Family Nitidulidae


Checklist

Subfamily Carpophilinae
- **Urophorus** Murray, 1864
- **Carpophilus** Stephens, 1829
- **Epuraea** Erichson, 1843

Subfamily Meligethinae
- **Pria** Stephens, 1829
- **Meligethes** Stephens, 1829

Subfamily Nitidulinae
- **Nitidula** Fabricius 1775
- **Omosita** Erichson, 1843
- **Soronia** Erichson, 1843
- **Amphotis** Erichson, 1843
- **Cychrmaus** Kugelann, 1794
- **Pocadius** Erichson, 1843
- **Thalyca** Erichson, 1843

Subfamily Cryptarchinae
- **Cryptarcha** Stuckard, 1839
- **Glischrochilus** Reitter 1873
- **Pityophagus** Stuckard, 1839
  - **ferrugineus** (Linnaeus, 1761)

Subfamily Cybocephalinae
- **Cybocephalus** Erichson, 1844

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Family Nitidulidae

Key to genus

1  Elytra shortened and appearing sheared-off at the tip, leaving more than just the last segment of the abdomen exposed. .....................................................2

Only the last segment of the abdomen is exposed beyond the elytra. ......4
2  Antennae consisting of three segments with a sharply differentiated club much more distinct. Pronotum with the hind margin simply and gently curved and the sides less rounded; hind angles of pronotum more distinct. Subfamily Carpophilinae. .................................................3

Club of the antennae consisting of three (rarely two) segments and not clearly differentiated from the rest of the antennae, which the segments gradually increasing in width. ............

......... Family Kateretidae
3 Elytra shortened to leave the last two tergites uncovered. Length 1.8-4.5 mm. ........................

......... **Genus *Carpophilus***
Take care with *Epuraea melanocephala* which has the second to last tergite partly uncovered.

Elytra shortened to leave the last three tergites uncovered. Length 3-5 mm. ........................

......... **Urophorus humeralis**
*U. humeralis* (Fabricius, 1798)
4 Tiny species, length 1.1-1.4 mm. Body rounded capable of rolling up into a ball. Pronotum over half the size of the elytra. Elytra bare and featureless. Subfamily Cybocephalinae. .......... 
........ Cybocephalus fodori
C. fodori Endrödy-Younga, 1965

Without the above characters in combination. ...........................................
5 Frontoclypeus and labrum completely divided by a distinct suture which is often ridged. .................................................................6
The frontoclypeus is the main dorsal section of the head, running between the eyes and then tapering towards the front. NOTE that this can be extremely difficult to see in *Meligethes* so if in doubt look at couplet 15 and if the genera don’t fit return to couplet 6.

Frontoclypeus and labrum united, separated by at most a fine indication of a curved line. Subfamily Cryptarchinae. .................................................................15
6 Middle and hind tibiae flattened so that the outer (dorsal) surface forms a single, more or less sharp edge. Mostly black, metallic blue or green species. Subfamily Meligethinae.

Middle and hind tibiae with a doubled outer edge. Subfamily Nitidulinae.

Translated and adapted from Lompe (2012).
7  Head broader in proportion to the pronotum. Segment 1 of antennae more or less symmetrical and club slightly elongate and loosely-segmented (formed of four segments in males and three in females). Middle and hind tibiae broader in proportion to the front tibia. Yellowish to dark brownish-yellow species with the head and area around the scutellum region often darker. Very small beetle, length 1.5-2.0 mm. ..........................

......... *Pria dulcamarae*
*P. dulcamarae* (Scopoli, 1763). Associated with the flowers of *Solanum dulcamara*; very local.

Head narrower in proportion to the pronotum. Segment 1 of antennae much rounded on the inner side and with the club tightly-segmented (formed of three segments in both sexes). Middle and hind tibiae usually about the same width as the front. ......

......... Genus *Meligethes*
A genus rich in species which are uniform in appearance. Males are primarily distinguished by the form of the anal segment which is unfortunately not visible except by dissection; further sexual differences exist in the shape of the metasternum and the last sternite of the abdomen. Larvae and adults are found at flowers where they feed on pollen, occasionally chewing the anthers and ovaries.
8 Pronotum with two rounded impressions, close together in the middle in front of the hind margin. Elytra (at least in the rear part) with distinctly impressed sutural striae which are separated from the suture by a ridge. Elytra with a reddish-brown and dark pattern. .........................................................

........ **Genus Omosita**
Males have the front and middle tarsi rather more developed than the females. The male anal segment is only visible after dissection. Feed on bones, dry carrion and similar substrates.

Pronotum without such impressions, but if with a trace then the elytra lack sutural striae. .................................................................
9  Elytra without rows of punctures, with at most tiny bristles arranged in rows. Elytra also lacking ribs, long or short. Upper surface generally evenly and uniformly punctured. ......................................................................................

Elytra with rows of punctures or with ribs or with indistinct, irregular, interrupted ribbed sections. ......................................................................................................................................

10 Sides of the pronotum and elytra lacking a distinct fringe of hairs, at most with microscopically fine hairs. .................................................................
........... Genus *Epuraea*
The anal segment is visible in males. The larvae are found in the feeding galleries of bark beetles, sap runs and in fungi. The adults are also found at flowers.

Sides of the pronotum and elytra with a fringe of hairs which is apparent as a distinct white border even with 10x magnification. ..............................
Fringe of hairs on the sides of the pronotum shorter than that on the elytra. Club of the antennae loosely-segmented. Capable of partially curling into a ball. Length 3.5-5.5 mm. .....................................................

........ Cychramus luteus
C. luteus (Fabricius, 1787). A common species on flowers and in decaying fungi. Males are completely dull and are relatively larger than females with finer and denser punctures. Females lack a leathery microscopic surface sculpture and this leads to a clear shine; ovipositor broadly truncate at the rear and often exposed. Probably on fungi.

Fringe of hairs on the sides of the pronotum longer than that on the elytra, or fringe of hairs uniform on both. Not capable of any sort of curling. Club of the antennae more compact. ...............................................................

11 12
Front tibiae with two short, equal terminal spurs on the front edge. Dark species with a reddish rounded mark, or a light and dark pattern on the elytra. ............

Genus *Nitidula*

Anal segment of males not externally visible; front and middle tibiae more strongly developed than in females. Feed on bones, dry carrion and similar substrates.

Front tibiae broader, with two unequal terminal spurs, one of which is more robust and somewhat curved. Rather uniformly reddish-brown species. Body more domed in section. .........................................................

*Thalycra fervida*

*T. fervida* (Olivier, 1790). Rare but widespread; collected by sweeping with a net in the evening. Middle and hind tibiae with a covering of hairs and small teeth on the outer surface, clearer on the middle one. Anal segment externally visible in males.
First segment of the antennae more or less distinctly broadened into a rectangular lobe which is often larger than an eye. Elytra with several conspicuous continuous ribs and flattened margins. Front border of the pronotum deeply concave. Length 3.8-5.9 mm. . .

........ Amphotis marginata

A. marginata (Fabricius, 1781). Rare in southern England northwards to Derbyshire. Associated with the nests and forage trails of the ant Lasius fuliginosa.

First segment of the antennae simply thickened or with a rounded extension towards the front. .......................................................... 14
14 Elytra with yellow or reddish-yellow markings. Pronotum with impressions on the top and with the front margin concave and hind angles blunt. Elytra sometimes with very slightly raised lines with rows of tiny bristles between them, curved towards the rear; flattened sides dull with a fine leathery texture.

............. **Genus Soronia**
The patterning on the upper surface is unique in the family. Species have been collected from sap runs, rotting vegetation and *Cossus* tunnels.

Upper surface more or less uniformly reddish-brown to blackish-brown. Pronotum with the front margin hardly concave and with sharp hind angles. Elytra with lines marked by fine punctures and with distinct erect hair.

............. **Genus Pocadius**
15 Upper surface hairy. Pronotum with the hind margin distinctly curving back at the sides. Elytra with a buff-brown pattern. .................................................................

........ Genus Cryptarcha
If the upper surface is short hairy and the elytra are uniformly dark return to couplet 6

Upper surface bare. Elytra either with two distinct yellowish or reddish markings or uniformly reddish-brown. .................................................................16
16 Upper surface black. Elytra each with two yellow or reddish markings. ..................................................

........ Genus *Glischrochilus*

Upper surface uniformly reddish brown. ....................

........ *Pityophagus ferrugineus*
Genus *Cryptarcha*
Translated from Lompe (2012)
http://www.coleo-net.de/coleo/texte/cryptarcha.htm

*strigata* (Fabricius, 1787)
*undata* (Olivier, 1790)

1 Larger species, 3.2-4.4 mm. Process of the prosternum comparatively broad and concave at the tip (projects between the bases of the front legs). Dark brown species with a reddish-yellow patch on the shoulders of the elytra and a jagged transverse band in the last third (markings very variable). .................................................

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**Cryptarcha strigata**
Line drawings from Spornra (1967) Die Käfer Mitteleuropas

Smaller species, 2.0-3.2 mm. Process of the prosternum narrower, parallel-sided and evenly rounded at the tip. General coloration paler with the markings on the elytra tending to be more irregular and usually more yellow. ..........................

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**Cryptarcha undata**
Genus *Glischochilus*
Adapted and translated from Lompe (2011)
http://www.coleo-net.de/coleo/texte/glischrochilus.htm

Subgenus *Glischochilus*
*quadripunctatus* (Linnaeus, 1758)

Subgenus *Librodor*
*hortensis* (Geoffroy in Fourcroy, 1785)
*quadriguttatus* (Fabricius, 1777)

1 Process of the prosternum (pointing back between the bases of the front legs) sheared off at the tip or slightly rounded. Flatter, more parallel-sided species. Pronotum narrowing just before the hind angles, the width at the hind angles being narrower than the base of the elytra. Elytra each with two reddish spots. Tarsi only very slightly broadened. Length 3-6 mm. Female elytra sharply pointed next to the suture. Aedeagus as shown. Subgenus *Glischochilus*. 

......... *Glischochilus quadripunctatus*
Found under the bark of conifers.

Process of the prosternum strongly rounded at the tip. More oval and convex species. Pronotum not narrowed towards the base and as wide as the base of the elytra. Tarsi clearly broadened. Subgenus *Librodor*. .................................2
2 Elytra with whitish-yellow patches and with the humeral patch usually three-branched. Male aedeagus as shown. Length 3.2-5.5 mm. ...........................................................

........ Glischrochilus quadriguttatus

Elytra with the humeral patch not three-branched; markings on the elytra yellow to reddish. Male aedeagus as shown (note that the tegmen is broadly truncate at the tip and about the same length as the median lobe; also the hairs are clustered on the outer corners). .................................................

........ Glischrochilus hortensis
Genus *Nitidula*
Translated from Lompe (2012)
http://www.coleo-net.de/coleo/texte/nitidula.htm

*bipunctata* (Linnaeus, 1758)
*carnaria* (Schaller, 1783)
*flavomaculata* Rossi, 1790
*rufipes* (Linnaeus, 1767)

1 Elytra always uniformly black or blackish-brown. Legs reddish-yellow or paler than the underside. Length 2.0-4.6 mm. Male pronotum flatter, weakly narrowing towards the front and very much duller than in the female. ..........

..........*Nitidula rufipes*
SE England and the Midlands northwards to the Humber

Elytra usually with yellowish or reddish-yellow markings. ..................2
2 Elytra without paler markings in the front third but each elytron with a rounded reddish spot just beyond the middle. Distinctly convex species with the sides strongly rounded. Pronotum clearly broader than long with a differentiated side margin. Length 3-5 mm. Male pronotum duller and not as clearly narrowing towards the front than the female. .......... Nitidula bipunctata
England and Wales with scattered records northwards into Scotland.

Elytra with yellowish markings in the front third. ..................................................3
Narrow flattened margin of the elytra viewed from above, always equally visible along the whole length. Elytra usually with a large irregular reddish-yellow patch at the base and a second, elongated patch over the suture beyond half-way which may be united with the basal patches. These markings are quite clearly defined against the background. Larger and broader species, 2.8-5.6 mm. Males with the pronotum very much duller, flatter, broader and less narrowed towards the front than females.

Nitidula flavomaculata
Rare species

Flattened margin of the elytra viewed from above not equally visible all along, at best appearing extremely narrow. Elytra usually with several reddish-yellow patches which have indistinct edges which fade into the background colour. Smaller, narrower species, 1.6-3.2 mm.

Nitidula carnaria
Scattered records in SE England and the eastern Midlands.
Genus *Omosita*
Translated from Lompe (2012), http://www.coleo-net.de/coleo/texte/omosita.htm

*colon* (Linnaeus, 1758)
*depressa* (Linnaeus, 1758)
*discoidea* (Fabricius, 1775)

1. The raised central part of the pronotum is bordered on each side by a longitudinal, weakly curved furrow. Upper surface with paler markings. Elytra with fine hairs and with rows of short bristles. Normally reddish-brown with a few blackish areas. Length 3-5 mm. ........................................

......... *Omosita depressa*
Widespread through Great Britain but scattered.

Pronotum without longitudinal furrows. Elytra with paler patches. ............2
2 Elytra with a large yellowish-brown patch in the middle which usually extends towards the front margin. Each elytron with a ridge running parallel to the suture which fades before the front margin. Sides of the pronotum broadly flattened. Length 2.0-3.6 mm. ...............................  
........... *Omosita discoidea*  
Widespread and relatively common in England and Wales.

Elytra with the paler area extending to the rear. Each elytron with the ridge running parallel to the suture running to the front margin. Sides of the pronotum narrowly flattened. Length 2.0-3.6 mm. ............................................  
........... *Omosita colon*  
Widespread northwards to southern Scotland.
Genus *Pocadius*
Translated from Lompe (2014)
http://www.coleo-net.de/coleo/texte/pocadius.htm

*adustus* Reitter, 1888  
*ferrugineus* (Fabricius, 1775)

1. Surface of the lateral keel of the elytra irregular due to the coarse punctures. Hairs on the pronotum and elytra about as long as the first segment of the antennae. Brown or rusty-red. Club of the antennae and sometimes the rear part of the elytra darker. Elytra with long semi-erect hairs. Most of the bristles on the middle and hind tibia short, only about 2.0-2.5 times as long as the spur. Upper surface with shorter golden-yellow hairs that lie more on the surface. Male: tip of the pygidium indistinctly rounded to truncate, at most slightly indented in the middle. ................

*Pocadius ferrugineus*  
On puffballs, e.g. *Scleroderma* and other fungi

Surface of the lateral keel of the elytra smooth. Hairs on the pronotum and elytra longer than the first segment of the antennae. Elytra with more upright, whitish-yellow hairs. Bristles of the middle and hind tibiae about 3-4 times as long as the spur. Tip of male pygidium usually clearly concave, forming an obtuse angle each side. Length 2.6-4.6 mm. .................................................................

*Pocadius adustus*  
On puffballs of genera *Lycoperdon, Bovista, Calvatia* und *Langermannia*.
Genus *Soronia*
Translated from Lompe (2012), [http://www.coleo-net.de/coleo/texte/soronia.htm](http://www.coleo-net.de/coleo/texte/soronia.htm)

**grisea** (Linnaeus, 1758)
**punctatissima** (Illiger, 1794)

1 Elytra uniformly and more densely punctured with the distance between the punctures* about equal to the diameter of the punctures. Between the suture and the first ridge there are 7-9 punctures. Sides of the pronotum more evenly rounded to the hind margins. Male front tibia bent on the inner surface and widening towards the tip. Larger and generally darker species. Rusty-red to dark-brown with black and reddish-yellow spots. The pale transverse band on the elytra is irregularly wavy and is usually interrupted by the darker suture. Male genital capsule broad and blunt at the tip. Length 4.5-7 mm.

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............... Soronia punctatissima
Generally distributed in Great Britain but less often recorded than grisea.
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*The elytra have two types of punctures, larger ones which do not have a hair and much smaller ones from which a tiny hair arises. The punctures referred to are the larger ones without a hair.*

Elytra with the punctures coarser and less dense, the gaps between the punctures 2-4 times greater than the diameter of the punctures. Between the suture and the first ridge there are 4-5 punctures. Sides of the pronotum more suddenly narrowing to the hind angle. Male front tibia not as above. Smaller and paler species with similar mottling. The pale transverse band is evenly triangular and is usually not interrupted by the suture. Male genital capsule more rounded at the tip.

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............... Soronia grisea
England and Wales, extending to southern Scotland.
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Translated and adapted from Lompe (2012).
Genus *Carpophilus*

**Source Material**
Translation and adaptation by Mike Hackston of the German key by Arved Lompe (2013) *Käfer Europas, Carpophilus*, published online at http://www.coleo-net.de/coleo/texte/carpophilus.htm (2011), published here with permission (his key taken derived from that of K. Spornraft).

**Checklist of species**

Genus *Carpophilus*
- *dimidiatus* (Fabricius, 1792)
- *flavipes* Murray, 1864
- *hemipterus* (Linnaeus, 1758)
- *ligneus* Murray, 1864
- *maculatus* Murray, 1864
- *marginellus* Motschulsky, 1858
- *mutilatus* Erichson, 1843
- *nepos* Murray, 1864
- *obsoletus* Erichson, 1843
- *sexpustulatus* (Fabricius, 1792)
- *truncatus* Murray, 1864

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In males the last sternite is deeply indented to accommodate the anal segment. In females the pygidium sometimes has a more or less distinct swelling or longitudinal central ridge. In the internal male genitalia, the parameres are only visible from above and the side; the aedeagus is small and membranous and so it is the form of the parameres that is used in identification.
Genus *Carpophilus*
Key to British species

1  Elytra clearly longer than their combined width. Pronotum often widest behind the middle and more distinctly narrowing towards the rear than to the front. Less convex in section. Pronotum with the hind angles and flattened side margin distinct. ................................................................................2

Elytra at most as long as their combined width. Sides of the pronotum more or less parallel or regularly rounded or rather more distinctly narrowed towards the front. More convex in section with a less distinct flattened side margin on the pronotum. ................................................................................4
2 Brown to blackish-brown species. Elytra with any paler areas more ill-defined. .................................................................3

Reddish-brown to pitch black species. Elytra with distinct yellowish-brown spots on the shoulders and before half way each side of the suture, sometimes with a further weaker one beyond half way towards the side. Rather more delicate, darker and more shining. Sides of the pronotum appear reddish-yellow. Last segment of the male abdomen without a clear transverse impression. Last segment of the female abdomen regularly rounded so that the sides do not appear to be rolled over. Length 2.0-3.5 mm. .................................................

......... *Carpophilus sexpustulatus*

England and Wales.
3 Pronotum more or less straight in the rear half and without a tooth at the hind angle; transition between the outline of the pronotum and the elytra much smoother. Elytra paler along the front margin and usually along the suture, forming a T-shape. Elytra covering more of the abdomen, with only two segments exposed. Length 1.6-2.0 mm. .................................................................

........ Carpophilus maculatus
Image from padil.gov.au © Caroline Harding. Rare.

Pronotum much more distinctly curved in the rear section with a well-defined tooth; transition from the pronotum to the elytra appearing interrupted. Elytra clearly paler in colour than the pronotum but without distinct markings. Elytra shorter compared to the abdomen leaving three exposed segments. Length 2.2-3.5 mm. .................................................................

........ Carpophilus ligneus
Image from padil.gov.au © Caroline Harding. England and Wales; few records.
4 Mesosternum with a fine ridge in the middle which reaches the rear edge and may be forked towards the front (although this may be obscured by the process between the front legs). .........................5
The mesosternum is the section on the underside of the thorax between the bases of the front and middle legs.

Mesosternum without a ridge but at most with punctures over the surface. ............................................................................................................................................7
5 Ridge of the mesosternum short, the forked section easily visible. The first segment of the abdomen viewed from below has a raised line that runs parallel to the hind coxae for the most part and reaches the episternum near the front. Elytra usually with yellowish or reddish markings. More oval species with a chocolate-brown to brownish-black colour. ..........................................................6

Ridge of the mesosternum long, usually forking towards the front, under the process of the prosternum that goes between the front legs. Raised line on the first segment of the abdomen close to the coxae at the start but then angled to reach the episternum well back along its length (about 2/3). Body uniformly blackish-brown, distinctly shining and punctured. Upper surface often darker. Antennae, legs and the front section of the head yellowish-red. Margin of the pronotum appearing yellowish-red. Appearance more parallel-sided. Length 2.0-3.5 mm. ..............................................................

......... **Carpophilus marginellus**
England. One of the commoner species.
6  Elytra unmarked, at most with an indistinct paler area over the shoulders. Length 2.3-4.5 mm. .................................................................
      ......... Carpophilus obsoletus
      An imported species. Few records.

Elytra with a smaller marking on the shoulders and an extensive one across the whole width of the elytra at the tip. Length 2-4 mm. .................................................................
      ......... Carpophilus hemipterus
      England.
7  Third segment of the antennae clearly longer than the second. Upper surface usually chestnut-brown. Antennae and legs reddish; club of the antennae often darkened. Hairs golden-yellow and black; the golden-yellow hairs usually form a broad but indistinct V marking across both elytra. Length 2-3 mm. .................................................................

......... *Carpophilus dimidiatus*
Rare.

Second and third segments of the antennae equal in length. ...................8
8 Hind margin of the last segment of the abdomen with a ridge running parallel to it and very close to it. Usually chestnut-brown species with variable paler markings on the elytra. ..........................................................9

Hind margin of the last segment of the abdomen appearing to have a double border with a gap in between. Rusty-reddish species with the pronotum blackish in the middle. .......................................................... Carphophilus mutilatus

9 Underside of the first segment of the abdomen with a shallow ridge that runs in a wide curve, meeting the episternum in the middle. Elytra usually yellowish- or reddish-brown, with the hind margin and an ill-defined patch behind the scutellum chestnut- or dark-brown (the same colour as the underside). Legs and antennae reddish-yellow. Hairs sparse and inconspicuous. Length 1.9-3.0 mm. 

........... *Carpophilus nepos*
Photograph © U Schmidt. Rare

Shallow ridge on the first segment of the abdomen running parallel to the coxae for nearly 2/3 of their breadth and then curving back meeting or almost meeting the episternum before the middle. Upper surface uniformly chestnut-brown to paler reddish-brown. Legs, antennae and mouthparts yellowish-red. Hairs long and golden yellow. 

........... *Carpophilus truncatus*
Rare.

*Carpophilus flavipes* is not included in the key but is illustrated here (left hand photo). Note the uniformly dark-coloured upper surface and the contrasting yellowish-brown legs. Only *C. obsoletus* (illustrated to the right) could be confused with it. Note the relative proportions of the pronotum and elytra and the shape of the elytra at the front.