**Key to species of *Netelia* in Britain and Ireland**

**[**Confirmatory characters are included in square brackets.]

An asterisk denotes a species not yet recorded from Britain.

**1** – Female: ovipositor short, not projecting beyond metasomal apex [occipital carina entirely absent; fore wing vein *cu-a* approximately opposite *Rs+M*] (subgenus ***Bessobates***) **6**

– Male, or female with ovipositor longer, obviously projecting beyond metasomal apex **2**

**2** – Occipital carina absent; fore wing vein *cu-a* opposite orslightly basal or distal to *Rs+M* **3**

– Occipital carina present; fore wing vein *cu-a* usually distal to *Rs+M*, sometimes opposite **14**

**3** – Scutellum with lateral carinae strong to apex; fore wing vein *cu-a* slightly basal to *Rs+M* or rarely opposite; male parameres long, parallel-sided and internally lacking pad or other structures

(subgenus ***Prosthodocis***)**13**

– Scutellum with lateral carinae absent or weak, not extending much beyond mid-length; fore wing vein *cu-a* usually opposite *Rs+M*; male parameres different, shorter, more rounded, or angulate ventrally, with internal structures, often including pad **4**

**4** – Fore wing with areolet open, i.e. vein 3*rs-m* missing; pterostigma dark greyish brown [female with ovipositor projecting beyond metasomal apex by xx x length of hind tibia]

***N. (Parabates) nigricarpa*** Thomson

– Areolet usually closed by vein 3*rs-m* (occasionally absent in small specimens); pterostigma pale **5**

**5** – Female, or male with parameres short, rounded, with curved ‘brace’ across internal surface

(subgenus ***Paropheltes***)**15**

– Male, with parameres longer, more angulate, lacking curved ‘brace’ across internal surface

(subgenus ***Bessobates***) **6**

**6** – Mesosternum dark brown and mesoscutum with three broad, dark brown markings laterally and medially (fig….) [flagellum uniformly testaceous; male paramere with comma-shaped pad at apex internally and curved strip of darker, minutely papillate cuticle] ***virgata* (Geoffroy)**

**–** Mesoscutum and mesosternum testaceous but sometimes with paler markings **7**

**7 –** Female **8**

**–** Male **10**

**8** – Terminal flagellomeres darkened; thorax usually lacking yellow markings, occasionally with some yellow marks; if with yellow marks, scutellar carinae conspicuous anteriorly; temples usually more rounded (fig….), very occasionally narrow, as in *pallescens* **9**

–Flagellum uniformly testaceous; thorax with inconspicuous, pale yellow markings often on some of the following: lower edge of mesoscutum, along notauli, on subalar prominence, on anterior edge of pronotum and on propleuron; scutellar carinae absent beyond scuto-scutellar groove; temples narrower (fig.…) [1st brachial cell with much of lower third glabrous or very sparsely setose, with only a single line of setae below glabrous patch (fig….)]

***pallescens* (Schmiedeknecht)**[[1]](#footnote-2)

**9** – Propodeum without a trace of transverse carina and slightly flattened posteriorly (fig….), medially with at most very faint striations; 1st brachial cell with distal glabrous patch; smaller, wing length around … mm ***latungula* (Thomson)**

–Propodeum with lateral sections of transverse carina (fig….), if these are lacking then with at least a slightly elevated ridge here and propodeum more rounded than in *latungula*, propodeum medially with faint transverse striations; 1st brachial cell usually with only very narrow glabrous strip along wing fold but sometimes with distal glabrous patch or extensively glabrous on lower part; usually larger but very variable in size, wing length around ……mm ***cristata* (Thomson)**

**10** –Claws of mid leg with dense pectination, spaces between teeth barely visible (fig….); with extensive yellow markings (as above, for female); parameres in lateral view with elongate terminal lobe (fig….) and internally with dark, curved strip of minutely papillate cuticle (fig….) [genitalia internally with pointed pad, not extending towards apical, heavily sclerotized area]

***pallescens* (Schmiedeknecht)**

–Claws of mid leg with sparser pectination, spaces between teeth obvious (fig….); lacking yellow markings, except occasional specimens; parameres in lateral view not with such an elongate, apical lobe (figs….), lacking or with very faint curved strip of minutely papillate cuticle **11**

**11 –** Parameres internally with apical, heavily sclerotized area; lobe small and lateral; hind wing with 5 distal hamuli ***rowardennani* sp. nov.**

**–** Parameres internally lacking apical fold of heavily sclerotized area; lobe larger and more central; hind wing with 6 to 9 distal hamuli **12**

**12 –** Parameres in lateral view with distinct ventral angulation (fig….), internally with large, rounded lobe adpressed to apical area (fig….); other characters as for female (above) ***cristata* (Thomson)**

–Parameres in lateral view narrowed towards tip, lacking angulation (fig….), internally with smaller lobe, more angulate and protruding laterally (fig….); other characters as for female (above)

***latungula* (Thomson)**

**13** – Areolet present, petiolate anteriorly; hind tibia with dorsal spines more evenly spaced along length of tibia; male parameres more rounded apically, internally with dark streak***bistoni* sp. nov.**

– Areolet absent; hind tibia with dorsal spines mostly lacking in apical quarter of tibia; male parameres more angulate apically, internally lacking dark streak ***brucei* sp. nov.**

**14** – Lateral carinae of scutellum weak, at most not extending much beyond middle; stemmaticum testaceous or yellowish [males with short, usually square-ended or rounded parameres] **15**

– Lateral carinae of scutellum strong, extending nearly to apex of scutellum; often with black or dark brown stemmaticum but sometimes pale; some males with lateral carinae of scutellum weak but stemmaticum contrasting dark brown or black **21**

**15** – Transverse carina of propodeum strongly and evenly curved throughout; distinctive creamy pattern on thorax, including spot on metapleuron [male parameres internally with large, faintly sclerotized pad apically, no sclerotized structure visible in apical third]

(subgenus ***Paropheltes***) ***ornata* (Vollenhoven)**

– Transverse carina of propodeum straight across mid-line or largely absent; thorax with or without creamy pattern, if patterned then without spot on metapleuron **16**

**16 –** Mesoscutum matt, dull; thorax entirely testaceous, lacking yellow marks [propodeum with transverse carina weak or absent; male parameres with tooth on inner edge]

(subgenus ***Paropheltes***) ***terebrator* (Ulbricht)\***

**–** Mesoscutum more polished, or with yellow stripes; thorax often with yellow marks (may be faint) or mesoscutum with mid-lobe brown **17**

**17 –** Fore wing vein *cu-a* opposite *Rs+M* or slightly distal; transverse carina of propodeum incomplete or absent (subgenus ***Paropheltes***) **18**

**–** Fore wing vein *cu-a* distal to *Rs+M* by at least 0.2 times length of *cu-a*; transverse carina of propodeum usually complete **19**

**18 –** Mesosoma testaceous with (usually) brown median lobe of mesoscutum, female otherwise testaceous [male often with extensive yellow markings]; areolet pointed anteriorly, 2*rs-m* and 3*rs-m* meeting on *Rs* or forming a short stalk; malar space ~0.4 times basal width of mandible; male parameres blunt-ended, internally with heavily sclerotized brace curving across entire width

***tarsata* (Brischke)**

**–** Median lobe of mesoscutum testaceous, pronotum, lower edges and paired median stripes of mesoscutum, and sides of scutellum yellow in both sexes; areolet petiolate, with 2*rs-m* and 3*rs-m* joined for 0.5-1.0 times height of areolet; malar space ≤ 0.25 times basal width of mandible; male parameres narrowed apically, internally with weaker brace, extending diagonally towards inner side ***millieratae* (Kriechbaumer)**

**19** – Transverse carina of propodeum complete, strong, with strong transverse striations anterior to carina; no pale yellow/creamy markings; females only (subgenus ***Netelia***) ***testacea* (Gravenhorst)**

– Transverse carina of propodeum incomplete or weak, with much weaker striations anterior to carina; usually with some yellow/creamy markings on mesosoma; males or females

(subgenus ***Paropheltes***) **20**

**20** – [Female unknown] Antennal flagellum entirely infuscate, ~46-48-segmented [small sample]; creamy marks (on notauli, lower edge of mesoscutum, sides of scutellum) contrasting against dark orange background colour; transverse carina of propodeum faint; fore wing vein *cu-a* distal to *Rs+M* by 0.4-0.5 times length of *cu-a*; male parameres with faint triangularly widening area of sclerotization, with denticle on dorsal, inner edge and pad lacking striation ***chandleri* sp. nov.**

– Antennal flagellum occasionally basally infuscate but mostly dull orange, 40-43-segmented; creamy marks inconspicuous against the pale orange background; transverse carina of propodeum usually strong, sometimes faint in males; fore wing vein *cu-a* distal to *Rs+M* by at most 0.3 times length of *cu-a*; male parameres with conspicuous triangularly widening area of sclerotization towards inner edge, dorsal margin rounded, lacking denticle, and pad with conspicuous striation

***inedita* (Kokujev)**

**21** – Propodeum with conspicuous punctation, no obvious transverse striae; males with short, rounded parameres, lacking internal pad subgenus ***Toxochiloides*[[2]](#footnote-3)**

– Mesopleuron and propodeum with inconspicuous punctation, with obvious striae on propodeum; males with longer, more angulate parameres with internal pad (subgenus ***Netelia***)**22**

**22 –** Fore wing vein *cu-a* distal of *Rs+M* by about 0.4-0.6 the length of *cu-a*; frequently with distinct ocular-ocellar space **23**

**–** Fore wing vein *cu-a* distal of *Rs+M* by 0.3 the length of *cu-a* or less; usually without distinct ocular-ocellar space **24**

**23** – Head in dorsal view with temples bulging, nearly in line with outer edge of eyes; legs stouter, fore femur XX as long as wide; spines on fore tarsus more conspicuous; antennae shorter, 41-45 flagellomeres, 1st flagellomere ~2.3 times as long as broad; male antennal flagellum entirely infuscate except for base of 1st flagellomere; males frequently with dark markings on mesosternum, lower edge of metapleuron and base of first tergite; male genitalia with pad more elongated dorsally, with smaller lateral lobe ***dilatata* (Thomson)**

–Head in dorsal view with temples less rounded; legs slenderer, fore femur XX as long as wide; spines on fore tarsus less conspicuous; antennae longer, 44-51 flagellomeres, 1st flagellomere ~XX times as long as broad; male antenna testaceous on basal few flagellomeres; males with at most vague brown markings on mesosternum and metapleuron; male genitalia with pad with only short dorsal process, with larger lateral lobe ***fuscicornis* (Holmgren)**

**24 –** Temples long and bulging, nearly as wide as or wider than outer edge of eyes; stemmaticum black or dark brown ***vinulae* (Scopoli)**

–Temples shorter, more abruptly narrowed, not as wide as outer edge of eyes; stemmaticum from testaceous to black **25**

**25 –** Metasoma broadly black apically, 5th tergite onwards entirely black; mid-lobe of mesoscutum matt, usually brown [stemmaticum black] **26**

**–** Metasoma usually testaceous apically, sometimes darker or with dark markings but never abruptly black over entire apical tergites; if mid-lobe of mesoscutum matt then other character not agreeing [stemmaticum testaceous to black] **27**

**26 –** Male or female: temples strongly narrowed dorsally; male genitalia with large, ovoid pad

***melanura* (Thomson)**

– Male: temples more rounded; genitalia with pad strongly bilobed ***opacula* (Thomon)** ♂

**27 –** Female: mesoscutum strongly matt [stemmaticum brown; metapleuron with indistinct, almost horizontal striae intermixed with punctures; temples rounded] ***opacula* (Thomson) ♀**

–Male or female: mesoscutum shiny **28**

**28 –** Stemmaticum testaceous (females) or dark orange to brown (males) **29**

–Stemmaticum black **32**

**29 –** Head in dorsal view with temples rounded; lateral sections of posterior transverse carina of propodeum low; male genitalia with pad roughly square in shape, large; lateral carinae of scutellum usually weak, not traceable much beyond pre-scutellar groove ***testacea* (Gravenhorst)**

–Head in dorsal view with temples strongly narrowed; lateral sections of posterior transverse carina of propodeum high; male genitalia with pad roughly ovoid in shape, smaller; lateral carinae of scutellum strong, traceable to near apex of scutellum **30**

**30–** Antennal flagellum darkened from around the middle, with 43-46[check] flagellomeres; propodeal crests weaker; metapleural striae weaker; male genitalia with pad relatively small and ovoid

***valvator* Aubert**

–Antennal flagellum darkened only in the apical third or mostly dark, usually with more than 50 flagellomeres (occasionally with fewer); propodeal crests higher; metapleural striae stronger; male genitalia with pad relatively larger and ovoid or distinctly bilobed **31**

**31–** Fore wing vein *cu-a* slightly to distinctly angled; propodeal and metapleural striae intermixed with some obvious punctures, propodeal striae medially posteriorly angled; antennal flagellum rather more infuscate, in male almost entirely dark (many males will key to couplet 32 with a black stemmaticum); male stemmaticum usually dark brown ***fuscicarpus* (Kokujev)**

–Fore wing vein *cu-a* straight; propodeal and metapleural striae with very inconspicuous punctures, propodeal striae medially not angled; antennal flagellum paler, infuscate on about apical third or quarter in both sexes; male stemmaticum pale brown ***williamsi* sp. nov.**

**32–** Hind wing vein *Cu*1 intercepted lower, upper abscissa of vein inclivous at more obtuse angle; hind tarsus paler than tibia (but sometimes altered by preservation); male face pale yellow; male genitalia with pad large, extending beyond level of tip of aedeagus, conspicuously incurved

***infractor* Delrio**

–Hind wing vein *Cu*1 intercepted higher, upper abscissa of vein inclivous at more acute angle; hind tarsus the same colour as hind tibia; male face often testaceous; male genitalia with pad large and ovoid or bilobed but smaller, not reaching level of tip of aedeagus, less incurved **33**

**33–** Temples rather rounded in dorsal view; propodeal carina rather weak; male genitalia with pad large, ovoid ***testacea* (Gravenhorst)**

–Temples strongly narrowed in dorsal view; propodeal carina stronger; male genitalia with pad bilobed **34**

**34–** Antennal flagellum infuscate (except very basally); mesoscutum with more conspicuous punctation, with punctures close together; lateral ocelli contiguous with eye; hind wing with vein *Cu* between *M+Cu* and *cu-a* about 0.39 – 0.45 times as long as vein *cu-a*, vein *Cu* moderately inclivous and hind wing veins dark brown; male genitalia with apical lobe of pad broader, pad more weakly incurved ***fuscicarpus* (Kokujev)**

–Antennal flagellum testaceous, darkened apically; mesoscutum with less conspicuous punctation, punctures further apart; lateral ocelli separated from eye by very narrow strip of cuticle [female only?]; hind wing with vein *Cu* between *M+Cu* and *cu-a* about 0.30 – 0.35 times as long as vein *cu-a*, vein *Cu* strongly inclivous and hind wing veins light brown/testaceous; male genitalia with apical lobe of pad narrower, pad more strongly incurved ***ocellaris* (Thomson)**

1. The female of *rowardennani* is unknown but would probably key to *pallescens*; by analogy with the male, *rowardennani* may differ in more rounded temples, uniformly testaceous thorax and smaller number of distal hamuli. [↑](#footnote-ref-2)
2. Three species of *Netelia* (*Toxochiloides*) are known in Europe but none has yet been found in Britain. Perhaps the most likely species to occur is *N. punctator* Delrio, which is a rather dark, reddish testaceous with black metasomal apex, pterostigma and antenna. [↑](#footnote-ref-3)