood refuse), Edge Moor (in stable refuse) and South waterworks (in grass cuttings) (first record: Edge Moor 26th July 2008). This is the only known Kirklees locality for the species.

Latridius consimilis Mannerheim,1844* Notable/Nb. A mould beetle.
A local 'plaster' beetle, found in bracket fungi on trees.

A single found in a garden near the Bull's Head public house on 23rd August 1980 constitutes the only record. There are four other Yorkshire records, none of which originate from Kirklees.

Enicmus brevicornis (Mannerheim,1844)* Notable/Nb. A mould beetle.
A small black 'plaster' beetle, found under bark of broad-leaved trees.

A single found in flood refuse along the East bank on 3rd September 1999 remains the only record. There are four other Yorkshire records, none of which originate from Kirklees.

Enicmus histrio Joy & Tomlin, 1910 Unknown. A mould beetle.
A small and rather flattened beetle, 1.5 to 2.0mm long, found in plant debris. Widespread but local.

Located at three subsites: West bank (in flood refuse), Edge Moor (in stable refuse) and South waterworks (in grass cuttings) (first record: West bank 30th July 1980). Known from a further two Kirklees localities (one of which is pre-1950).

Enicmus transversus (Olivier, 1790) Common. A mould beetle.
Recorded from four subsites: West bank, Edge Moor (in stable refuse), Jubilee Quarries (in grass cuttings) and South waterworks (in grass cuttings) (first record: West bank 6th July 1989). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Corticaria impressa (Olivier, 1790) Common. A mould beetle.
Located at four subsites: Edge Moor (regularly in stable refuse), Orange Wood, South embankment (in grass cuttings) and South waterworks (in grass cuttings) (first record: Orange Wood 3rd July 1999). Widely distributed in Kirklees. Common and widespread in Yorkshire.

Corticaria punctulata Marsham, 1802 Common. A mould beetle.
Found in stable refuse on Edge Moor on 31st August 2005. Known from a further nine Kirklees localities.

Corticaria umbilicata (Beck, 1817) Local. A mould beetle.
Tiny beetle found in moss. Widespread but very local.

Specimens located in flood refuse along the West bank on 19th February 1982 remain the only Kirklees record.

Corticarina minuta (Fabricius, 1792) Common. A mould beetle.
2.0mm long brown beetle living in plant litter.

Recorded from three subsites: West bank (in flood refuse), Jubilee Quarries (in grass cuttings) and South embankment (in grass cuttings) (first record: West bank 15th May 1985). Widely distributed in Kirklees. Common and widespread in Yorkshire.

Corticaria gibbosa (Herbst, 1793) Common. A mould beetle.
1.5-2.0mm long brown 'plaster' beetle. Leaf and grass litter, moss etc. Very common in most habitats.

Located at six subsites: West bank, Edge Moor (in stable refuse), Jubilee Quarries (in grass cuttings), NE corner, Orange Wood and South waterworks (first record: West bank 4th August 1990). Common and widely distributed in both Kirklees and the rest of Yorkshire.

CIIDAE

The members of this group are generally very small and easily missed in their usual subcortical habitat. All species are associated with fungus-impregnated wood. Many of these breed gregariously and several species may coexist under the same piece of bark. Many species are under threat because of habitat destruction and changing woodland management practices (dead wood being removed or burned instead of being allowed to decay naturally).

Octotemnus glabriculus (Gyllenhal, 1827)* Common. A small fungus beetle.
1.8-2.2mm long shiny brownish black beetle making tunnels in fungi, most often on bracket fungi on trees.

Recorded from three subsites: West bank, East bank and Jubilee Quarries (in Birch Polypore *Piptoporus betulinus*) (first record: West bank 17th September 1996). Widely distributed in Kirklees. Common and widespread in Yorkshire.

Cis boleti (Scopoli,1763)* Common.

A small fungus beetle.

3.5mm long brown beetle excavating galleries in a wide variety of fungi, including many cap and bracket fungi.

Located at three subsites: West bank, East bank and Orange Wood (first record: West bank 1st August 1985). Common and widely distributed in both Kirklees and the rest of Yorkshire.

MYCETOPHAGIDAE

The 13 British species of this family are to be found on or in tree fungi, although one lives under mouldy straw.

Typhaea stercorea (Linnaeus,1758) Local.

Hairy Fungus Beetle.

A small (5.0mm) orange brown beetle living in grass tussocks and leaf litter. Widespread but local.

Found in flood refuse along the West bank on 30th June 1982. Known from a further three Kirklees localities.

TENEBRIONIDAE

This very large family exhibits more diversity of form and habitat requirements than any other group of beetles. Huge numbers of species occur in the world's more arid regions, but only 47 are found in the British Isles. Half this number are cosmopolitan species spread by commercial activity and are probably not indigenous.

Lagria hirta (Linnaeus,1758) Common.

A darkling beetle.

Ochre-brown and black bristly beetle. Locally common in sandy places in southern Britain, becoming more localised in the north and rare in Scotland.

Recorded from five subsites: West bank, NE corner, Jubilee Quarries, Edge Moor and South waterworks (first record: West bank 9th July 1999). Known from a further five Kirklees localities.

TETRATOMIDAE

Tetratoma fungorum Fabricius,1790* Local.

A shiny fungus beetle.

Red and black beetle found in bracket fungi on trees, mainly, although not exclusively, in old woodland. Quite common in the south, local in northern England and rare in Scotland.

Locate in bracket fungi along the West bank on 18th October 1985. Widely distributed in Kirklees.

SALPINGIDAE

A small family with 11 British representatives. They are subcortical and many superficially resemble Carabidae - little is known of their habits.

Sphaeriestes reyi (Abeille,1874)* Local.

A false weevil.

Small black beetle associated with burnt wood, particularly scorched twigs. Southern species - old woodland.

A single found under bark in Orange Wood on 1st June 1990 remains the only Kirklees record. The species is known from a further nine Yorkshire localities.

Vincenzellus ruficollis (Panzer,1794)* Local.

A false weevil.

Small beetle predatory on small invertebrates under dead bark. Widespread but local, mainly in older woodland.

Recorded from two subsites: West bank (under bark) and Orange Wood (under bark) (first record: 1st September 1991). Known from one other Kirklees locality.

Salpingus planirostris (Fabricius,1787)* Common. A false weevil.
3.0mm long bronze brown beetle with very elongate mouthparts. Common in woodland, usually under bark but also in fungi, leaf litter, moss etc.

Located at three subsites: West bank, Jubilee Quarries and Orange Wood (first record: West bank 10th March 1997). Widely distributed in Kirklees. Common and widespread in Yorkshire.

Salpingus ruficollis (Linnaeus,1761)* Common. A false weevil.
3.0mm long bronze beetle with reddish thorax and elongate mouthparts. Occurs mainly under tree bark, but also in dead wood, in moss and leaf litter.

Recorded along the West bank on three occasions (first record: 1st September 1991). Known from a further thirteen Kirklees localities.

MELANDRYIDAE

Of the 17 British species, most are to be found behind loose bark on old trees, in tree fungi and in rotten wood, only a few appear on flowering plants and shrubs.

Orchesia undulata Kraatz,1853* Local. A false darkling beetle.
A small saltatory beetle living in fungi, mainly in brackets but also under fungus infested bark. Widely distributed, mainly in older woodland.

Located under bark in Orange Wood on 15th August 2003. Known from a further five Kirklees localities.

SCRAPTIIDAE

The 14 British members of this family are mostly associated with rotten wood or fungi, at least in their immature stages, although adults of *Anaspis* can be abundant on flowers.

Anaspis frontalis (Linnaeus,1758)* Common. A tumbling flower beetle.
3.0-4.5mm long black elongate beetle. Adults on flowers, especially hawthorn *Crataegus* spp., larvae in dead wood, probably twigs.

Recorded from three subsites: West bank, Edge Moor (beaten from Hawthorn *Crataegus monogyna* blossom) and Orange Wood (first record: West bank 5th July 1999). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Anaspis fasciata (Forster,1771)* Common. A tumbling flower beetle.
Located at two subsites: Orange Wood (beaten from Hawthorn *Crataegus monogyna* blossom) and NE corner (first record: Orange Wood 30th May 2001). Widely distributed in Kirklees. Common and widely distributed in Yorkshire.

Anaspis maculata (Geoffroy in Fourcroy,1785) Common. A tumbling flower beetle.
A small yellowish beetle with variable blackish markings, 2.75-3.75mm long. The larvae are lignicolous; adults occur in large numbers on blossom in early summer. Widely distributed and generally common.

Recorded from seven subsites: West bank, East bank, Edge Moor (beaten from Hawthorn *Crataegus monogyna* blossom), Jubilee Quarries, NE corner, Orange Wood (beaten from Hawthorn blossom), South plantation and inflow (first record: West bank 19th July 1985). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Anaspis regimbarti Schilsky,1895 Common. A tumbling flower beetle.
3.0-4.0mm long black beetle with conspicuous red thorax. Larvae develop in dead plant stems and adults common on flowers, especially hawthorn *Crataegus* spp. blossom and umbellifers, in early summer.

Located at five subsites: West bank, NE corner, Jubilee Quarries, Orange Wood (beaten from Hawthorn *Crataegus monogyna* blossom) and inflow (first record: West bank 4th July 1999). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Anaspis rufilabris (Gyllenhal, 1827)* Common. A tumbling flower beetle.
3.0-4.0mm long black beetle. Larvae develop in dead plant stems and adults common on flowers, especially hawthorn *Crataegus* spp. blossom and umbellifers, in early summer.

Recorded from six subsites: West bank, NE corner, Jubilee Quarries, Edge Moor, Orange Wood (beaten from Hawthorn *Crataegus monogyna* blossom) and South embankment (first record: West bank 25th June 1999). Common and widely distributed in both Kirklees and the rest of Yorkshire.

OEDEMERIDAE

The ten British members of this family can be found on flowers, where they eat pollen. The larvae develop in rotting wood and in dry stems of herbaceous plants. The only species encountered at Blackmoorfoot, *Oedemera lurida*, has undergone a recent unprecedented northward expansion in range.

Oedemera lurida (Marsham, 1802) Local. A thick-legged flower beetle.
A dull metallic-green elongate beetle. The larvae develop in plant stems and the adults are usually found on flowers, particularly umbellifers and hawthorns *Crataegus* spp. In the south it can be quite common but more unusual north of the Midland, although it has recently undergone a range expansion and is now commoner than formerly.

Specimens have been swept from vegetation at five subsites: East bank, Edge Moor, Jubilee Quarries, Orange Wood and South waterworks (first record: East bank 2nd July 2001). Known from a further three Kirklees localities.

ANTHICIDAE

The members of this family are sometimes known as "ant-beetles" because of their vague resemblance to those insects. Our 13 species inhabit rotting vegetable matter, hay stack refuse, compost heaps etc., and most favour a maritime situation.

Omonadus floralis (Linnaeus, 1758) Common. An antlike beetle.
3.0-4.0mm long 'flower' or 'ant' beetle. Develops in rotting vegetation, often on compost heaps.

Recorded from four subsites: West bank (in flood refuse), Edge Moor (in stable refuse), NE corner and South waterworks (in grass cuttings) (first record: West bank 20th October 1983). Widely distributed in Kirklees. Common and widespread in Yorkshire.

Omonadus formicarius (Goeze, 1777) Common. An antlike beetle.
3.0mm reddish brown 'ant' beetle living as a larva in decaying plant material. Adults usually on flowers.

Located at four subsites: West bank (in flood refuse), Edge Moor (in stable refuse), Jubilee Quarries (in grass cuttings) and inflow (in flood refuse) (first record: West bank 10th May 1999). Known from three other Kirklees localities.

CERAMBYCIDAE

Found within this family are some of the largest and most striking of all the beetles, but the group is mainly concentrated in the tropics. Its members are largely associated with wood in various stages of growth and decay. The life cycle of the insect varies in length from months to tens of years. About 65 species have been recorded from Britain, several of these being very rare and some not being indigenous to our shores.

Rhagium bifasciatum Fabricius, 1775* Common. A longhorn beetle.
Large, variably patterned, colourful longhorn beetle. Larvae in rotten timber of most species of trees, particularly conifers including stumps in plantations. Adults on flowers, particularly hawthorn *Crataegus* spp. Common in most parts of Britain.

Beaten from Hawthorn *Crataegus monogyna* blossom in Orange Wood on 13th June 2001. Widely distributed in Kirklees. Common and widespread in Yorkshire.

Grammoptera ruficornis (Fabricius, 1781)* Common. A longhorn beetle.
A small blackish longhorn beetle with legs and antennae partly reddish. Larvae develop in the wood of a wide range of tree species; adults often occur on blossom in early summer.

Recorded from three subsites: Orange Wood (beaten from Hawthorn *Crataegus monogyna* blossom), Jubilee Quarries (on Hogweed *Heracleum sphondylium*) and NE corner (first record: Orange Wood 13th June 2001). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Agapanthia villosiviridescens (De Geer, 1775) Local. A longhorn beetle.
12.0-18.0mm long spectacular longhorn beetle, mottled black and yellow to give a greenish appearance. Conspicuously banded antennae. Southern and eastern in distribution and has apparently spread northwards in recent years. Formerly regarded as very rare. Larvae develop in the stems of Hogweed *Heracleum sphondylium*, Wild Parsnip *Pastinaca sativa* and possibly other species.

Three, including two in cop., were found on Hogweed at the northern end of Jubilee Quarries on 1st July 2009, two were swept from vegetation along the West bank on 22nd June 2010, a single was swept from vegetation at the southern end of Jubilee Quarries on 24th June 2010 and a single was swept from vegetation at the northern end of Jubilee Quarries on 30th June 2010. This is the only known Kirklees locality for the species.

Tetrops praeusta (Linnaeus, 1758)* Local. A longhorn beetle.
Larvae bore into thin branches of rosaceous bushes and trees, particularly in old hedges. Widespread in southern England. Very local in the north.

A single beaten from Hawthorn *Crataegus monogyna* blossom along the edge of Orange Wood on 31st May 2004 remains the only Kirklees record.

CHRYSOMELIDAE

The 14 'British' members of the Bruchinae (formerly considered a separate family, Bruchidae) are small and compact; no native species measuring more than 5mm in length. The larvae develop in the fruits of leguminous plants. A number of species introduced from other regions to central Europe with imported pulses are capable of developing in ripe seeds and may be serious pests of stored products.

The other members of this family are commonly known as "leaf-beetles" owing to their association with plants and plant material. Many of the species within this group are specific to particular plants.

Bruchus loti Paykull, 1800 Common. A seed beetle.
Recorded from two subsites: Edge Moor and South waterworks (first record: South waterworks 3rd September 2005). Known from a further thirteen Kirklees localities. Common and widely distributed in Yorkshire. Widespread in England and Wales.

Bruchidius villosus (Fabricius, 1793) Local. A seed beetle.
2.0-3.0mm long grey-black seed beetle. Adults lay eggs in developing pods of Broom *Cytisus scoparius* and the larvae develop inside the mature seeds. Locally common where Broom grows. Widespread in southern England and Wales north to Yorkshire.

Beaten from Broom *Cytisus scoparius* on Edge Moor on four occasions (first record: 31st May 2007). Known from a further eleven Kirklees localities. Common and widely distributed in Yorkshire.

Oulema melanopus (Linnaeus, 1758) Common. Cereal Leaf Beetle.
A metallic blue and red leaf beetle, 4.0-4.8mm long, which feeds on grasses.

Recorded from the South embankment on 5th May 2006. This is the only Kirklees locality for the species although recent splitting makes the distribution uncertain.

Oulema rufocyanea (Suffrian, 1847) Common. Cereal Leaf Beetle.
Very common, 4.0-5.0mm long elongate blue and red leaf beetle feeding on grasses, including crop cereals of which it is a minor pest. Formerly called *Oulema melanopa*, it was noted in 1989 that two species existed under this name, which were only discernable by dissection of the genitalia. *Oulema rufocyanea* has proved the commoner of the two species in Britain, and the two are sometimes found together.

Recorded from the West bank on three occasions (first record: 1st September 1992). The distribution of this species is uncertain due to recent splitting from *Oulema melanopus*.

Cryptocephalus labiatus (Linnaeus, 1761) Common. A leaf beetle.
Small black leaf beetle feeding on foliage of young birch *Betula* spp., especially on heathland. Widespread and locally common.

Located at two subsites: West bank and Jubilee Quarries (first record: West bank 1st July 1984). Widely distributed in Kirklees. Common and widespread in Yorkshire.

Chrysolina fastuosa (Scopoli, 1763) Local. Dead-nettle Leaf Beetle.
Golden green leaf beetle feeding on hemp-nettle *Galeopsis* spp. and dead-nettle *Lamium* spp., usually in ruderal or riverside habitats.

Recorded along the catchment channel near the inflow on 23rd July 2001. The only other Kirklees record is pre-1950.

Chrysolina hyperici (Forster, 1771) Local. A leaf beetle.
6.0-8.0mm long dark violet or blue leaf beetle on saint john's-wort *Hypericum* spp. in grasslands, verges and woodland rides. Widespread but local, particularly in the north.

A single specimen was found on a stone by the entrance gate along the West bank on 9th October 2008. The nearest foodplant, which had long finishes flowering, was 10 feet away. Known from one other Kirklees locality.

Chrysolina oricalcia (Muller, O.F., 1776) Notable/Nb. A leaf beetle.
Large dark blue leaf beetle, generally associated with umbellifers, usually Upright Hedge-parsley *Torilis japonica*, Cow Parsley *Anthriscus sylvestris*, Cowbane *Cicuta virosa* and Hemlock *Conium maculatum*. Widespread but very local, more common in Scotland.

Recorded from Edge Moor on three occasions (first record: 26th July 2008). Known from two other Kirklees localities.

Gastrophysa polygoni (Linnaeus, 1758) Common. A leaf beetle.
4.0mm long metallic green leaf beetle with a red thorax. Fairly common on knotgrass *Polygonum* spp.

Located along the South embankment on 12th May 2006. Known from a further ten Kirklees localities.

Gastrophysa viridula (De Geer,1775) Common. Green Dock Beetle.
A metallic green leaf beetle feeding on docks *Rumex* spp. (preferring the broader leaved species), found locally in wetlands and damp, unimproved meadows.

Recorded from seven subsites: West bank, Edge Moor, Orange Wood, NE corner, South embankment, SW corner overflow field and inflow (first record: West bank August 1980). This is a very common species at Blackmoorfoot and by late summer the flesh on the leaves of Broad-Leaved Dock *Rumex obtusifolius* can be completely eaten away to reveal the venation. Common and widely distributed in both Kirklees and the rest of Yorkshire.

Phaedon armoraciae (Linnaeus,1758) Common. Mustard Beetle.
5.0mm long bluish black leaf beetle feeding on foliage of Water-cress *Rorippa nasturtium-aquaticum* and other aquatic or wetland Cruciferae. Widespread and common in wet places.

Located at two subsites: West bank and South waterworks (first record: West bank 15th May 1985). Known from a further eight Kirklees localities.

Phaedon cochleariae (Fabricius,1792) Common. Mustard Beetle.
5.0mm long shiny blue leaf beetle feeding on various species of the family Cruciferae. Widespread and common, sometimes a minor pest of Water-cress *Rorippa nasturtium-aquaticum*.

Recorded along the West bank on two occasions (first record: 17th April 1983). This is the only known Kirklees locality for the species.

Phaedon tumidulus (Germar,1824) Common. Celery Leaf Beetle.
5.0mm long shiny bronze black leaf beetle feeding on foliage of various umbellifers, particularly Hogweed *Heracleum sphondylium*. Sometimes a pest of Celery *Apium graveolens*.

Located at four subsites: West bank, East bank, Edge Moor and inflow (first record: West bank 16th September 1979). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Hydrothassa marginella (Linnaeus,1758) Common. A leaf beetle.
A dark metallic bluish leaf beetle with a paler margin to thorax and elytra, feeding on buttercup *Ranunculus* spp. flowers, often in marshy places.

Recorded from three subsites: West bank (regularly), East bank and inflow (first record: West bank 6th April 1998). Known from four other Kirklees localities. Common and widely distributed in Yorkshire.

Phratora vitellinae (Linnaeus,1758) Common. Brassy Willow Beetle.
A bronze coloured leaf beetle found on Aspen *Populus tremula* and willow *Salix* spp. Fens, marshes and riverbanks, including uplands.

Located along the West bank on 16th July 1989. Known from a further eight Kirklees localities.

Phratora vulgatissima (Linnaeus,1758) Local. Blue Willow Beetle.
A blue leaf beetle found on Aspen *Populus tremula* and various willows *Salix* spp. Found in fens, carrs and riverbanks. Local but sometimes in large colonies on willow bushes.

Recorded from seven subsites: West bank (regularly), East bank, Edge Moor, NE corner, Orange Wood, South embankment and inflow (first record: West bank 23rd May 1997). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Galerucella lineola (Fabricius,1781) Common. Brown Willow Beetle.
4.0-5.0mm long brown leaf beetle feeding on foliage of various willows *Salix* spp., often causing defoliation. Also occasionally on foliage of Meadowsweet *Filipendula ulmaria*.

Located along the West bank on five occasions (first record: 11th July 1983). Known from one other Kirklees locality.

Galerucella nymphaeae (Linnaeus,1758) Local. Water-lily Leaf Beetle.
Leaf beetle feeding on floating leaves of water lilies *Nymphaea* spp. and Amphibious Bistort *Persicaria amphibia*. Southern species, very local in the north.

Recorded along the West bank on two occasions (first record: 1st September 1991). Known from one other Kirklees locality.

Galerucella sagittariae (Gyllenhal,1813) Local. A leaf beetle.
6.0mm long brown leaf beetle feeding on foliage of various aquatic plants. Widespread but local.

Located along the West bank on two occasions (first record: 8th October 1979). Known from a further seven Kirklees localities.

Lochmaea caprea (Linnaeus,1758) Common. Willow Leaf Beetle.
5.0mm long greyish yellow leaf beetle feeding on the foliage of various willows *Salix* spp. Very common in wet places, sometimes causing extensive defoliation.

Recorded from seven subsites: West bank, East bank, Jubilee Quarries, Edge Moor, South embankment, South waterworks and inflow (first record: West bank 13th May 1998). Known from a further four Kirklees localities.

Lochmaea crataegi (Forster,1771) Common. Hawthorn Leaf Beetle.
5.0mm long dull red leaf beetle living on hawthorn *Crataegus* spp. foliage. Adults in May and June.

Beaten from Hawthorn *Crataegus monogyna* blossom along the West bank on 19th May 1992. Known from a further four Kirklees localities.

Lochmaea suturalis (Thomson,C.G.,1866) Common. Heather Beetle.
5.0mm long blackish brown leaf beetle feeding on foliage of Heather *Calluna vulgaris*, sometimes causing extensive defoliation and even death of heather plants. Regarded as particularly damaging on grouse moors, and partially controlled by heather burning cycle. Very common just about anywhere heather grows.

Recorded from seven subsites: West bank, East bank, Edge Moor, Jubilee Quarries, Orange Wood, South embankment and inflow (first record: West bank 15th May 1985). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Luperus longicornis (Fabricius,1781) Common. A leaf beetle.
7.0mm long shiny black leaf beetle with yellow legs and exceptionally long antennae. Found commonly on young birch *Betula* spp. throughout Great Britain.

A single dead specimen in a puddle on the South embankment on 22nd July 2012 remains the only known Kirklees locality for the species.

Sermylassa halensis (Linnaeus,1767) Local. A leaf beetle.
Metallic green and orange leaf beetle feeding on bedstraw *Galium* spp. in sandy places - heaths and dunes. Widespread but local, more so in the north.

Located on Edge Moor on three occasions (first record: 20th September 2008). Known from two other Kirklees localities.

Phyllotreta nigripes (Fabricius,1775) Common. Turnip Flea Beetle.
2.0-2.6mm long bronze-black flea beetle feeding on various members of the Cruciferae and hence, occasionally, a pest.

Recorded from a garden near the Bull's Head public house on 29th May 2000. Known to occur at one other Kirklees locality.

Phyllotreta tetrastigma (Comolli,1837) Local. A leaf beetle.
1.5-2.0mm long black and yellow flea beetle on Water-cress *Rorippa nasturtium-aquaticum* and other Cruciferae in marshy places. Widespread but very local.

Located along the West bank on two occasions (first record: 1st April 2000). Known from ten other Kirklees localities.

Phyllotreta undulata Kutschera,1860 Common. Small Turnip Flea Beetle.
Small black and yellow flea beetle feeding on leaves of various crucifers, including cultivated brassicas. Major pest of seedlings of these.

Recorded from two subsites: West bank and South embankment (first record: West bank 15th May 1985). Widely distributed in Kirklees.

Phyllotreta vittula (Redtenbacher,1849) Local. Barley Flea Beetle.
Small black and yellow flea beetle. Widespread but local in England and Scotland. Foodplant uncertain.

Specimens located along the West bank on 25th June 2001 remain the only record for Kirklees.

Aphthona euphorbiae (Schrank,1781) Local. Large Flax Flea Beetle.
Flea beetle usually described as feeding on spurge *Euphorbia* spp. but also found in absence of the plant. Known to feed on Linaceae and Chenopodiaceae in Europe. Local in southern England, rarer in the north. There are occasional population increases.

Recorded from five subsites: West bank, East bank, Jubilee Quarries, Orange Wood and South embankment (first record: East bank 1st October 1999). Widely distributed in both Kirklees and the rest of Yorkshire.

Longitarsus exoletus (Linnaeus,1758) Local. A leaf beetle.
A brownish flea beetle, 2.5-3.0mm long, associated primarily with Viper's-bugloss *Echium vulgare*, but also Hound's-tongue *Cynoglossum officinale*, Common Gromwell *Lithospermum officinale* and Purple Gromwell *Lithospermum purpureocaeruleum*. Widely distributed but local.

Located on Russian Comfrey *Symphytum officinale* x *asperum* at Edge Moor Farm on 24th August 2008. Known from one other Kirklees locality.

Longitarsus luridus (Scopoli,1763) Common. A leaf beetle.
1.5mm long flea beetle. Variable in coloration, from yellow to brown to black, sometimes bicoloured. Probably polyphagous.

Recorded from four subsites: West bank, East bank, Orange Wood and South waterworks (first record: Orange Wood 3rd May 1981). Widely distributed in Kirklees. Common and widespread in Yorkshire.

Longitarsus parvulus (Paykull,1799) Na. Flax Flea Beetle.
Very local flea beetle. Has been recorded feeding on Perennial Flax *Linum perenne*, but possibly polyphagous. The species has recently undergone a range expansion and is now commoner than formerly.

Located at three subsites: West bank, East bank and South embankment (first record: West bank 4th May 1998). Known to occur at two other Kirklees localities.

Longitarsus suturellus (Duftschmid,1825) Common. A leaf beetle.
Recorded from two subsites: East bank and South embankment (first record: both subsites 2nd July 2001). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Altica lythri Aube,1843 Common. A leaf beetle.
5.0mm long bright metallic blue flea beetle feeding on willowherb *Epilobium* spp. and other members of the Onagraceae, in particular Enchanter's-nightshade *Circaea lutetiana*. Widely distributed and generally common.

Located at nine subsites: West bank, East bank, Edge Moor, NE corner, Jubilee Quarries, South plantation, South embankment, South waterworks and inflow (first record: West bank 10th June 1997). Widely distributed in Kirklees. Common and widespread in Yorkshire.

Altica palustris Weise,1888 Common. A leaf beetle.
Specimens located along the West bank on 15th May 1985 remain the only Kirklees record.

Neocrepidodera ferruginea (Scopoli,1763) Common. A leaf beetle.
3.0-4.0mm long reddish flea beetle feeding on foliage of thistles *Cirsium* spp.

Recorded from three subsites: East bank, Edge Moor and South waterworks (first record: East bank 14th May 1983). Widely distributed in Kirklees. Common and widespread in Yorkshire.

Neocrepidodera transversa (Marsham,1802) Common. A leaf beetle.
4.0-5.0mm long reddish flea beetle feeding on foliage of thistles *Cirsium* spp.

Recorded from two subsites: West bank and East bank (first record: West bank 1st July 1989). Widely distributed in Kirklees. Common and widespread in Yorkshire.

Crepidodera aurata (Marsham,1802) Common. Willow Flea Beetle.
A small flea beetle, about 3.0mm long, usually bicoloured in metallic green and reddish. Widely distributed and generally common, feeding on willows and sallows *Salix* spp.

Specimens located along the West bank on 3rd August 1981 remain the only record for Kirklees.

Crepidodera fulvicornis (Fabricius,1793) Common. A leaf beetle.
3.0mm long very brightly metallic flea beetle (green, gold, red, blue or coppery), feeding on the foliage of various willow *Salix* spp.

Recorded from three subsites: West bank, Edge Moor and Jubilee Quarries (first record: West bank 15th May 1985). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Chaetocnema concinna (Marsham,1802) Common. Beet Flea Beetle.
A small, dark bronze flea beetle which is widely distributed and generally common. The adult lives for about a year, overwinters and in spring flies to new breeding grounds. The eggs are laid in or on the soil close to the foodplants during May and June. The larva often feeds on the roots of knotgrasses *Polygonum* spp. though it may also be a pest of Beet *Beta vulgaris*. When fully fed it pupates in the soil and within two or three weeks emerges and begins to feed on the plant leaves.

Recorded from four subsites: West bank, South embankment, South waterworks and inflow (first record: West bank 5th June 1980). The Kirklees status is uncertain due to recent splitting (Booth & Owen, 1997) although it is probably common. The other species, *Chaetocnema picipes*, would appear to have a southern distribution and has not been recorded from Yorkshire (YNU database, 2009).

Chaetocnema hortensis (Fourcroy,1785) Common. A leaf beetle.
A small black flea beetle with a bronze reflection, 1.5-2.3mm long. Larvae and adults are polyphagous on grasses.

Located at two subsites: West bank and South embankment (first record: West bank 7th July 1998). Known from a further six Kirklees localities.

Sphaeroderma testaceum (Fabricius,1775) Common. A leaf beetle.
3.5-4.0mm hemispherical red flea beetle feeding on foliage of thistles *Cirsium* spp. Locally common throughout Great Britain.

Recorded from three subsites: West bank, Edge Moor and South waterworks (first record: West bank 4th June 2003). Known from one other Kirklees locality.

Psylliodes napi (Fabricius,1793) Common. A leaf beetle.
2.0-3.3mm long blue-black flea beetle feeding on various Cruciferae, including cultivated species. Generally common throughout Britain, sometimes a pest.

Located along the West bank on four occasions (first record: 6th June 1984). Widely distributed in Kirklees.

Psylliodes laticollis Kutschera,1860 Local. A leaf beetle.
A flea beetle which feeds on Water-cress *Rorippa nasturtium-aquaticum* and Garlic Mustard *Alliaria petiolata*.

Found on Garlic Mustard along the West bank on 16th April 1994. Known from one other Kirklees locality.

Cassida flaveola Thunberg,1794 Local. Pale Tortoise Beetle.
Small dull yellow tortoise beetle feeding on chickweed *Stellaria* spp. in meadows and marshes. Throughout southern and midland England and Wales, becoming more local in the north.

Recorded from three subsites: West bank, East bank and South waterworks (first record: West bank 6th September 1981). Widely distributed in Kirklees.

Cassida rubiginosa Muller,O.F.,1776 Common. Thistle Tortoise Beetle.
5.0-6.0mm long dull green tortoise beetle feeding on foliage of thistle *Cirsium* spp. and burdock *Arctium* spp. Very common, the adults often on umbelliferous flowers.

Located at four subsites: Edge Moor, Jubilee Quarries, South embankment and North bank road (first record: North bank road 16th April 2003). Known from a further seven Kirklees localities.

ATTELABIDAE

Attelabus nitens (Scopoli,1763) Local. Oak Leaf-roller.
4.0-6.0mm long conspicuous, bright red primitive weevil which causes very characteristic leaf rolls on oak *Quercus* spp. Widespread but local.

Several leaf-rolls on oak along the periphery of Edge Moor on 25th June 2010 revealed the presence of this species – no adults were seen. Known from three other Kirklees localities.

APIONIDAE

A family with a very characteristic appearance, most members of which are only to be found in association with their specific food-plant.

Ceratapion gibbirostre (Gyllenhal,1813) Common. A seed weevil.
2.0-2.9mm long bluish black 'seed' weevil on various species of thistles *Cirsium/Carduus* spp.
Larvae bore in the stems. Widespread and very common.

Recorded from three subsites: West bank, Edge Moor and South waterworks (first record: West bank 15th May 1985). Known from a further eight Kirklees localities.

Exapion fuscirostre (Fabricius,1775) Local. A seed weevil.
Small (2.4-3.0mm) 'seed' weevil feeding exclusively on Broom *Cytisus scoparius* with the larvae developing in the pods. Widespread but somewhat local in south-eastern England, apparently absent from the north and Wales.

Specimens located on Broom on Edge Moor on 29th May 2009 and 22nd May 2012 constitute the only Kirklees records.

Exapion ulicis (Forster,1771) Common. Gorse Weevil.
On Gorse *Ulex europaeus* and probably other *Ulex* species. Larvae in the pods.

Recorded from two subsites: Edge Moor (on Broom *Cytisus scoparius*) and East bank (first record: East bank 19th June 1989). Known from a further eleven Kirklees localities.

Protapion apricans (Herbst,1797) Common. Clover Seed Weevil.
1.8-2.9mm long black 'seed' weevil with yellow legs. Larvae develop in seed heads of red clovers - various *Trifolium* spp. Very common, sometimes a pest where fodder crops are being grown for seed.

Located at seven subsites: East bank, Edge Moor, NE corner, Jubilee Quarries, Orange Wood, South embankment and South waterworks (first record: Orange Wood 3rd July 1999). Widely distributed in Kirklees. Common and widespread in Yorkshire.

Protapion assimile (Kirby,1808) Common. Clover Seed Weevil.
Small (1.8-2.9mm) black 'seed' weevil living on clovers *Trifolium* spp. Locally common in grassland, waste places etc.

Recorded from eight subsites: East bank, Edge Moor, Jubilee Quarries, NE corner, Orange Wood, South embankment, South waterworks and inflow (first record: East bank 1st May 2001). Widely distributed in Kirklees. Common and widespread in Yorkshire.

Protapion fulvipes (Geoffroy in Fourcroy,1785) Common. White Clover Seed Weevil.
A small (1.8-2.2mm) black 'seed' weevil with reddish-yellow legs, feeding on clovers *Trifolium* spp.

Located at eight subsites: West bank, East bank, Edge Moor, Jubilee Quarries, Orange Wood, South embankment, South waterworks and South plantation (first record: Orange Wood 31st August 1994). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Protapion nigritarse (Kirby,1808) Common. A seed weevil.
Biology not well studied in Britain, but on the Continent restricted to small yellow-flowered clovers *Trifolium* spp. Larvae in the flowerheads.

Swept from vegetation at the South waterworks on 8th August 2009. Known from two other Kirklees localities.

Protapion trifolii (Linnaeus,1768) Common. Clover Seed Weevil.
In grasslands, hedgerows and waste places. On Red Clover *Trifolium pratense* and Zigzag Clover *Trifolium medium* but not (on the Continent, at least) on White Clover *Trifolium repens* or Alsike Clover *Trifolium hybridum*; larvae in the flowerheads.

Located at five subsites: Edge Moor, Jubilee Quarries, Orange Wood, South waterworks and South embankment (first record: Edge Moor 14th June 2008). Known from one other Kirklees locality.

Perapion curtirostre (Germar, 1817) Common. A seed weevil.
On a wide variety of dock *Rumex* spp., including members from each of the subgenera: *Rumex* sen. str., *Acetosa* and *Acetosella*.

Recorded from five subsites: West bank, East bank, Jubilee Quarries, Edge Moor and South waterworks (first record: West bank 10th October 1992). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Perapion hydrolapathi (Marsham, 1802) Common. A seed weevil.
2.8-3.1mm long blue-black orthocerous 'seed' weevil. Larvae mine the stems of the larger species of dock *Rumex* spp.

Located at two subsites: West bank (in flood refuse) and South waterworks (first record: West bank 25th June 2001). Widely distributed in Kirklees.

Perapion marchicum (Herbst, 1797) Local. A seed weevil.
1.6-2.3mm long blue-black 'seed' weevil, developing in the stems of the larger dock/sorrel *Rumex* species. Widespread but local.

A single specimen was located at the South waterworks on 28th June 2010. Known from a further three Kirklees localities.

Perapion violaceum (Kirby, 1808) Common. A seed weevil.
2.6-3.5mm long greenish blue 'seed' weevil developing in stem mines in Broad-leaved Dock *Rumex obtusifolius* and other *Rumex* species.

Recorded from five subsites: West bank, Edge Moor, NE corner, South waterworks and inflow (first record: West bank 16th April 1998). Widely distributed in Kirklees.

Apion frumentarium (Linnaeus, 1758) Common. A seed weevil.
3.6-4.4mm long blood red 'seed' weevil. Larvae develop in stem mines in the large species of docks *Rumex* spp. (Broad-leaved Dock *Rumex obtusifolius*, Curled Dock *Rumex crispus*, Water Dock *Rumex hydrolapathum* etc). There is considerable taxonomic confusion in this species group. This species was previously known as *Apion miniatum*, whilst *Apion haematodes* was known as *Apion frumentarium*, therefore considerable caution is necessary in interpreting older records.

Located at two subsites: West bank and South waterworks (first record: West bank 17th August 1990). Known from a further nine Kirklees localities.

Apion haematodes Kirby, 1808 Common. A seed weevil.
Tiny (2.1-2.8mm) red 'seed' weevil feeding in stems of Sheep's Sorrel *Rumex acetosella*, in sandy places. Locally common in the right habitat. There is considerable confusion in this species group, this species was previously known as *Apion frumentarium*, whilst the species previously known as *Apion frumentarium* is now known as *Apion miniatum*. Considerable caution is therefore required in interpreting older records.

Recorded along the West bank on 7th June 1985. Known from a further eight Kirklees localities.

Catapion pubescens (Kirby, 1811) Notable/Nb. A seed weevil.
A widely distributed but very local 'seed' weevil. Associated with clover *Trifolium* spp. on the Continent, but repeatedly found on willow *Salix* spp. in Britain.

Specimens from the South waterworks on 28th August 2005 remain the only record for Kirklees.

Betulapion simile (Kirby,1811) Local. A seed weevil.
1.8-2.4mm long black 'seed' weevil living on birch *Betula* spp. Larvae in the female catkins.
Locally common wherever birch grows.

A single beaten from Silver Birch *Betula pendula* on Edge Moor on 8th August 2010 remains the only Kirklees record.

Stenopterapion scutellare (Kirby,1811) Local. A seed weevil.
Found on heaths, where it feeds on Dwarf Gorse *Ulex minor* or Gorse *Ulex europaeus*, the larvae causing galls in the stem. Widespread but local in England and Wales and distinctly less common in the north.

A single located on the wall along the South embankment on 7th June 2003 remains the only Kirklees record.

Ischnopterapion loti (Kirby,1808) Common. A seed weevil.
A small (2.0-2.5mm) black 'seed' weevil, feeding on Common Bird's-foot-trefoil *Lotus corniculatus* and Narrow-leaved Bird's-foot-trefoil *Lotus glaber* in dry grassland and dunes.

Recorded from three subsites: East bank, South waterworks and South plantation (first record: East bank 26th March 1999). Widely distributed in Kirklees. Common and widespread in Yorkshire.

Protopirapion atratum (Germar,1817) Common. A seed weevil.
A black 'seed' weevil, 2.2-3.1mm in length, living in the pods of Broom *Cytisus scoparius*, occasionally on Gorse *Ulex europaeus* and greenweed *Genista* spp.

Located at two subsites: Jubilee Quarries and Edge Moor (first record: Jubilee Quarries 29th June 2009). Known from one other Kirklees locality.

Pirapion immune (Kirby,1808) Local. A seed weevil.
Probably feeds exclusively on Broom *Cytisus scoparius* in Britain and is therefore mainly found on heaths and sandy areas. Greenweeds *Genista* spp. are also possible host plants. Larvae occur in galls on the young stems. Rather local but widely distributed as far north as Elgin. Few records from Wales and midland England.

Beaten from Broom on Edge Moor on 22nd May 2012. This is the only known Kirklees locality for the species.

Oxystoma cerdo (Gerstaecker,1854) Notable/Nb. A seed weevil.
Small (2.4-3.0mm) 'seed' weevil developing in seed pods of Tufted Vetch *Vicia cracca*. Local in northern England and south-west Scotland. Woodlands, grasslands, hedgerows. Possibly spreading.

Recorded from three subsites: Edge Moor, Jubilee Quarries and South waterworks (first record: South waterworks 24th July 2009). This is the only known locality for the species in Kirklees.

Oxystoma subulatum (Kirby,1808) Common. A seed weevil.
A small (2.4-3.0mm) black 'seed' weevil, feeding on vetches *Lathyrus* spp., particularly Meadow Vetchling *Lathyrus pratensis*.

Located at four subsites: Edge Moor, NE corner, Jubilee Quarries and South waterworks (first record: South waterworks 3rd September 2005). Known from a further three Kirklees localities.

Eutrichapion ervi (Kirby,1808) Common. A seed weevil.
In waste places etc, particularly in hedgerows. Most frequently on Meadow Vetchling *Lathyrus pratensis*; also on vetches belonging to the genus *Vicia*. Larvae in the flower buds.

Recorded from four subsites: Edge Moor, NE corner, Jubilee Quarries and South waterworks (first record: South waterworks 9th June 2007). Known from a further thirteen Kirklees localities.

Eutrichapion viciae (Paykull,1800) Common. A seed weevil.
In hedgerows, roadsides etc on vetches *Vicia/Lathyrus* spp., particularly Tufted Vetch *Vicia cracca* and Meadow Vetchling *Lathyrus pratensis*.

Located at three subsites: Edge Moor, Jubilee Quarries and South waterworks (first record: Jubilee Quarries 2nd July 2001). Known from two other Kirklees localities.

CURCULIONIDAE

This group contains the "broad-nosed weevils", all of which, at least at some stage in their development, are associated with plants. No part of the plant, from the roots to the seed, escapes the attention of one or more species. Most are terrestrial but some are aquatic, their larvae inhabiting the submerged parts of water plants.

Of the 64 species of Scolytinae (formerly considered a separate family, Scolytidae) which occur in Britain, the majority develop in the twigs, branches and trunks of deciduous and coniferous trees and can be serious forest pests. As well as damaging wood directly many species can also transmit plant diseases.

Otiorhynchus ligneus (Olivier,1807) Common. A weevil.
A ground-living weevil, found particularly on the coast, but also found inland in similar situations. Polyphagous, with no known feeding preferences.

A single in flood refuse along the West bank on 31st October 1986 remains the only Kirklees record.

Otiorhynchus ovatus (Linnaeus,1758) Local. Strawberry Root Weevil.
A slow-moving black weevil, 4.5 to 5.5mm long, found on the ground at the roots of various plants in fairly dry places. Widely distributed and generally fairly common.

A single found in Orange Wood on 19th July 1985 remains the only record for Kirklees.

Otiorhynchus singularis (Linnaeus,1767) Common. Raspberry Weevil.
A moderately-sized brown weevil, largely ground dwelling and polyphagous. Larvae feed on plant roots and can be a notorious pest of forest trees, fruit trees and bushes. Widely distributed and common.

Recorded from five subsites: West bank, Edge Moor, NE corner, Jubilee Quarries and Orange Wood (first record: West bank 31st October 1979). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Otiorhynchus sulcatus (Fabricius,1775) Common. Vine Weevil.
A 7.5-9.5mm long brownish black weevil. Lives in leaf litter, under stones etc, feeding on various low growing plants, probably also on detritus. Very common, sometimes a garden pest (Vine Weevil), coming into houses in the autumn to hibernate.

Located along the West bank on two occasions (first record: 7th June 1989). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Phyllobius argentatus (Linnaeus,1758) Common. Silver-green Leaf Weevil.
Beautiful, sparkling silver-green leaf weevil feeding on the foliage of various tree and shrub species, particularly Hazel *Corylus avellana*, oak *Quercus* spp., Beech *Fagus sylvatica*, birch *Betula* spp., willow *Salix* spp. and poplar *Populus* spp. Common on woodland edges, scrub and hedgerows.

Recorded from seven subsites: Edge Moor, Jubilee Quarries, NE corner, Orange Wood, South waterworks, South plantation and inflow (first record: Orange Wood 4th June 2001). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Phyllobius glaucus (Scopoli,1763) Common. A weevil.
On a wide variety of broad-leaved trees and shrubs, in many places showing a preference for Alder *Alnus glutinosa*, but also on birch *Betula* spp., oak *Quercus* spp., Hazel *Corylus avellana*, willow *Salix* spp., hawthorn *Crataegus* spp., elm *Ulmus* spp, whitebeam *Sorbus* spp. and Bird Cherry *Prunus padus*.

Located at three subsites: West bank (regularly), Edge Moor and NE corner (first record: West bank July 1985). Widely distributed in Kirklees. Common and widespread in Yorkshire.

Phyllobius maculicornis Germar,1824 Local. Green Leaf Weevil.
Fairly bright green weevil feeding on foliage of various trees and shrubs, particularly oak *Quercus* spp., Beech *Fagus sylvatica*, birch *Betula* spp., willow *Salix* spp. and elm *Ulmus* spp.

Recorded from four subsites: Edge Moor, Jubilee Quarries, Orange Wood and South plantation (first record: Orange Wood 30th May 2001). Known from a further thirteen localities.

Phyllobius oblongus (Linnaeus,1758) Common. Brown Leaf Weevil.
3.7-5.9mm long brown and black leaf weevil, feeding on the foliage of various species of trees, including hawthorn *Crataegus* spp., Blackthorn *Prunus spinosa*, apple *Malus* spp. and willow *Salix* spp. Has been recorded as a minor pest of fruit trees. Locally common throughout Britain.

Located on Edge Moor on four occasions (first record: 30th May 2001). Widely distributed in Kirklees.

Phyllobius pomaceus Gyllenhal,1834 Common. A weevil.
7.5-9.0mm long green leaf beetle feeding on Stinging Nettle *Urtica dioica*, occasionally on Meadowsweet *Filipendula ulmaria* and other herbaceous vegetation. Very common wherever nettle grows.

Recorded from five subsites: West bank, Edge Moor, NE corner, Jubilee Quarries and South plantation (first record: West bank 14th May 1999). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Phyllobius pyri (Linnaeus,1758) Common. Common Leaf Weevil.
A rather small (4.7-7.5mm), golden-green leaf weevil which is very common in hedgerows, woodland and scrub. It feeds on the foliage of various trees and shrubs and also nettles *Urtica* spp., and the early stages are passed in the ground.

Located at ten subsites: West bank, East bank, Edge Moor, Jubilee Quarries, Orange Wood, NE corner, South embankment, South waterworks, South plantation and inflow (first record: West bank 15th May 1985). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Phyllobius roboretanus Gredler,1882 Common. Small Green Nettle Weevil.
2.6-4.5mm long bright green weevil living on the foliage of a wide variety of herbaceous vegetation in a number of grassy and open habitats.

Recorded from eight subsites: West bank, Edge Moor, NE corner, Jubilee Quarries, Orange Wood, South embankment, South waterworks and inflow (first record: Orange Wood 30th May 2001). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Phyllobius virideaeris (Laicharting, 1781) Local. Green Nettle Weevil.
3.7-5.0mm long bright green weevil feeding on a wide variety of herbaceous vegetation in a number of grassy and open habitats, also on shrubs and bushes.

Located at five subsites: West bank, Edge Moor, Jubilee Quarries, NE corner and South embankment (first record: West bank 6th June 1989). Widely distributed in Kirklees. Common and widespread in Yorkshire.

Barypeithes pellucidus (Boheman, 1834) Common. Hairy Spider Weevil.
Small black 'spider' weevil. Lives among leaf litter on woodland floor, sometimes in dry grassland. Apparently polyphagous, possibly detritivorous. Widespread and generally common.

Recorded from three subsites: West bank, Jubilee Quarries and South embankment (first record: South embankment 7th June 2005). Widely distributed in Kirklees. Common and widespread in Yorkshire.

Strophosoma melanogrammum (Forster, 1771) Common. Nut Leaf Weevil.
3.9-5.9mm long dumpy brown weevil. Feeds on foliage of various trees and shrubs, particularly Hazel *Corylus avellana* and oak *Quercus* spp.

Located at three subsites: West bank, Jubilee Quarries and Orange Wood (first record: West bank 15th May 1978). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Neliocarus sus (Stephens, 1831) Local. Heather Weevil.
3.6-5.2mm long blackish brown dumpy weevil feeding on foliage of Heather *Calluna vulgaris* and heaths *Erica* spp. in sandy and peaty places, more commonly on heathland than on moorland. Locally common in much of southern Britain in the right habitat.

Recorded from Edge Moor (beaten from Broom *Cytisus scoparius*) on three occasions (first record: 7th April 2007). Known from a further eight Kirklees localities.

Barynotus moerens (Fabricius, 1793) Local. A weevil.
A large (8.0-9.0mm) brown weevil. Probably polyphagous, but with a preference for Dog's Mercury *Mercurialis perennis*. Widespread but local, less common in the north.

Located at the South waterworks on 10th May 2008. Recorded from two other Kirklees localities (one of which is pre-1950).

Barynotus obscurus (Fabricius, 1775) Common. Ground Weevil.
A large (7.1-11.0mm) weevil, covered in slightly metallic variegated brown and grey scales. Polyphagous, with no recorded feeding preferences. Found in grassy places, but chiefly ground-dwelling and easily overlooked. Widely distributed and fairly common.

Recorded along the West bank on three occasions (first record: 9th July 1992). Known from a further seven Kirklees localities.

Barynotus squamosus Germar, 1824 Notable/Nb. A weevil.
Large (6.9-8.8mm) weevil which is nocturnal and polyphagous. A northern and western species.

Located at two subsites: West bank and East bank (first record: East bank 11th September 1991). Known from three other Kirklees localities.

Coelositona cambricus (Stephens,1831) Local. A weevil.
Chiefly on Large Bird's-foot-trefoil *Lotus uliginosus* in Britain. Larval foodplant unclear, but recorded from Common Bird's-foot-trefoil *Lotus corniculatus* on the Continent. Widespread in Great Britain, mainly western where it is locally common. Very local elsewhere.

A single on the wall towards the eastern end of the South embankment on 5th May 2006 remains the only Kirklees record.

Sitona hispidulus (Fabricius,1777) Common. Clover Weevil.
A small weevil, 2.8-4.6mm long, covered in brownish scales, some of which are raised to give a spiky appearance. Larvae develop in the root nodules of leguminous plants, including clovers *Trifolium* spp., and adults feed on the leaves. A generally common species in dry and well-drained places.

Recorded from five subsites: West bank, East bank, South Waterworks, South embankment and South plantation (first record: East bank 6th August 1985). Widely distributed in Kirklees. Common and widespread in Yorkshire.

Sitona lepidus Gyllenhal,1834 Common. A weevil.
A 4.3-5.7mm long weevil, covered in brownish scales. Associated with leguminous plants, including clovers *Trifolium* spp., especially Red Clover *Trifolium pratense* and White Clover *Trifolium repens*. Larvae develop in root nodules, adults feed on the leaves.

Located from five subsites: West bank, Edge Moor, South waterworks, South embankment and inflow (first record: West bank 3rd May 1981). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Sitona lineatus (Linnaeus,1758) Common. Pea and Bean Weevil.
3.4-5.3mm long brown weevil feeding on most species of Leguminosae mainly in grassland. Common pest in gardens of peas and beans; the characteristic feeding notches caused by adults in the leaves being familiar to gardeners.

Recorded from seven subsites: West bank, East bank, NE corner, Jubilee Quarries, South embankment, South waterworks and inflow (first record: West bank 22nd April 1985). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Sitona puncticollis Stephens,1831 Local. A weevil.
On clovers *Trifolium* spp., especially Red Clover *Trifolium pratense* and White Clover *Trifolium repens*. Biology unknown.

Located along the East bank on 6th August 1985. Known from one other Kirklees locality.

Sitona striatellus Gyllenhal,1834 Common. A weevil.
2.8-4.7mm long brown weevil living on gorse *Ulex* spp. and Broom *Cytisus scoparius*, also recorded from greenweed *Genista* spp.

Recorded from two subsites: West bank and Edge Moor (beaten from Broom *Cytisus scoparius*) (first record: West bank 15th May 1985). Known from a further thirteen Kirklees localities.

Sitona sulcifrons (Thunberg,1798) Common. A weevil.
A small weevil, 2.6-3.9mm long, covered in brown scales. Adults feed on the leaves of clovers *Trifolium* spp., particularly Red Clover *Trifolium pratense*, though also found on Common Bird's-foot-trefoil *Lotus corniculatus* and other Papilionaceae. Widely distributed and common.

Recorded from three subsites: Jubilee Quarries, Edge Moor and South waterworks (first record: Jubilee Quarries 24th June 2010). Known from two other Kirklees localities.

Sitona suturalis Stephens, 1831 Common. A weevil.
3.3-4.5mm long brown weevil living on various Leguminosae, especially Meadow Vetchling *Lathyrus pratensis* and Bush Vetch *Vicia sepium*.

Located at four subsites: West bank, Edge Moor, Jubilee Quarries and South waterworks (first record: West bank 4th May 1998). Widely distributed in Kirklees.

Andrion regensteinense (Herbst, 1797) Common. A weevil.
3.0-6.0mm long greyish weevil feeding on flowers and foliage of gorse *Ulex* spp. and Broom *Cytisus scoparius*. When feeding on *Cytisus scoparius*, the larvae feed exclusively on the cells containing bacteria in the root nodules. Widespread and locally common.

Recorded from three subsites: East bank, Edge Moor (regularly on Broom) and Jubilee Quarries (first record: East bank 19th June 1989). Widely distributed in Kirklees. Common and widespread in Yorkshire.

Hypera nigrirostris (Fabricius, 1775) Common. A weevil.
A 3.3-4.1mm long greenish or reddish weevil. Feeds on a variety of clovers *Trifolium* spp., particularly Red Clover *Trifolium pratense*, but recorded from other species of *Trifolium* on the Continent.

Located at two subsites: Edge Moor and South waterworks (first record: Edge Moor 31st August 2005). Known from a further six Kirklees localities. Common and widespread in Yorkshire.

Hypera zoilus (Scopoli, 1763) Common. A weevil.
A moderately large (6.8-8.5mm) weevil, patterned with dark and light brown scales. The foodplants are members of the Leguminosae, including clovers *Trifolium* spp. Widely distributed and common.

A single on the wall along the South embankment on 8th May 2012 remains the only record. Known from one other Kirklees locality. Widely distributed in Yorkshire.

Cionus scrophulariae (Linnaeus, 1758) Common. Figwort Weevil.
A rather rounded weevil, 3.5-5.0mm long, patterned with white, yellowish and black pubescence. Larvae and adults feed on figworts *Scrophularia* spp., particularly Common Figwort *Scrophularia nodosa* and Water Figwort *Scrophularia auriculata*; also Balm-leaved Figwort *Scrophularia scorodonia* and a number of introduced plants: Cape Figwort *Phygellus capensis* (and cultivars), Butterfly-bush *Buddleja davidii* and Orange-ball-tree *Buddleja globosa*. Widely distributed and fairly common.

Numerous larvae were found on Common Figwort at the northern end of Jubilee Quarries on 30th June 2010. Known from a further twelve Kirklees localities.

Hylobius abietis (Linnaeus, 1758)** Common. Pine Weevil.
Large, dark brown weevil up to 15.0mm long, but variable in size. Both larvae and adult feed on the growing shoots of various conifers; mainly pine *Pinus* spp., especially Scots Pine *Pinus sylvestris* and Lodgepole Pine *Pinus contorta*, but also spruce *Picea* spp. Sometimes a serious pest in conifer plantations. Locally common in conifer plantations throughout Britain.

Located along the West bank on 14th May 2000. Known from a further nine Kirklees localities.

Leiosoma deflexum (Panzer, 1795) Common. A weevil.
2.4-3.0mm long shiny black weevil feeding on various Ranunculaceae, especially Wood Anemone *Anemone nemorosa* and Creeping Buttercup *Ranunculus repens*. Common in grassy, usually damp, places, throughout Britain.

Recorded from four subsites: West bank, Orange Wood, South waterworks and SW corner overflow field (first record: Orange Wood 4th July 1989). Widely distributed in Kirklees. Common and widespread in Yorkshire.

Magdalis cerasi (Linnaeus,1758)* Notable/Nb. A weevil.
Larvae are woodborers in the smaller branches of hedgerow shrubs: cherry *Prunus* spp., hawthorn *Crataegus* spp., pear *Pyrus* spp. and apple *Malus* spp. Very local in woodland edge and hedgerows in southern Britain.

Found under bark in Orange Wood on 1st September 1991. Widely distributed in the southern half of Yorkshire, but only known from one other locality in Kirklees.

Euophryum confine (Broun,1881)*n Naturalised. Wood-boring Weevil.
2.5-3.6mm long reddish, elongate wood boring weevil. Frequently met with in infestations of Cellar Fungus *Coniphora puteana*, but often causing considerable damage to furniture and house timbers on its own. Originally introduced to Britain from New Zealand, now very common indoors throughout Britain, though less frequent in dry dead wood out of doors.

Recorded from two subsites: East bank and Jubilee Quarries (first record: East bank 7th August 1998). Known from a further five Kirklees localities.

Dorytomus taeniatus (Fabricius,1781) Common. A weevil.
3.0-4.5mm long dark reddish weevil on a wide variety of broad-leaved willow *Salix* spp., including Goat Willow *Salix caprea*, Grey Willow *Salix cinerea*, Eared Willow *Salix aurita* and probably many of their hybrids.

Located at three subsites: West bank, Edge Moor (beaten from Hawthorn *Crataegus monogyna* blossom) and Jubilee Quarries (first record: West bank 28th July 1997). Widely distributed in Kirklees. Common and widespread in Yorkshire.

Notaris acridulus (Linnaeus,1758) Common. A weevil.
3.4-5.1mm long reddish black weevil living on grasses and sedges *Carex* spp., often being found in moss at base of plants. Most often in marshy places.

Recorded from two subsites: West bank (in flood refuse) and East bank (in flood refuse) (first record: both subsites 6th May 1981). Widely distributed in Kirklees. Common and widespread in Yorkshire.

Coeliodes rana (Fabricius,1787) Common. A weevil.
2.1-2.8mm long reddish weevil living on the foliage of Sessile Oak *Quercus petraea* and Pedunculate Oak *Quercus robur*. Widespread but local.

Located at two subsites: West bank and Orange Wood (beaten from oak) (first record: Orange Wood 5th June 1989). Know from one other Kirklees locality.

Micrelus ericae (Gyllenhal,1813) Common. Small Heather Weevil.
A small (1.7-2.3mm) reddish weevil found on Heather *Calluna vulgaris* and heath *Erica* spp. throughout the British Isles.

Recorded from the South embankment on 2nd July 2001. Known from three other Kirklees localities.

Nedyus quadrimaculatus (Linnaeus,1758) Common. Small Nettle Weevil.
Small (2.6-3.2mm) brown and black weevil living on flowers of Stinging Nettle *Urtica dioica*; the larvae in the roots and rhizomes. Very common, just about everywhere nettles grow.

Located at three subsites: West bank, Jubilee Quarries and Edge Moor (first record: West bank 1st July 1986). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Trichosirocalus troglodytes (Fabricius,1787) Common. A weevil.
A small brownish weevil, 2.1-2.9mm long. Found on Ribwort Plantain *Plantago lanceolata* and not reported from other species in the genus; the larvae feed in the flowering stems and pupate in soil. The species is widely distributed and generally common in grassy places.

Recorded from the South embankment on two occasions (first record: 23rd April 2003). Known from three other Kirklees localities. Common and widespread in Yorkshire.

Ceutorhynchus obstrictus (Marsham,1802) Common. Cabbage Seed Weevil.
A very small (2.0-3.0mm), rather square shaped weevil with a long proboscis. It is common and widely distributed, feeds on a very wide range of Brassicaceae, is dark with an incomplete covering of light scales and the male has a strong hook to the posterior tibia.

Located at three subsites: West bank, East bank and South waterworks (first record: East bank 2nd June 1981). Widely distributed in Kirklees.

Ceutorhynchus contractus (Marsham,1802) Common. Cabbage Leaf Weevil.
A metallic blue or black weevil, 1.5-2.1mm long, feeding on a wide variety of Brassicaceae; the larvae make short linear mines in the leaves.

Recorded from four subsites: West bank, East bank, Edge Moor and inflow (first record: West bank 15th May 1985). Known from three other Kirklees localities.

Ceutorhynchus erysimi (Fabricius,1787) Common. A weevil.
A very common, rather square shaped weevil with a long proboscis. It is found throughout the British Isles and feeds exclusively on Shepherd's-purse *Capsella bursa-pastoris*. It is brassy-black and the elytra are bright metallic blue, sometimes with a greenish tinge. It has some white scales underneath and the antennae, rostrum and legs are black.

Located at two subsites: West bank and Edge Moor (first record: West bank 15th May 1985). Widely distributed in Kirklees.

Ceutorhynchus pallidactylus (Marsham,1802) Common. Cabbage Stem Weevil.
2.3-3.2mm long brown weevil. Very common on various species of Brassicaceae, both wild and cultivated, the larvae boring in the stems. Very common in many different habitats, sometimes a pest of cultivated brassicas and Oilseed Rape *Brassica napus*.

Recorded from two subsites: West bank and South waterworks (first record: West bank 1st June 1982). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Hadroplontus litura (Fabricius,1775) Common. A weevil.
A small (2.8-3.8mm) black and white weevil found on Creeping Thistle *Cirsium arvense*, and probably other *Cirsium* species.

Swept from vegetation at the South waterworks on 3rd September 2005. Known from one other Kirklees locality.

Parethelcus pollinarius (Forster,1771) Common. A weevil.
A dark-bodied weevil with an extensive covering of reddish-yellow scales, 2.8-4.0mm long, feeding on Stinging Nettles *Urtica dioica*.

Recorded from two subsites: West bank and Edge Moor (first record: West bank 7th June 2003). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Rhinoncus pericarpus (Linnaeus,1758) Common. A weevil.
A blackish weevil with a pale elytral marking, 2.5-3.6mm long. On a wide variety of docks *Rumex* spp.; the eggs are laid in the stems and the larvae feed there, penetrating to the roots. Widely distributed and fairly common, particularly in damp places.

Located at eight subsites: West bank, East bank, Edge Moor, Orange Wood, NE corner, Jubilee Quarries, South plantation and inflow (first record: West bank 30th January 1987). Widely distributed in Kirklees. Common and widespread in Yorkshire.

Rhinoncus perpendicularis (Reich,1797) Common. A weevil.
A short and rather rounded weevil, 2.1-2.8mm long, black patterned with patches of whitish or yellowish scales. It feeds on knotweeds *Persicaria* spp., in wet or marshy places. It is widespread in Britain, and generally frequent, though local in some areas.

Recorded from two subsites: West bank and SW corner overflow field (first record: West bank 15th November 1986). Widely distributed in Kirklees.

Pelenomus quadrituberculatus (Fabricius,1787) Common. A weevil.
A small (2.1-3.0mm) weevil found on Curled Dock *Rumex crispus* and possibly other species of *Rumex*, also on knotgrass *Persicaria* spp.

Located at two subsites: South waterworks and inflow (first record: inflow 22nd April 2005). Known from two other Kirklees localities.

Anthonomus pedicularius (Linnaeus,1758) Common. A weevil.
4.0-5.0mm long bright red weevil with transverse white stripe. Adults are found in hawthorn *Crataegus* spp. blossom in spring, the larvae developing in the developing stone of the fruit.

Recorded from two subsites: Orange Wood (beaten from Hawthorn *Crataegus monogyna* blossom) and Edge Moor (beaten from Broom *Cytisus scoparius*) (first record: Orange Wood 30th May 2001). Known from a further twelve Kirklees localities.

Archarius pyrrhoceras (Marsham,1802) Local. A weevil.
4.0mm long black weevil with a very long snout. Feeds on oak *Quercus* spp., larvae causing galls on the leaves. Locally common on heathland and woodland edge.

Beaten from oak along the top of Jubilee Quarries on 24th June 2010. Known from six other Kirklees localities.

Archarius salicivorus (Paykull,1792) Common. Willow Gall Weevil.
A small (4.0mm) weevil which is widespread and common throughout Britain and found on birches *Betula* spp., plums *Prunus* spp., oaks *Quercus* spp. and willows *Salix* spp. It is black but has a fine, white, scale-like pubescence and the antennal club is oval with the funiculus black or pitchy.

A single was beaten from willow on Edge Moor on 13th June 2012. Widely distributed in Kirklees.

Curculio venosus (Gravenhorst,1807) Local. A weevil.
A nut weevil which develops in acorns. Widespread but local, particularly in the north.

Beaten from Hawthorn *Crataegus monogyna* blossom along the edge of Orange Wood on 30th May 2001. Known from two other Kirklees localities.

Tychius picirostris (Fabricius,1787) Common. A weevil.
2.0mm long grey black weevil found in grassy places. Very widespread and quite common, usually turning up as occasional individuals. Much more local in Scotland.

Recorded from three subsites: West bank, East bank and South waterworks (first record: West bank 7th July 1997). Known from a further twelve Kirklees localities. Widely distributed and common in Yorkshire.

Mecinus pascuorum (Gyllenhal,1813) Common. A weevil.
A small weevil which is fairly widespread over much of Britain, although it can be local, and lives on the flowers of Ribwort Plantain *Plantago lanceolata*. It is grey with the thorax and lower part of the elytra covered in thick, red scales.

Located at two subsites: West bank and South waterworks (first record: West bank 7th May 1999). Known from three other Kirklees localities.

Orchestes faqi (Linnaeus,1758) Common. Beech Leaf Miner.
A small (2.0-3.0mm long) grey black flea weevil with pink tarsi. Mainly on Beech *Fagus sylvatica* but also frequent on other shrubby species and it has recently been shown that it can breed successfully on introduced species of oak *Quercus* spp. Adults feed at hawthorn *Crataegus* spp. and other trees in early spring, and move onto Beech, from evergreens where they overwinter, before bud-burst. Eggs are laid in the buds, larvae mine the leaves and pupation occurs in the mine. Newly emerged adults move on to other species to feed in preference to senescent Beech leaves. Adults have a reproductive diapause. Populations vary greatly from year to year. Exceedingly abundant and recorded from most parts of the United Kingdom except Shetland.

Recorded from five subsites: West bank, East bank, Jubilee Quarries, Orange Wood and South embankment (first record: West bank 4th June 1982). Common and widely distributed in both Kirklees and the rest of Yorkshire.

Rhamphus oxyacanthae (Marsham,1802) Local. A weevil.
A small weevil which lives on the leaves of a variety of woody Rosaceae including apple *Malus* spp., cherry *Prunus* spp., Medlar *Mespilus germanica* and Quince *Cydonia oblonga*, where the larvae mine the leaves. The two species in this genus are difficult to separate (although they have different foodplants) and records are scarce. This species occurs widely, but sparsely in England and Wales, but has not yet been recorded from Scotland.

Located in Orange Wood on 27th May 2012. Known from a further three Kirklees localities.

Rhamphus pulicarius (Herbst,1795) Common. A weevil.
A small (1.5mm long) black flea weevil on willow *Salix* spp., birch *Betula* spp. and Bog-myrtle *Myrica gale*. Widespread and common throughout Britain, except Shetland and the Isle of Man. Older records may refer to *Rhamphus oxyacanthae*, a more local species, only recently recognised as separate.

Beaten from Hawthorn *Crataegus monogyna* blossom at two subsites: Edge Moor and Orange Wood (first record: Edge Moor 3rd June 2010). Known from a further five Kirklees localities.

Scolytus mali (Bechstein in Scharfenberg,1805) Notable/Nb. Large Fruit Bark Beetle.
Several specimens found along the West bank on 17th October 1984 constitute the first record for Kirklees and only the fifth for Yorkshire. Unlike *Scolytus scolytus* and *Scolytus multistriatus*, the species is not a vector for Dutch Elm Disease *Ophiostoma ulmi*.

Scolytus scolytus (Fabricius,1775)* Common. Large Elm Bark Beetle.
Reddish bark beetle causing characteristic feeding burrows under the bark of mature elm *Ulmus* spp. One of the two principle vectors of Dutch Elm Disease *Ophiostoma ulmi*. Widespread and common over much of southern Britain, possibly likely to become less so with the dearth of elm trees.

Located under elm bark in Orange Wood on 30th June 1990. Common and widely distributed in both Kirklees and the rest of Yorkshire.

Hylesinus varius (Fabricius,1775)* Common.
A bark beetle associated with Ash *Fraxinus excelsior*.

Ash Bark Beetle.

Recorded under Ash bark in Jubilee Quarries on 13th October 2008. The two other Kirklees records (from two localities) are both pre-1950.

Hylastinus obscurus (Marsham,1802) Local.

Gorse Bark Beetle.

2.0-2.5mm long black bark beetle living under bark and in dead twigs of gorse *Ulex* spp. and Broom *Cytisus scoparius*, leaving characteristic exit holes. Locally common throughout Britain.

Beaten from Broom on Edge Moor on 22nd May 2012. This is the only known Kirklees locality for the species.

Trypodendron domesticum (Linnaeus,1758)* Local.

A bark or ambrosia beetle.

Local 'bark' beetle. Larvae bore into unhealthy wood of most species of broad-leaved trees. Local, particularly in the north, where it is indicative of old woodland.

Located under oak *Quercus* spp. bark in Orange Wood on two occasions (first record: 11th June 1992). Known from a further seven Kirklees localities.

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M.L. Denton FRES
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