

An extraordinary life cycle

Oil beetles have one of the most extraordinary life cycles of any British insect - they are nest parasites of solitary mining bees. Female oil beetles dig nest burrows in the ground, in to which they lay hundreds of eggs. Once hatched, the active, louse-like, larvae climb up on to flowers and lay in wait for a suitable bee. Their hooked feet enable a firm hold on an unwitting bee collecting pollen for its own nest. Once in a bee's nest the larva disembarks and eats the bee's eggs and the store of pollen and nectar. The larva develops in the bee burrow until it emerges as an oil beetle ready to mate and start the whole cycle again.

Looking for oil beetles

Oil beetles are conspicuous, charismatic insects which are often encountered when walking and enjoying the countryside. Their habit of seeking out bare ground in which to dig nest burrows means that they are frequently seen on footpaths. The best time of year to look for oil beetles is March to July.

Oil beetle conservation

Oil beetles have been identified as priorities for conservation action through the UK Biodiversity Action Plan - meaning urgent work needs to be done to conserve them and their habitats. Oil beetles have an intimate relationship with solitary bees and are therefore dependant on the health and diversity of wild bees. The ideal habitat for oil beetles is wildflower-rich grassland and heathland - two habitats that have been lost from large parts of our countryside. By sending us your oil beetle records you are playing an important part in the conservation of these magnificent insects.

How to take part

Please send us your oil beetle records and photographs via the Buglife website.

www.buglife.org.uk

or by post to:

Oil Beetle Survey

**Buglife – The Invertebrate Conservation Trust,
The Lindens, 86 Lincoln Road
Peterborough, PE1 2SN**

Buglife - The Invertebrate Conservation Trust

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and Boy and beetle © Richard Clarke

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Black oil beetle digging her nest burrow.



Violet oil beetle larvae on a lesser celandine flower.



Violet oil beetle larva hitching a ride on the back of a solitary mining bee.

Join the hunt for amazing oil beetles



**This year we are searching for
these fascinating but threatened
beetles, and we need your help...**



Conserving the small things that run the world

Cover photo: Violet Oil Beetle

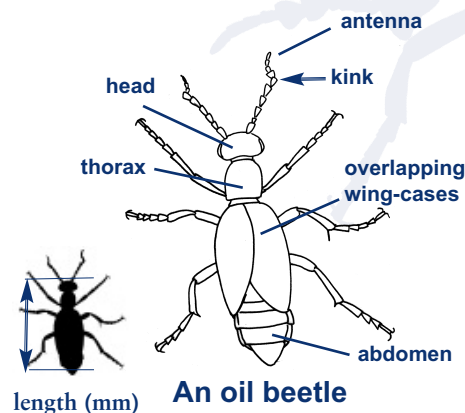


Oil beetles are incredible insects, but they are under threat. Three of the UK's native oil beetles are thought to be extinct, and the remaining five species have suffered drastic declines due to changes in the way our countryside is managed.

Identifying oil beetles

There are five species of oil beetle found in Britain. The **Violet** and **Black oil beetles** are widespread and can be locally common. The **Mediterranean**, **Rugged** and **Short-necked oil beetles** are rare.

Oil beetles can be identified in the field using this guide. By studying this beetle diagram before you start you can familiarise yourself with the names of the beetle body parts and key identification features. Please take photographs of the oil beetles you record and submit them with your records.



Beware lookalikes!

Oil beetles are distinctive but can sometimes be mistaken for other beetles like these. Oil beetles have **overlapping wing-cases** which are usually shorter than their abdomens. The beetles below all have wing-cases which do not overlap.

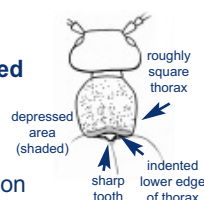


Violet oil beetle

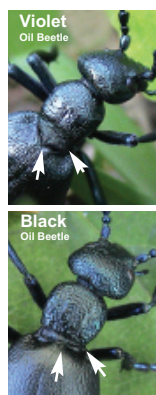
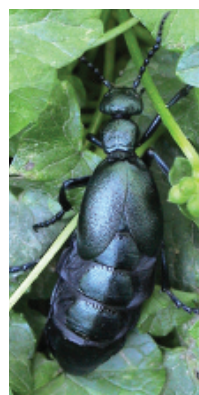
Meloe violaceus

Has a roughly **square-shaped thorax**. Males have **kinked antennae**. Females have slightly-kinked antennae. Black with violet-blue reflection or all black in colour. Very similar to the Black oil beetle but it has an **indented lower edge of the thorax with a depressed area at the base**. Has a **distinct sharp tooth at the base** of the thorax.

Found from March to June in meadows and woodlands in western and northern Britain.



Life Size
up to 30 mm
long

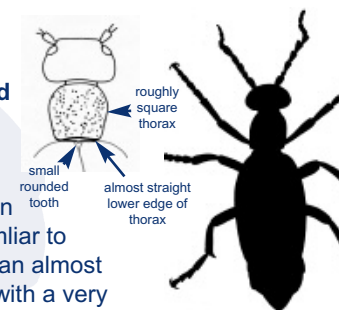


Black oil beetle

Meloe proscarabaeus

Has a roughly **square-shaped thorax**. Males have **kinked antennae**. Females have slightly-kinked antennae. Black with violet-blue reflection or all black in colour. Very similar to the Violet oil beetle but it has an almost **straight base to the thorax** with a very **small rounded tooth at the base**. There is no depressed area at the base of the thorax.

Found from March to June in meadows and coastal grassland throughout Britain but becoming less common in the north.



Life Size
up to 30 mm
long



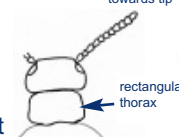
Short-necked oil beetle

Meloe brevicollis

Has a **rectangular-shaped thorax** which is wider than it is long. The antennae are short, straight and slightly thickened at the tips. **Shiny, blue-black in colour**.

Very rare, found from March to June. Found on coastal grasslands, dunes and heaths with sandy soils in south-west England, Ireland and western Scotland.

straight antennae
which thicken
towards tip



Life Size
up to 24 mm
long



Rugged oil beetle

Meloe rugosus

Has a **rectangular-shaped thorax** which is wider than it is long, with a **distinct narrow groove in the middle**. The **antennae are straight**. **Dull black** in colour with a roughened surface.

Rare. Mainly nocturnal. Found from September to April in grasslands on chalk, limestone and sandy soils. Currently known from central and southern England and Wales.



Life Size
up to 19 mm
long



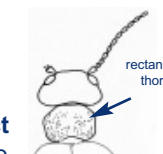
Mediterranean oil beetle

Mediterranean oil beetle

Meloe mediterraneus

Very similar to the Rugged oil beetle. Has a **rectangular-shaped thorax** which is wider than it is long **without a distinct groove** running down the centre. The antennae are straight. **Dull black** colour with a roughened surface.

Very rare. Mainly nocturnal. Found from September to April on coastal grasslands. Currently only known from southern England.



Life Size
up to 36 mm long
usually up to 20 mm
in Britain



Rugged oil beetle

