

Family Malachiidae

Key to British species

Source Material

Translation and adaptation by Mike Hackston of the German key by Arved Lompe (2016), with permission (his key taken from those of Reitter and Evers). The German original can be found at <http://www.coleo-net.de/coleo/texte/malachiidae.htm> and linked pages.

Checklist of species

From the Checklist of Beetles of the British Isles, 2012 edition, edited by A. G. Duff (available from www.coleopterist.org.uk/checklist.htm). This lists 17 species in 11 genera. Some are very rare and as a family the species are more frequent to the south and then become rarer further north.

Genus ***Anthocomus*** Erichson, 1840

fasciatus (Linnaeus, 1758)

rufus (Herbst, 1784)

Genus ***Axinotarsus*** Motschulsky, 1853

marginalis (Laporte, 1840)

pulicarius (Fabricius, 1777)

ruficollis (Olivier, 1790)

Genus ***Cerapheles*** Mulsant & Rey, 1867

terminatus (Ménétries, 1832)

Genus ***Clanoptilus*** Motschulsky, 1854

barnevillei (Puton, 1865)

marginellus (Olivier, 1790)

strangulatus (Abeille de Perrin, 1885)

Genus ***Colotes*** Erichson, 1840

punctatus (Erichson, 1840)

Genus ***Cordylepherus*** Evers, 1985

viridis (Fabricius, 1787)

Genus ***Ebaeus*** Erichson, 1840

pedicularius (Linnaeus, 1758)

Genus ***Hypebaeus*** Kiesenwetter, 1863

flavipes (Fabricius, 1787)

Genus ***Malachius*** Fabricius, 1775

aeneus (Linnaeus, 1758)

bipustulatus (Linnaeus, 1758)

Genus ***Sphinginus*** Mulsant & Rey, 1867

lobatus (Olivier, 1790)

Genus ***Troglops*** Erichson, 1840

cephalotes (Olivier, 1790)

A large family distributed mostly in the tropics and subtropics. One of the characteristics of the Malachiidae are the membranous areas on the prothorax and abdomen which can be expanded with gentle pressure in fresh specimens. Their function is unknown. The males are often characterised by an excitatory organ, which is located in various parts of the body; these are important during reproduction. The larvae are predatory and live under bark or in plant stalks (some feed on the cast skins of the larvae of wood-feeding insects). A few species are known to live with solitary bees and wasps.

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Family Malachiidae

Key to British species

1 Males or females.2
Use this key if you are not sure of the sex of the beetle.

Males.
..... [Key to Males](#)



2 All segments of the front tarsus similar in both sexes.[3](#)
Check both leads for females

Second segment of the front tarsus in males lobed and elongated over the third
segment. All segments similar in females.[9](#)



3 Small species, about 2-3 mm.[4](#)

Larger species, about 4-7 mm.[6](#)



- 4 Margins of pronotum pale brown. Elytra more or less parallel-sided.
..... ***Troglops cephalotes***
Very rare.

Pronotum uniformly coloured.5



- 5 Elytra relatively shorter, with distinct punctures and without hook-like processes on the tip. Last segment of the palps greatly enlarged in males.
..... ***Colotes punctatus***

See image at http://www.flickrriver.com/photos/peter_hodge/5654576585/. Very rare

Elytra with any punctures very indistinct with a pointed or hooked process at the tip. Last segment of the palps not enlarged.

..... ***Hypebaeus flavipes***

Uncommon.



6 Antennae arising from a point in front of a line drawn between the front margins of the eyes.7

Antennae arising between the eyes.11



- 7 Elytra longer and parallel-sided, or rarely in males slightly broadening towards the back, about 2.5 times as long as wide, in males indented at the tip.[8](#)



Elytra short, scarcely twice as long as the broadest point across both elytra; elytra gently rounded to the tip.[9](#)



- 8 Last segment of the palps spindle-shaped, pointed. Elytra uniformly coloured or with an incomplete central paler band and paler at the tip.
..... [Genus *Anthocomus*](#)



Last segment of the palps appearing sheared off. Elytra black, orange-brown at the tip.
..... ***Cerapheles terminatus***
Records often coastal but with inland records in the Fens.



9 Elytra with fine hairs that lie on the surface.10

Elytra with distinct hairs and hair-like bristles.
..... [Genus *Axinotarsus*](#)



10 Pronotum suddenly narrowing beyond the widest point, then convex to the rear angle; yellowish at the base. Elytra with yellowish tips and often narrowly yellow at the sides.
..... ***Sphinginus lobatus***

Very rare.



Pronotum evenly curved to the base.
..... ***Ebaeus pedicularius***

Very rare.



- 11 Elytra partly pale reddish-brown, at least at the sides.
..... ***Malachius aeneus***
Local in England, becoming less frequently recorded the further north one goes.



Elytra green or bluish, at most with a red or yellowish-brown patch at the tip. ..[12](#)



12 Sides of the pronotum or the front corners orange-brown.[13](#)

Pronotum uniformly metallic.[14](#)



13 Sides of pronotum reddish.
..... ***Clanoptilus marginellus***
Scattered records in the southern half of England.



Pronotum only reddish on the front corners.
..... ***Malachius bipustulatus***
Common in England and Wales



14 Elytra uniformly coloured. [15](#)

Elytra reddish or yellowish-brown at the tips. [16](#)



- 15 Segments 3-5 of the antennae at least mostly yellowish-brown. Tips of front femora and tibiae and all of the front tarsi yellowish-brown. Length 4.5-6 mm.

..... ***Clanoptilus barnevillei***

Illustration from aegaweb.com. Very rare, coastal around The Wash and the Thames.



- Segments 2-4 of the antennae yellowish-brown underneath only (segment 3 sometimes yellowish-brown above). Front legs with at most segments 1-3 of the tarsus yellowish-brown. Length 4-5 mm.

..... ***Cordylepherus viridis***

Common in the southern half of England and Wales, with records becoming very scattered further north.



16 Palps partly yellowish-brown. Pronotum and elytra shining blue-black. Front legs sometimes with segments 1-3 of the tarsus yellowish-brown. Length 4-5 mm.

..... ***Cordylepherus viridis***

Common in the southern half of England and Wales, with records becoming very scattered further north.



Palps completely dark. Pronotum and elytra dull green. Pronotum only slightly broader than long and without outstanding hairs at the sides. Legs dark green. Length 4-5 mm.

..... ***Clanoptilus strangulatus***

SE England, rare on salt marshes.



Key to males

1 All segments of the front tarsus similar in structure.[2](#)

Second segment of the front tarsus lobed, elongated over the third segment.[7](#)



2 Clypeus clearly reduced and indistinct. Antennae inserted nearer to the front edge of the head than to the eyes.[3](#)

Clypeus distinct. Antennae inserted nearer to the eyes than to the front edge of the head.[5](#)



- 3 Frons with a groove from the front margin to about level with the front of the eyes (serving as the excitatory organ).
Margins of pronotum pale brown.
..... ***Troglops cephalotes***
Very rare.



Frons not as above.4



4 Tips of the elytra without excitatory organs.

..... ***Colotes punctatus***

See image at http://www.flickrriver.com/photos/peter_hodge/5654576585/. Very rare.

Tips of elytra with excitatory organs with ear-like processes.

..... ***Hypebaeus flavipes***

Uncommon.



5 Antennae inserted in front of a line linking the front margins of the eyes.[6](#)

Antennae inserted between the eyes.[9](#)



- 6 Last segment of the palps spindle-shaped, pointed. Elytra uniformly coloured or with an incomplete central paler band and paler at the tip.
..... [Genus *Anthocomus*](#)



- Last segment of the palps appearing sheared off. Elytra black, orange-brown at the tip.
..... ***Cerapheles terminatus***
Records often coastal but with inland records in the Fens.



7 Tips of the elytra without excitatory organs.
..... ***Sphinginus lobatus***
Very rare.

Tips of elytra with excitatory organs.[8](#)



- 8 Elytra only with fine hairs which lie on the surface.
..... ***Ebaeus pedicularius***
Very rare.



- Elytra with fine hairs and erect hair-like bristles.
..... Genus *Axinotarsus*



9 Excitatory organs present on the tips of the elytra.
..... [Genus *Clanoptilus*](#)

Excitatory organs present on the head.[10](#)



10 Excitatory organs consist of a swelling in front of the antennae. This means that in dorsal view the front margin of the head between the antennae is curved forwards.

..... ***Cordylepherus viridis***

Common in the southern half of England and Wales, with records becoming very scattered further north.



Excitatory organs consist of a groove in the head in front of the antennae. The front margin of the head between the antennae is therefore concave.

..... Genus *Malachius*

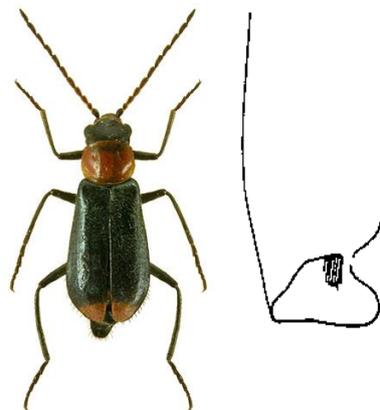


Genus *Axinotarsus*

- 1 Pronotum orange-brown. Elytra (except for tip) and head black with a green or bluish sheen. Length 2-3 mm. Excitatory organ as illustrated.

..... ***Axinotarsus ruficollis***

Local with records in England south of the Humber.

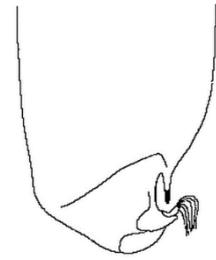


Pronotum broadly reddish at the sides only.2

- 2 Front and middle tibiae darkened. Segments of the antennae about three times as long as wide. Upper edge of the excitatory organ obliquely directed forwards so that the suture is angled and the process of the excitatory organ is robust. Length 3.0-3.5 mm.

..... ***Axinotarsus pulicarius***

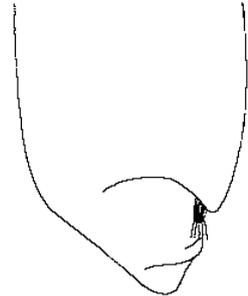
Rarely recorded, in the southern half of England.



- Front and middle tibiae pale. Segments of the antennae twice as long as wide. Upper edge of the excitatory organ straight; suture without an angle; process of the excitatory organ less robust. Length 2-3 mm.....

..... ***Axinotarsus marginalis***

The commonest of the three species in the genus in the southern half of England.



Genus *Anthocomus*

- 1 Elytra completely reddish-brown. Head and a broad band in the middle of the pronotum blackish green; sides of pronotum reddish-brown. Elytra in females becoming slightly broader towards the tips. Length 4.25-5.0 mm.
..... ***Anthocomus rufus***

In vegetation in swampy habitats and reed-beds from Yorkshire southwards.



Elytra blackish-green with a reddish-brown band just beyond the middle and the tip reddish-brown. Head and pronotum uniformly blackish-green.

..... ***Anthocomus fasciatus***

Often found associated with human habitation, for example overwintering in window casements; also observed associated with solitary bees. England and Wales mostly south of the Humber.



Genus *Malachius*

- 1 Elytra reddish-brown towards the sides and tip and with a large triangular greenish mark in the middle. Pronotum shining black. Male antennae with segments 2-3 toothed. Length 6-7 mm. ..

.....*Malachius aeneus*

Local in England, becoming less frequently recorded the further north one goes.



Elytra and pronotum shining blue-black; elytra with the tips orange-brown. Antennae in both sexes with segments 2-4 thickened.

..... *Malachius bipustulatus*

Common in England and Wales



Genus *Clanoptilus*

- 1 Pronotum with the whole of the sides orange-brown; rest of pronotum metallic blue-black. Head in front of eyes and tips of elytra yellowish-brown.

..... ***Clanoptilus marginellus***

Scattered records in the southern half of England.



Pronotum uniformly greenish with at most the front angles reddish-brown. Either head in front of the eyes paler or tips of elytra reddish-brown.2



- 2 Dull green species. Pronotum only slightly broader than long, as wide in the middle as across the shoulders of the elytra; without erect hairs at the sides. Tips of elytra reddish-brown, antennae black, legs dark green. Length 4-5 mm.

..... ***Clanoptilus strangulatus***

SE England, rare in salt marshes.



Elytra uniformly shining green. Pronotum distinctly broader than long, narrower in the middle than across the shoulders of the elytra; erect hairs along the sides. The following parts yellowish-brown: segments 3-5 of the antennae, tips of front femora and tibiae, front tarsi and part of middle tarsi. Length 4.5-6 mm.

..... ***Clanoptilus barnevillei***

Very rare, coastal around The Wash and the Thames.

