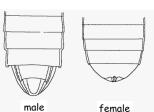
# Family Cantharidae

Characterised by the long, thin legs and the obscured clypeus. The antennae are long and slender and are inserted on the frons between the eyes. The front border of the frons completely covers the clypeus. The second-to-last segment of the tarsi is bilobed and the claws are usually cleft or toothed. Body weakly chitinised. Prosternum with a raised process extending backwards between the front coxae. Middle coxae touching one another. Abdomen with seven visible sternites, in males often with a small additional anal sternite. The sexes differ in the structure of the end of the abdomen.



tip of the abdomen from below (after Dahlgren)

The larvae are motile, elongate, quite convex in section and densely velvety hairy. The head is prognathous, well sclerotised and flattened on the top and bottom with a large, transversely elliptical ocellus visible on each side. They are usually velvet-black, sometimes with red or white spots with paler antennae and legs. The last sternite of the abdomen bears a suction-cup-like process. Larvae and adults are predacious on smaller insects and snails. The adults are found in the early summer in large numbers on low vegetation, shrubs and trees.

## **Source Material**

These keys are adapted and translated from those published by Arved Lompe (2015) at <u>http://www.coleo-net.de/coleo/texte/cantharidae.htm</u> and linked pages. Reproduced here with permission. See also the information and links from Mark Telfer - <u>http://www.coleo-net.de/coleo/texte/cantharidae.htm</u>.

### Checklist

From the Checklist of Beetles of the British Isles, 2012 edition, edited by A. G. Duff, (available from www.coleopterist.org.uk/checklist.htm).

### Subfamily CANTHARINAE Imhoff, 1856

Tribe PODABRINI LeConte, 1881 Genus PODABRUS Westwood, 1838 alpinus (Paykull, 1798) Tribe CANTHARINI Imhoff, 1856 Genus ANCISTRONYCHA Märkel in Kiesenwetter, 1852 abdominalis (Fabricius, 1798) Genus CANTHARIS Linnaeus, 1758 Genus RHAGONYCHA Eschscholtz. 1830 Subfamily SILINAE Mulsant, 1862 Genus SILIS Charpentier, 1825 ruficollis (Fabricius, 1775) Subfamily MALTHININAE Kiesenwetter, 1852 Tribe MALTHININI Kiesenwetter, 1852 Genus MALTHINUS Latreille, 1806 Tribe MALTHODINI Böving & Craighead, 1930 Genus MALTHODES Kiesenwetter, 1852

### **Image Credits**

The illustrations of whole beetles in this key are reproduced from the Iconographia Coleopterorum Poloniae, with permission kindly granted by Lech Borowiec. Others are from Arved Lompe (2015) unless otherwise stated.



# Key to subfamily, tribe and genus

1 Last segment of the maxillary palps usually hatchetshaped or asymmetrical. The elytra are not shortened and cover the wings (but do not always cover the whole abdomen); sometimes the wings are absent or rudimentary. .....2

Last segment of the maxillary palps slender, oval, rather pointed at the tip. The wings protrude beyond the shortened elytra. Subfamily Malthininae. ......6

Malthodes minimus. Photo by A Lomp







Second-to-last sternite cleft to the base; third-to-last sternite  $\pm$  deeply and broadly notched. Pronotum in males with a deep constriction at the side. Antennae weakly toothed. Subfamily Silinae.

## ..... Silis ruficollis

A local species in England south of The Wash, and Wales. Elytra with three slightly raised lines.



Crudosilis ruficollis mal Photo by A Lompe











4 Tips of all claws simply pointed. Some species have a  $\pm$  well-developed lobe or tooth towards the base - do not confuse these with the tip of the claw. Third segment of the middle and hind tarsi divided into two



lobes and thus similar in structure to the fourth segment. ..5

segment 3 bilobed

Tips of the claws on all legs or at least on the middle and hind legs divided into two. Frons without a swelling between the bases of the antennae. Front angles of the pronotum often distinct. Third segment of the middle and hind tarsi slightly notched in the same way as segments 1-2. ..... ..... <u>Genus *Rhagonycha*</u>





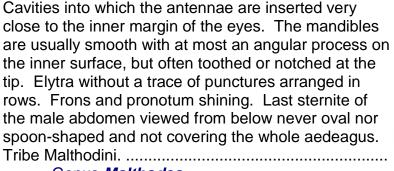


A rare species with records from upland northern England and Wales. Included in the *Cantharis* key if the claws can't be checked.

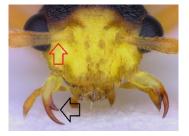
Front claws of all tarsi with a lobe or tooth towards the base but this is often greatly reduced in females. Elytra never clearly blue or greenish-blue (fresh specimens of a few species have black elytra with at most a hint of blue) but yellow, black or two-coloured.

..... Genus Cantharis





..... Genus Malthodes





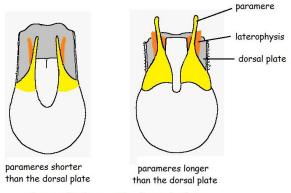




# Genus Cantharis

Key to British species (translated and adapted from Lompe (2017), Käfer Europas: *Cantharis*)

Front margin of the pronotum convex; front corners rounded; hind angles not acutely projecting. Head with a longitudinal swelling between the bases of the antennae (sometimes indistinct). All claws simply pointed (do not confuse with the tooth-like onychium between the claws). Hair of the elytra not matted. Elytra not clearly blue or greenish-blue. In fresh specimens of *longicollis, livida* var. *rufipes* and *pellucida* the black elytra sometimes have a distinct hint of blue. Males have a simple, at most very slightly concave dorsal plate over the genital capsule.



male genital capsule from below

Genus CANTHARIS Linnaeus, 1758 cryptica Ashe, 1947 decipiens Baudi, 1871 figurata Mannerheim, 1843 fusca Linnaeus, 1758 lateralis Linnaeus, 1758 livida Linnaeus, 1758 nigra (De Geer, 1774) nigricans (Müller, O.F., 1776) obscura Linnaeus, 1758 pallida Goeze, 1777 paludosa Fallén, 1807 pellucida Fabricius, 1792 rufa Linnaeus, 1758 rustica Fallén, 1807 thoracica (Olivier, 1790)



1	Elytra black or dark brownish-black2

Elytra reddish-yellow along with most of the rest of the body.	Sometimes the tips
of the elytra are black.	<u>14</u>



2 Elytra with fine, short, silky-shining pale hairs interspersed with erect longer hairs. Elytra appearing grey. .....<u>3</u>

Elytra with the hairs all alike, at most with rather rougher hair towards the tip. ... 4



3 Elytra greyish-black with the sides narrowly yellowish-red. Front half of the head yellowish-red; rear half black. Pronotum yellowish-red, rarely with two dark median patches that are close together. Legs yellowish red; hind tibiae often partly darkened. Length 5-7 mm. ..... Cantharis lateralis



Elytra not yellowish-red towards the sides. Pronotum yellow with or without black patches on the top. Front half of the head reddish-yellow; rear half black Legs yellowishred; tips of the hind femora usually black; tibiae partly darkened; tarsi dark. Length 8-11 mm. .....



...... Cantharis nigricans



4	Pronotum black, sometimes with the margins ± yellowish-red	<u>5</u>
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Pronotum red or yellow, at most with 1-2 darker patches on top. ......<u>7</u>



Head and elytra black. Particularly in swampy grassland.



Pronotum black with a broad, well-defined yellowish or reddish margin, sometimes (*pulicaria*) with the front and rear margins narrowly yellow. .....<u>6</u>



Head black with at most the cheeks and maxillae yellow; the black colour reaches the front of the head in the middle. ..... *Cantharis obscura* 





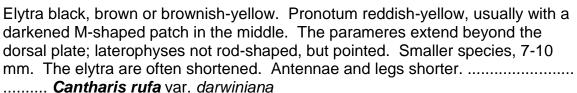
Rear part of the head completely black from level with the eyes. ......<u>10</u>



8 Larger species, from 10-18 mm	<u>9</u>
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Halophilic race amongst tidal deposits on the North Sea coast.



10	Larger species from 10-18 mm.	11	
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# Smaller species from 5-7.5 mm.

..... **Cantharis nigra** Base of the abdomen dark along the centre; pronotum orange-brown, sometimes with a black patch in the middle or predominantly black. Front part of the head orange-brown. Rear part of the head and the elytra black. In damp habitats.





11 Legs black with the inner surface of the front tibiae, the base of the front femora and the front tarsi sometimes yellowish. Length 11-15 mm.



Legs reddish-yellow for the most part or otherwise coloured	.12
	· · · · ·



Pronotum narrower than the elytra measured across the shoulders; sides of the pronotum much less rounded so that the front angles are indicated. ......<u>13</u>









14	Elytra yellow with blackened tips.
	<u>Genus <b>Ancistronycha</b></u>

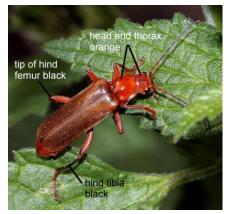


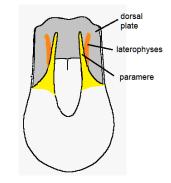
15	Head black behind the antennae.	. <u>16</u>
	Head yellowish brown behind the antennae, sometimes with a black patch behind the eyes or on the vertex.	<u>17</u>











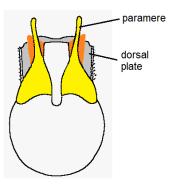


18 Length 8-11.5 mm. Parameres extend beyond the dorsal plate. Upper surface reddish-yellow. Rear half of the head often with a black patch behind the eyes. Middle and hind femora rarely with a black mark in the middle. In variety *liturata* and variety *darwiniana* the pronotum has a black M-shaped marking and the legs are usually partly black. The nominate form is distinguished from *C. livida* by the usually unmarked legs while variety *liturata* is distinguished by the marking on the pronotum.

## ..... Cantharis rufa

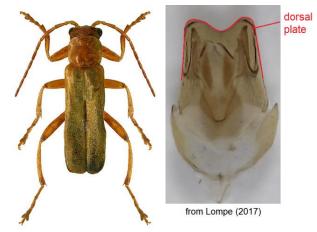
Common in Central Europe, mainly as the nominate form (illustrated). In northern Europe variety *liturata* is almost always the normal form. In coastal areas of the North Sea the halophilic variety *darwiniana* occurs which has shorter, usually darker elytra and short antennae and legs (see couplet 9).





Length 6-8.5 mm. The parameres do not project behind the dorsal plate. ....19

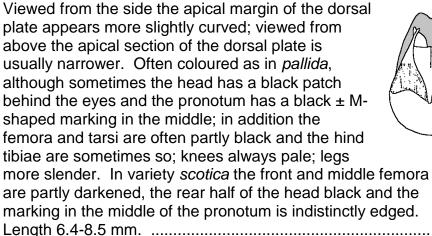




Dorsal	nlate only	v sliahtlv	concave		20
Dorsar	plate offi	y ongingy		 	.20



Damp habitats.

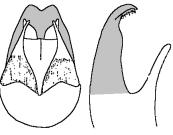


..... **Cantharis figurata** Shows a preference for damp habitats such as good quality fen and marshy grassland. The dark M-shaped marking on the pronotum may be indistinct at the edges and spread over much of the surface.



dorsal

plate







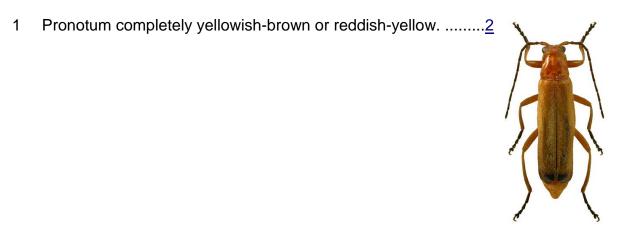


# Genus Rhagonycha

Key to British species (translated and adapted from Lompe (2015), Käfer Europas: *Rhagonycha*)

*elongata* (Fallén, 1807) *fulva* (Scopoli, 1763) *lignosa* (Müller, O.F., 1764) *limbata* Thomson, C.G., 1864 *lutea* (Müller, O.F., 1764) *testacea* (Linnaeus, 1758) *translucida* (Krynicki, 1832)

Head without a swelling between the base of the antennae. Tips of all claws divided into two. Dorsal plate in males always present. Hairs on the elytra short and not patchy. Determination of some species requires examination of the male genital capsule.



Pronotum completely black to blackish-brown or partly yellowish-brown and	
partly black to blackish-brown5	



Elvtra uniformly vellowish-brown	<u>4</u>
Light a uniformity yellowish brown	· ····································



3 Head and scutellum black. Pronotum orange-brown. Elytra dirty yellowish-brown with darker brown to black tips (rarely with a darker line over the shoulders. Length 6-9 mm.

..... Rhagonycha lutea











5	Pronotum centrally black to blackish-brown and orange-brown towards the sides.
	<u>6</u>

Pronotum uniformly black to	blackish-brown7	
i ionotani anioniny biaok to		















# Genus Malthinus

Key to British species (translated and adapted from Lompe (2017), Käfer Europas: *Malthinus*)

Genus *MALTHINUS* Latreille, 1806 *balteatus* Suffrian, 1851 *flaveolus* (Herbst, 1786) *frontalis* (Marsham, 1802) *seriepunctatus* Kiesenwetter, 1852

Eyes in males very strongly bulging (smaller in females) with the head behind the eyes very strongly and (at least in males) conically narrowed.

Pronotum uniformly black; elytra uniformly darkened. ........... *Malthinus frontalis* 







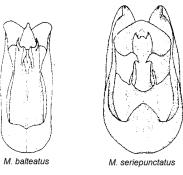
after Lompe (2017)





Male: hind tibiae with a thickening on the inner surface in the apical half Female: spur of the front tibiae short, reaching at most to one third of the length of the first segment of the tarsi; hind legs brown. ..... *Malthinus balteatus* 





male genital capsule, after Wittmer

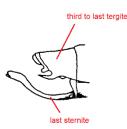


## Genus Malthodes

Key to males from Wittmer (1979), Die Käfer Mitteleuropas <u>Click here</u> to have a go at females

Genus *MALTHODES* Kiesenwetter, 1852 *crassicornis* (Mäklin, 1846) *dispar* (Germar, 1824) *fibulatus* Kiesenwetter, 1852 *flavoguttatus* Kiesenwetter, 1852 *fuscus* (Waltl, 1838) *guttifer* Kiesenwetter, 1852 *lobatus* Kiesenwetter, 1852 *marginatus* (Latreille, 1806) *maurus* (Laporte, 1840) *minimus* (Linnaeus, 1758) *mysticus* Kiesenwetter, 1852 *pumilus* (Brébisson, 1835)

The species of this genus are easiest to distinguish in males using the diagnostic features of the last sternite and the last three tergites.

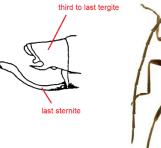




Third to last tergite without special features. ......4



2 Third to last tergite with a quite long, straight or very weakly curved thorn-like process towards the side. Last sternite of the abdomen strap-like and generally curved upwards and when viewed from the side generally thickened. Length 3.5-5 mm. ...... *Malthodes flavoguttatus* Generally distributed through Great Britain





Third to last tergite with a longer process which is hooked and broadens slightly towards the tip. Last sternite strap-like and bent upwards in a right angle at about half-way and then suddenly slightly broadening. Length 4-5 mm.

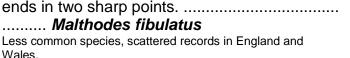
...... *Malthodes dispar* Widespread in England and Wales, becoming rare in Scotland.







3 Middle section of the aedeagus cleft, dorsally with a relatively long process which partly covers the section below it. Last sternite viewed from below formed of a very narrow parallel-sided strap which only becomes broader close to the tip, and ends in two sharp points.





Less common species, scattered records in England and Wales.

Middle section of the aedeagus undivided and thus without a dorsal process. Last sternite viewed from below tapering to about half-way and then broadening again to the tip, ending in two blunt teeth.

..... Malthodes maurus

Uncommon but with records widely scattered in Great Britain.











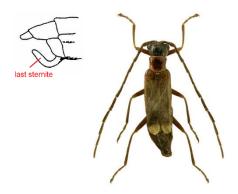
6 Last sternite forming two branches towards the tip, with a knee-like swelling two-thirds of the way along. Last tergite spatulate, broadening towards the tip and appearing snipped off at the tip or very weakly emarginate. Length 3.5-5 mm. .. *Malthodes mysticus* 





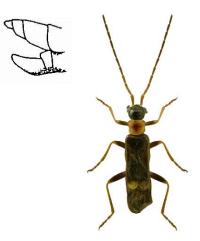






Last starnita quita	deeply divided toward	de tha tin	Q
Lasi siennie quite	ueepiy uiviueu loward	ມຣ ແມຣ ແມ	





Last sternite only slightly forked towards the tip. ......9







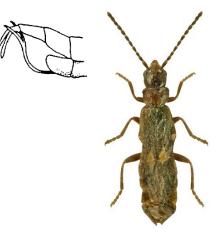






Second to last tergite without a process at the side. Last sternite narrow with two long narrow teeth at the tip, with the appearance of a snake's tongue.

..... Malthodes pumilus





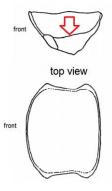
## Genus Malthodes

Provisional key for use with females, adapted from Fitton (1973)

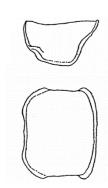
1	Length less than 1.8 mm. Elytra appear to be uniformly coloured - the tips are at most very indistinctly paler2
	Length more than 2.5 mm. Elytra appear to be uniformly coloured or the tip is clearly paler4
2	Head parallel for some distance behind the eyes. Pronotum not as broad compared to the length and with the hind angles more obtuse
	Head narrowing from immediately or almost immediately behind the eyes (more so in males than females). Pronotum relatively broader compared to the length with the hind angles nearly right angled
3	Elytra very short, extending back to between the middle and hind legs, about equal to the length of the head
	Elytra longer, extending at least to the base of the hind legs, much longer than the length of the head. 



pronotum side view



Pronotum not bordered at the sides. Length 3-4 mm. .....6





5	Elytra more elongate, at least 2.45 times longer than wide (measured across the shoulders).
	Malthodes marginatus
	Elytra shorter, at most 2.35 times longer than wide (measured across the shoulders).
	Malthodes mysticus and M. guttifer
6	Elytra appearing uniformly coloured to the eye, at most indistinctly paler at the tips7
	Tips of the elytra distinctly yellow
7	Pronotum uniformly very dark brown
	Pronotum with a narrow but distinct yellow border
8	Pronotum with at least the angles broadly reddish or yellow (occasionally entirely pitchy in <i>minimus</i> )9
	Pronotum uniformly black or very dark brown (occasionally very narrowly yellowish at the front and sides10
9	Antennae uniformly brown. Pronotum uniformly reddish-yellow. Elytra more elongate with the length at least 2.3 times greater than the width measured across the shoulders
	Antennae with the segments towards the base paler, yellow. Pronotum usually pale with the central part ± dark brown (occasionally uniformly dark brown or completely pale). Elytra shorter with the length <2.25 times the width measured across the shoulders
10	Antennae uniformly dark brown to black
	Antennae with the segments at the base paler, reddish to yellowish

