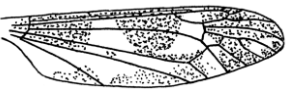
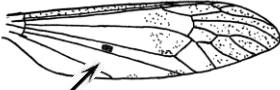



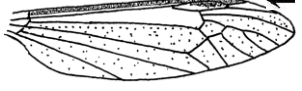
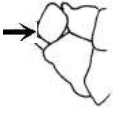
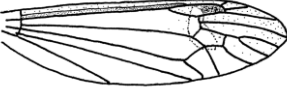
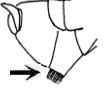
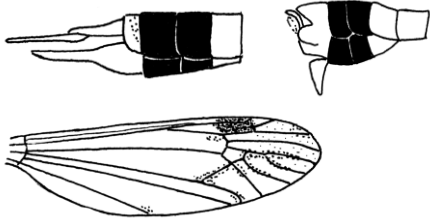




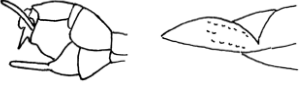
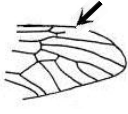
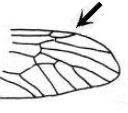






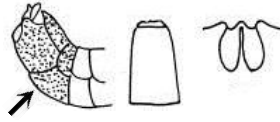
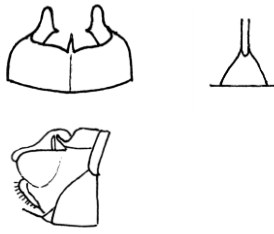
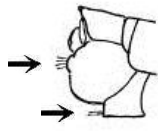

**KEY TO THE SUBGENERA AND SPECIES OF TIPULA by ALAN STUBBS - 1996**  
**Revised by John Kramer - 2016**

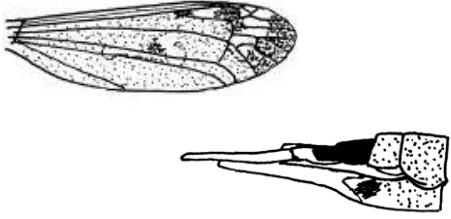
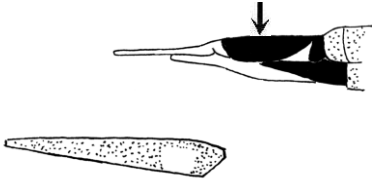
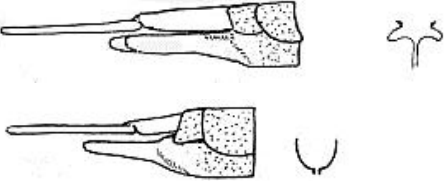
1.	Wing with large chocolate markings, including an anterior large median triangle. Very large species.		subgenus <b>ACUTIPULA</b> (p7) maxima
-	Wing smoky brown (female) or grey (male), with a dark spot between close veins Cu2 and 1A midway across wing. Very large species, as maxima.		fulvipennis
-	Not as above		2
2	Wings with longitudinal markings, streaked with white or pale markings, or with brown costal edge. (view obliquely).		3
-	Not as above		4
3.	Wing as shown, with long cream streak along grey membrane and streak from wing apex to below discal cell. Grey abdomen with a black stripe down each side.		vittata
-	Wing marked as shown, but may be faint. Abdomen usually orange but with a single strong dark central stripe. V-shaped posterior appendage in the male. 		subgenus <b>LUNATIPULA</b> (p7) vernalis
-	Costal cell (along front of wing) brown with a parallel pale stripe below; (View obliquely) rest of wing slightly greyish. Male genitalia with outer clasper large rhomboid.	 	Subgenus <b>TIPULA</b> (p25)
4.	Wing only faintly tinted. A faint white lunule runs down to discal cell as in some other crane flies, PLUS blue-grey abdomen with thin dark median stripe. Male genitalia with tuft of golden hairs ventrally on sternite 8. Female cerci in lateral view with abrupt bulge anteriorly; with shallow keel below and double bulge at sides.	 	Subgenus <b>ACUTIPULA</b> luna
-	Without these characters		5

5.	Male terminalia with large ventral dagger. Abdomen yellowish with strong black pre-genital band; Marbled wings. Vein Cu straight at end of lower basal cell.	 <p style="text-align: right;">subgenus <b>SCHUMMELIA</b> (p24)</p>	
-	Male terminalia without large ventral dagger. Vein Cu angled at end of lower basal cell. [If Cu straight, abdomen not black-ringed as in <i>Schummelia</i> ]	6	
6.	Male terminalia with an upwardly pointing process on sternite 10. Female with cerci broad, blunt, slightly saw-edged and upturned at end; sternal valves with an apical pair of thread-like tails. Prescutum (top of thorax) grey, with 4 stripes with pale centres within dark borders. [wings patterned]	 <p style="text-align: right;">subgenus <b>VESTIPLEX</b> (p25)</p>	
-	Species lacking above genital features. Thoracic pattern as <i>Vestiplex</i> pattern, or not.	7	
7.	Middle flagellar segments with one or more median bristles. [If damaged, eliminate easy characters in next couplet]		8
-	Middle flagellar segments with basal whorl of bristles only.		9

8.	Male tergite 9 rather square-ended, with a pair of median teeth. Female with slender ovipositor (as in many other <i>Tipula</i> ). Costal cell yellow; stigma dark and rest of wing clear.		<b>DENDROTIPULA</b> ( <i>flavolineata</i> ) (p7)
-	Costal cell and rest of wing clear greyish. Male tergite 9 V-notched, sternite 8 with a long projecting tongue. Ovipositor with broad leaf-like cerci. [rare, Scotland]		<b>ODONATISCA</b> ( <i>nodicornis</i> ) (p12)
9.	Wing with R2 short or missing. Definitely not meeting costa, even if the break is short. (The key allows for doubtful decisions.).		10
-	Wing with R2 complete, finishing in wing margin.		11
10.	Pleura yellowish, at most with light grey patches. Male tergite 9 with a pair of apical processes. [small weak species, very rare]		<b>MEDIOTIPULA</b> (p12)
-	Pleura grey. Male tergite 9 without processes, deeply cleft or blunt-ended.		<b>PTERELACHISUS</b> (p13)
11.	Prescutum (top of thorax) with a thin median dark line as shown.		<b>PTERELACHISUS</b> (Part. p13)
-	Not as above		12
12.	Male tergite 9 with a median or paired median projection. Abdomen pale on top with a black lateral stripe on each side. Prescutum with dark median stripe resulting from the fusion of the subdorsal stripes, as shown. The subdorsal and lateral thoracic stripes are pale within dark margins.		<b>YAMATOTIPULA</b> (p28)

-	Male tergite 9 not as above. Abdomen lacking lateral stripes; with or without median dark stripe. Prescutal pattern may be similar, or not.	13
13.	Wing membrane plain, apart from a white lunule next to the stigma in some species (stigma pale or dark).	14
-	Wings patterned, with at least a white spot in lower basal cell [view obliquely along wing to reveal any markings; faintly marked cases should key out by either choice]	16
14.	Abdomen orange/brown with a dark dorsal stripe. Stigma pale yellow or absent. Female tergite 10 short and mainly dusted. [Bogs, swamps and carr in late summer and autumn]	<b>PLATYTIPULA</b> (p12)
-	Abdomen dull brown, grey or orange, without strong dorsal stripe. [Boggy places in Spring or Autumn, or drier places in Spring and Summer.]	15
15.	Blackish-grey species of boggy ground in spring, or small drab brown species of autumn. Female can be brachypterous. Squama bare.	<b>SAVTSHENKIA</b> (p17)
-	Usually orange or brown species of spring and summer. [moist or dry habitats] Female not brachypterous. Wing often with white lunulate mark or line, adjacent and internal to the stigma. Squama with bristles.	<b>LUNATIPULA</b> (p7)

16.	Males		17
-	Females		21
17.	Inner clasper of male with conspicuous downward pointing dagger like process. Dark grey species with patterned (marmorated) wings.		<b>PTERELACHISUS</b> irrorata (male) (p13)
-	Not as above		18
18.	Male terminalia long and angled upwards in side view. Tergite 9 very elongate. Sternite 8 with a yellow double U-shaped membranous area. Abdomen with median dark stripe. Wings patterned.		subgenus <b>BERINGOTIPULA</b> (unca) (p7)
-	Otherwise		19
19.	Tergite 9 with large flanges at the hind corners. Sternite 8 with a tab ending in twin tails. Wings patterned.		subgenus <b>LINDNERINA</b> (bistilata) (p7)
-	Otherwise		20
20.	Genitalia with a distinct bulge bearing long pale hairs at hind side corner. Sternite 8 with long yellow apical hairs (normally visible: can arise just inside the hind margin); if a more general apical area of hairs, the bulge character works well. [spring - midsummer]		subgenus <b>PTERELACHISUS</b> (p13)
-	Genitalia without distinctively hairy apical side bulge. Often bald in this general area though an even covering of hairs is present in some species). Sternite 8 generally without the characters above, though can be with conspicuous projecting processes. [mainly late summer to autumn]		subgenus <b>SAVTSHENKIA</b> (p17)

21.	<b>Females:</b> Abdomen orange-brown with a strong median dark stripe. Wings broad and patterned.	 <p style="text-align: right;">subgenus <b>BERINGOTIPULA</b> (unca) (p7)</p>
-	Without this combination.	22
22.	Tergite 10 very elongate. Lower basal cell with large white spot close to apex. Wings patterned. [rare, by Scottish rivers]	 <p style="text-align: right;">subgenus <b>LINDNERINA</b> (bistilata) (p7)</p>
-	Tergite 10 not markedly elongate. Lower basal cell with any white spot less close to apex	23
23.	Tergite 10 long (lower edge more than half length of cerci). Sternite 8 flattish V-shaped in section, without a keel. [This distinction applies, having earlier eliminated other members of the subgenus] [spring - midsummer]	subgenus <b>PTERELACHISUS</b> (p13)
-	Tergite 10 long or shorter. Sternite 8 with a keel, well developed in species with a longish tergite 10. [mainly late summer to autumn, including all species with tergite 10 as long as in upper illustration]	 <p style="text-align: right;">subgenus <b>SAVTSHENKIA</b> (p17)</p>

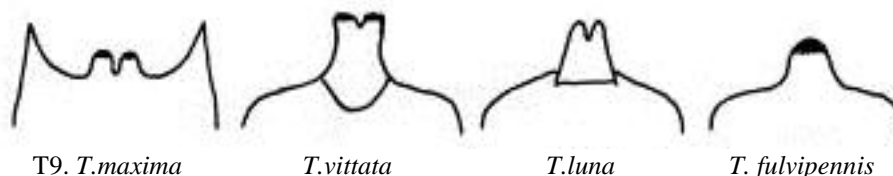
## KEY TO SPECIES OF TIPULA

Terminology. There are a number of alternative names for the different parts of the terminalia used in identification. The non-technical outer clasper (oc) and inner clasper (ic) are the alternatives chosen here for the styles of *Tipula*.

Subgenus ACUTIPULA Four species, see beginning of subgeneric key.

These are highly distinctive and widespread species in wet situations.

Male tergite 9 has median processes very similar to those of *Tipula* and *Yamatotipula* so these clearly form an allied group in sharing this character.



Subgenus BERINGOTIPULA *unca* only, see subgeneric key.

Very distinctive short broad, marbled wings plus dorsal stripe on abdomen. Male sternite 8 especially distinctive. Common in marshes and wet woods.

Subgenus DENDROTIPULA *flavolineata* only, see subgeneric key.

The clear wing with a yellowish front edge, plus the extra whorls of bristles on the antennae and the very long abdomen of the female, are a distinctive combination. Develops in dead wood, locally common in spring.

Subgenus LINDNERINA *bistilata* only, see subgeneric key.





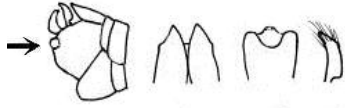
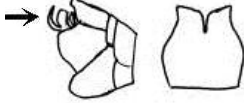
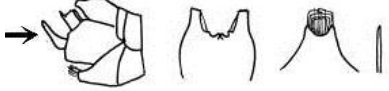
A dark mottled-winged species by Scottish rivers. Rare.

Subgenus LUNATIPULA





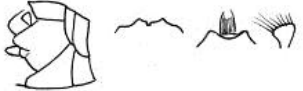
Orange, usually orange-brown or brown species, but *T. selene* has a grey thorax. Wings usually clear, with a white lunule and a grey stigma. Two species have the ovipositor greatly reduced. Eyes often bright green in life. *Tipula vernalis* differs in having wings with streaky markings.

Key to male *Lunatipula*




1.	Wings without a white lunule, plain with dark stigma, or with streaky longitudinal marks.	2
-	Wings with a white lunule, with stigma pale or dark.	3

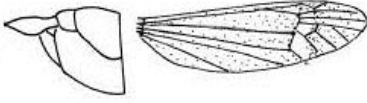
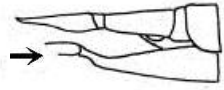

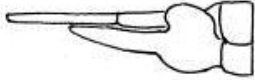
2.	Wings plain with dark stigma. Abdomen rather bright, yellowish.		livida
-	Wings streaky dark and white. Abdomen usually orange but with a single strong dark central stripe. V-shaped posterior appendage in the male. 		vernalis
3.	Orange species with sternite 8 of male bearing a flat tab of golden hairs directed obliquely downwards. [outer clasper very broad and blunt-ended]		lunata
-	Any such tab not orientated as above. [outer clasper different]		4
4.	Orange species with a pair of posterior conspicuous white blisters.		cava
-	No isolated white blister.		5
5.	Inner clasper with a conspicuous branched curved spine.		fascipennis
-	Genitalia otherwise. [scarce species]		6
6.	Genitalia apically at side with a pair of whitish horn-like projections. Tergite 9 deeply and broadly incised at apex.		laetabilis (ex dilatata)
-	Genitalia without such long whitish horns. Tergite 9 not deeply and broadly incised.		7

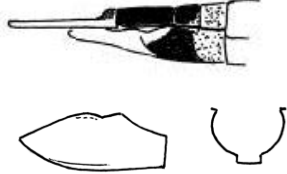


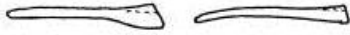




7.	Hind end of genitalia (view from behind) in lower part with a pair of processes bearing inwardly directed golden hairs and apical spines. [ <i>lunata</i> & <i>cava</i> are similar]		8
-	Hind end of genitalia without above structures.		9
8.	Orange species. Genitalia in side view with tergite 9 small, a white membranous slit, and sternite 8 compact. Sternite 8 with spines elbowed at the base and slender throughout. Outer clasper long and curved.		pelestigma
-	Darkish-brown species. Genitalia in side view with tergite 9 larger, no white membranous slit, and sternite 8 tall. Sternite 8 with spines bulbous at base, straight, and abruptly slender. Outer clasper short		selene
9.	Sternite 8 with an apical ventral tuft of golden hairs.		alpina
-	Sternite 8 with a tab of golden hairs. Side of genitalia with a projecting small brown knob, with adjacent small white blister at the base. [Outer clasper short and broad]		helvola

Key to Female Lunatipula

1.	Ovipositor with very short cerci and sternal valves.		2
-	Ovipositor elongate, as normal		3
2.	Cerci broad at base. Wings streaky.		vernalis

-	Cerci narrow at base before broadening. Wings faint greyish with a white bar below stigma to hind margin of wing.		fascipennis
3	Sternal valves bifid at apex; cerci swollen at base and with pointed apex. Brown species with dark stigma.		livida
-	Sternal valves simple. Cerci blunt-ended.		4
4.	Tergal valves and sternal valves short, as shown. Smaller orange-brown species.		helvola
-	Cerci longer; sternal valves well developed. Often larger robust species.		5
5.	Sternite 8 with large upwardly directed side flaps.		laetabilis (ex dilatata)
-	Sternite 8 simple.		6



6.	Thorax grey above. Pleura and postnotum matt pale grey-brown. Sternite 8 broad in cross-section.		7
-	Thorax mainly orange-yellow, including the upper hind part of the pleura and the postnotum (rest of pleura yellowish-grey). Sternite 8 narrow in cross section.		8
7.	Cerci with very strong abrupt bulge at base above. Sternite 8 dorsally with a short trough and sharp ridge: a keel below. Abdomen bearing a strong dorsal median stripe. [rare]		selene
-	Cerci with a less abrupt bulge at base above, or without a bulge. Sternite 8 without modification on dorsal or ventral edges. Abdomen with at most a weak dorsal stripe. [rare]		alpina
8.	Cerci with base uniformly wide in basal half, then fairly abruptly slender to apex. Sternite 8 almost plain on dorsal edge, but with a short vertical strip. Orange-brown species.		cava
-	Cerci slender for much or all of length. Sternite 8 with a ridge or flange on dorsal edge. Orange species.		9
9.	Sternite 8 with a bulbous ridge on the dorsal edge.		lunata
-	Sternite 8 with a thin flange on the dorsal edge. [rare]		peliostigma

**Subgenus MEDIOTIPULA**

Two very rare (possibly now extinct) southern species. Rather small build, with mainly yellowish-grey pleurae. Wings clear (yellow-brown stigma); R<sub>2</sub> abbreviated or absent.

Females are difficult to separate and there is inadequate British material to produce a key.

Key to males only

1.	Tergite 9 with sub-median apical thumbs on dorsal edge, and a median tooth beneath. Outer clasper straight, tapering at both ends. Sternite 8 simple. [very rare]	 <p style="text-align: right;">sarajevensis</p>
-	Tergite 9 with sub-median processes rooted beneath dorsal surface. Outer clasper curved, hatchet-shaped. Sternite 8 with ventral V-shaped brush of hairs. [very rare]	 <p style="text-align: right;">siebkei</p>


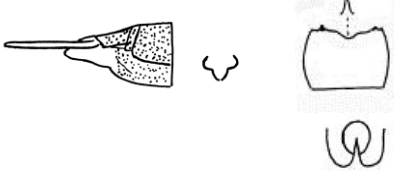
**Subgenus ODONATISCA**

**nodicornis** only, see subgeneric key

One rare species with long abdomen rather like a damselfly. On Scottish dunes and river sand banks.

**Subgenus PLATYTIPULA**



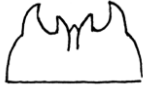



Two species of late summer and autumn. Wing membrane clear, stigma yellowish, or absent. Abdomen yellowish-brown with a dark dorsal median stripe. Female sternite 8 with upper part strongly bulbous. Larvae aquatic in bogs, marshes and carr.

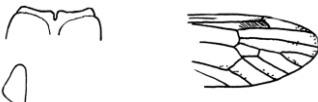

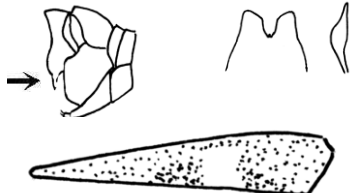




1.	Male tergite 9 strongly extended at hind corners. Female sternite 8 extensively dusted in posteriorly directed wedge. Cerci slender. [Brown wings, yellow wing veins, antennae and palps; femora only black at tip.]	 <p style="text-align: right;">luteipennis</p>
-	Male tergite 9 rather square-ended; viewed from behind. Sternite 8 with a vertical table-tennis-bat-shaped process. Female sternite 8 only dusted at base. Cerci broader. [If not teneral, veins antennae and palps mostly black, femora black in at least distal quarter.]	 <p style="text-align: right;">melanoceros</p>

### Subgenus PTERELACHISUS






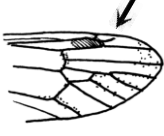
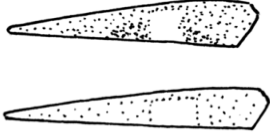

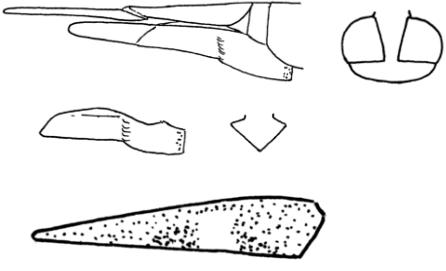
Blackish, grey or brown species of spring and early summer, mainly in woodland. The wings range from strongly mottled to having weak reduced markings. The abdomen usually has a dark median dorsal stripe, at least near the base. In some species (*pseudovariipennis*, *submarmorata* and *varipennis*) vein  $R_2$  is usually incomplete (as in *Mediotipula*), not reaching the wing margin, but examples with this vein complete make the character unreliable.

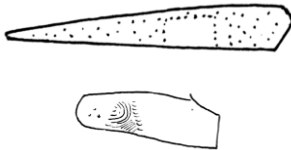

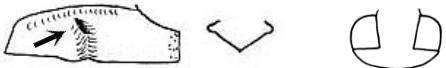

#### Key to males

1.	Prescutum (top of thorax) with a thin median dark stripe (plus typical paired stripes). Tergite 9 with one or a paired median process, plus sub-lateral projections.		2
-	Prescutum only with the two pairs of stripes in the median area. Tergite 9 deeply V-cleft or blunt ended.		3
2.	Tergite 9 with a pair of small median projections.		pabulina
-	Tergite 9 with a single strong median triangle on hind margin.		truncorum
3.	Tergite 9 truncate (straight-ended) with minute median notch. Outer clasper broad.		4
-	Tergite 9 with a broad deep median notch (within which there may be further minute notches). Outer clasper elongate and narrower.		5

4.	R <sub>2</sub> absent. Smaller species, with wings about 10mm and marbled. Outer clasper short, semi-triangular. [Probably extinct.]	 <p style="text-align: right;">mutila</p>
-	R <sub>2</sub> present, even if incomplete. Larger species. Outer clasper more elongate. [rare]	 <p style="text-align: right;">luridorostris</p>
5.	Inner clasper with a strong downward spine. Tergite 9 with a narrow deep notch. Wings mottled darkish with a large square white spot in lower basal cell.	 <p style="text-align: right;">irrorata</p>
-	Inner clasper without a downward spine. Tergite 9 with a broader notch. Lower basal cell with any white spot nearer apex.	 <p style="text-align: right;">6</p>
6.	Tergites 1-5 orange- brown gradually darkening to black posteriorly. Femora entirely pale or only weakly dark-tipped (rarely black). Inner clasper with strong tooth (can be obscured). Eyes fairly close together beneath head, as shown.	 <p style="text-align: right;">submarmorata (ex meigeni)</p>
-	Tergites mainly blackish. Femora with at least apex black. Eyes further apart beneath.	<p style="text-align: right;">7</p>
7.	Front femora normally black in apical third, Male inner clasper with only a tiny spine. Outer clasper not unduly slender. Eyes very widely separated beneath head.	 <p style="text-align: right;">varipennis</p>
-	Front femora black at apex only. Male inner clasper with a strong spine. Outer clasper very slender. Eyes less separated beneath.	 <p style="text-align: right;">pseudovariipennis</p>

**Key to females**

1.	Prescutum (top of thorax) with a thin median dark stripe (between typical paired sub-dorsal stripes).	 <p style="text-align: right;">2</p>
-	Prescutum without a median stripe.	 <p style="text-align: right;">3</p>
2.	Wings with scarcely any obvious markings; lower basal cell faintly marked as shown. Sternite 8 sinuous dorsally, locally with a thickened edge.	 <p style="text-align: right;">pabulina</p>
-	Wings strongly marked; lower basal cell with pattern as shown. Sternite 8 fairly straight on dorsal margin, with a flange on edge basally.	 <p style="text-align: right;">truncorum</p>
3.	R2 absent. Smaller, marbled-winged species (wing length only about 10mm). Sternite 8 short. [very rare]	 <p style="text-align: right;">mutila</p>
-	R2 present even if incomplete. Wing length much more than 10mm. Sternite 8 longer.	 <p style="text-align: right;">4</p>
4.	Lower basal cell with subapical white patch well before apex of lower basal cell. (if markings faint, view obliquely along wing.).	 <p style="text-align: right;">5</p>
-	Lower basal cell with subapical white patch very close to apex of lbc.	 <p style="text-align: right;">6</p>
5.	Eyes very close beneath. Wings mottled dark-greyish and white, Sternite 8 apically, shaped like an inverted arrow-head in section.	 <p style="text-align: right;">irrorata</p>




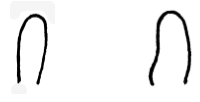


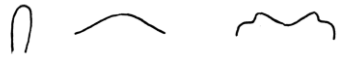
-	Eyes further apart beneath. Wing pattern weakish brown and white. Sternite 8 with fine thumb-print pattern as shown and simple V-shaped in section.	 <p style="text-align: right;">luridorostris</p>
6.	Abdomen medium greyish. Wings weakly pale-brown-mottled. Femora slender, usually at most poorly darkened at apex (rarely quite dark). Eye gap beneath head moderate. Normally with first three antennal segments orange. Cross-section of sternal valves sharply angled.	 <p style="text-align: right;">submarmorata (ex meigeni)</p>
-	Abdomen blackish. Wing markings darker brown. Front femora thicker than normal, black at apex or more. Eye gap moderate or very wide. Third antennal segment normally black. Cross-section of sternal valve with rounded beaded lateral angles.	<p style="text-align: right;">7</p>
7.	Front femora stout, normally black in apical third. Eyes very widely separated beneath. Normally with only second antennal segment pale. Sternite 8 with a deep elbowed transverse furrow, may have a black spot as shown.	 <p style="text-align: right;">varipennis</p>
-	Front femora black at apex only, often somewhat thickened. Eye gap moderate. Normally with first two antennal segments pale. Sternite 8 with a weak furrow, lacking a dark spot. [INTERMEDIATE problem specimens occur] [scarce]	 <p style="text-align: right;">pseudovariipennis</p>



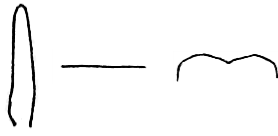
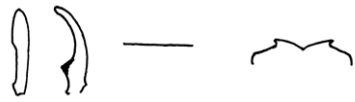










## Subgenus SAVTSHENKIA




Mottled- and clear-winged species, superficially resembling *Pterelachisus*. However, the few spring species occur on boggy ground and most species fly in late summer and autumn in woods and open habitat (*Pterelachisus* occurs mainly in woodland in spring and early summer; none occur on boggy ground). The male sternite 8 lacks an apical median brush of hairs (present in most *Pterelachisus*) though a few species have a line of hairs on tiny tubercles or lateral brushes of hairs. Vein R<sub>2</sub> is always complete.

### Key to Male Savtshenkia

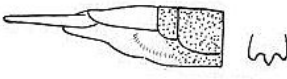

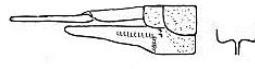
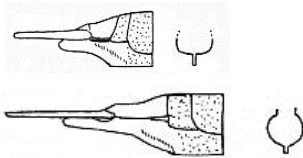
1.	Sternite 8 plain on hind margin (straight or slightly sinuous).		2
-	Sternite 8 with hind margin modified (strongly sinuous, hair clusters, spines, projections, or membranous areas flanked by hairs).		7
2.	Sternite 9 with ventral peg. Outer clasper smoothly clubbed.		cheethami
-	Sternite 9 without this peg.		3
3.	Outer clasper short and dumpy. [spring species with extensively dark legs]		4
-	Outer clasper long or with projection. [late summer and autumn species].		5
4.	Dark grey species. Flagellum with most segments just over twice as long as broad. Tergite 9 with median notch containing slight median triangle and small sublateral projections. [Spring, boggy ground].		subnodicornis
-	Brown species. Flagellum long, with very long segments. Tergite 9 without projections. [early Spring, bogs].		grisescens

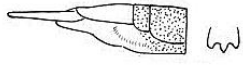





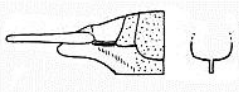
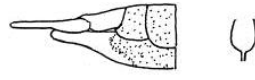
5.	Outer clasper elongate; slender or with spine on inner hind edge.		6
-	Outer clasper less elongate; with nose on hind edge. Sternite 8 with hind edge strongly sinuous.		8
6.	Outer clasper slender, simple. Tergite 9 very plain. [late August to September, rocky places on mountains, rare]		invenusta
-	Outer clasper with inner projection seen in hind view. Tergite 9 with slight sub-lateral projections on hind edge. [Autumn; local, northern upland base-rich flushes above 300m a.s.l. Females brachypterous.]		gimmerthali
7.	Outer clasper with long posterior spine at base. Sternite 8 strongly projecting as a tab with a V-shaped apical notch. Wings obscurely mottled. [Autumn]		obsoleta
-	Outer clasper without such a strong spine. Sternite 8 rarely V-notched as above (only in <i>holoptera</i> ).		8
8.	Wings plain. Outer clasper with strong nose on hind margin (except in dwarf specimens). Sternite 8 extended as a tab, either plain rounded with a median row of hairs, or with a V-notch.		9
-	Wings obviously patterned, Outer clasper very different or with a sharper pointed nose. Sternite 8 different.		10


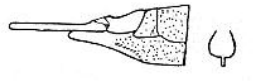
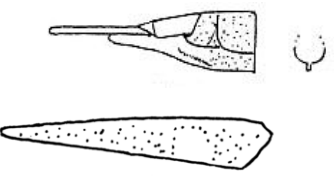
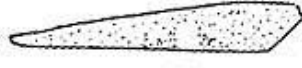


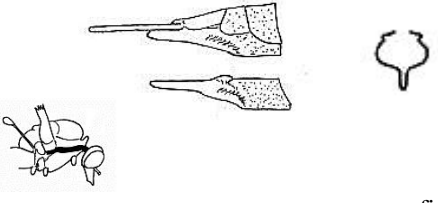
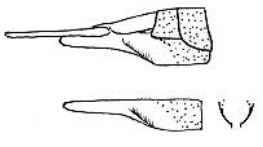
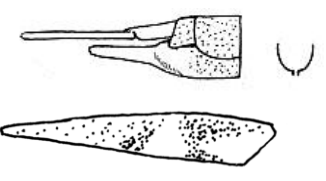
9.	Sternite 8 with a V-notch bearing a single long hair in the centre. Outer clasper longer; the nose less angular; thick enough to contain a hollowed pit beneath (view from below).	 <p style="text-align: right;">holoptera</p>
-	Sternite 8 without a V-notch but with a row of hairs along extreme apex [CAUTION WITH INTERMEDIATES]. Outer clasper longer; edge of the nose is very thin so pit is absent (view from below).	 <p style="text-align: right;">pagana</p>
10.	Sternite 8 with large sub-cylindrical paired median lobes.	11
-	Sternite 8 with at best only modest submedian or lateral lobes.	12
11.	Sternite 8 with very long paired median lobes.	 <p style="text-align: right;">staegeri</p>
-	Sternite 8 with short median lobes and a median ventral peg.	 <p style="text-align: right;">signata</p>
12.	Eyes separated by a scape width or less beneath. Squama usually with minute bristles. [CAUTION - make sure eye gap has not collapsed, but genitalia distinctive]	13
-	Eyes separated by at least two times scape width beneath. Squamae bare.	14
13.	Pleurae with a very strong dark stripe from neck to below wing (including pteropleuron). Sternite 8 rather plain, with semi-opposing rows of hairs. Outer clasper with hind edge straight, in basal half with this edge sharp and serrate.	 <p style="text-align: right;">rufina</p>
-	Pleura with darkish stripe from neck to nearly below wing (pteropleuron at most more weakly marked). Sternite 8 with a concave hind edge with tiny black teeth; lateral hair tufts. Outer clasper longer, curved and with a triangular tooth at basal hind corner.	 <p style="text-align: right;">alpium</p>

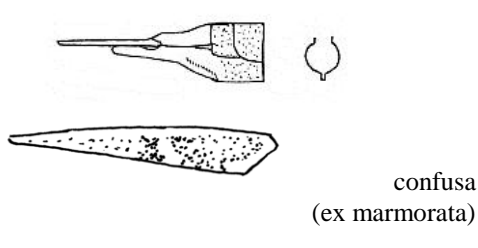
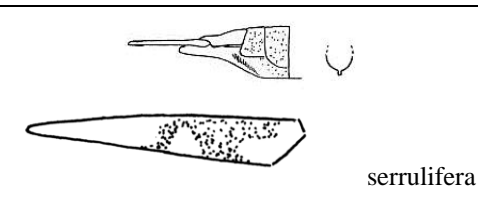
14.	Sternite 8 with rows of tiny black teeth near hind margin. Outer clasper short, with a crochet-hooked nose on hind margin.	 <p style="text-align: right;">serrulifera</p>
-	Sternite 8 membranous in median hind area, without teeth. Outer clasper more elongate.	15
15.	Sternite 8 with horseshoe-shaped median notch flanked by knob-like lateral lobes bearing tufts of hairs. Outer clasper curved, with a blade-like hind edge. Abdomen yellow-brown with thin dark lateral lines.	 <p style="text-align: right;">confusa (ex marmorata)</p>
-	Sternite 8 with a deep median cleft fringed by short hairs. Outer clasper with a small tooth on hind edge.	 <p style="text-align: right;">limbata</p>

### Key to Female Savtshenkia

1.	Brachypterous (wings reduced to small flaps)	2
-	Wings well developed (reaching at least halfway down abdomen)	3
2.	Tergite 10 long. Sternite 8 dusted at base only, ventrally with a furrow either side of the keel. [Autumn; local, northern upland base-rich flushes above 300m a.s.l.]	 <p style="text-align: right;">gimmerthali</p>
-	Tergite 10 very short. Sternite 8 extensively dusted, ventrally with only a keel. [autumn]	 <p style="text-align: right;">pagana</p>
3.	Tergite 10 long (on lower margin much more than half length of cerci). Sternite 8 furrowed below or almost so, with deep keel.	 <p style="text-align: right;">4</p>
-	Tergite 10 short or only medium length (lower margin no more than half length of cerci). Sternite 8 more rounded.	 <p style="text-align: right;">6</p>

4.	Sternite 8 very strongly furrowed beneath so keel hidden for much of height. [Usually brachypterous]. Local, northern upland base-rich flushes above 300m a.s.l		gimmerthali
-	Sternite 8 less deeply furrowed beneath, keel deep.		5
5.	Sternite 8 very deeply keeled, the upper part laterally corrugated (to accommodate long male lobes). Stigma pale brown.		staegeri
-	Sternite 8 with less deep keel and not corrugated at sides; depression very blunt-ended (to accommodate male lobes). Stigma dark, as dark as on veins towards discal cell.		signata
6.	Dorsal thoracic stripes fused to form a broad central band (almost so in a species with femora mainly black). Wings of uniform hue or otherwise, not distinctly mottled.		7
-	Dorsal thoracic stripes separated, the median axis pale. Wings mottled (only very weakly in <i>obsoleta</i> ). Femora at most dark-tipped.		10
7.	Spring species. Femora mainly pale or extensively black.		8
-	Late summer and autumn species. Femora mainly pale.		9
8.	Dark greyish species with femora extensively black. Sternite 8 with dusting extending well posteriorly in upper part. [Spring, boggy ground]		subnodicornis
-	Brownish species with mainly yellowish femora. Sternite 8 only dusted at base. [Early spring, bogs]		grisescens
9.	Sternite 8 with whole inflated area dusted. [Autumn, boggy ground]		holoptera

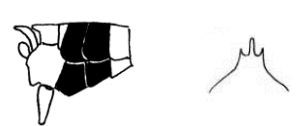

-	Sternite 8 with much of inflated area free of dusting. [late August to September, mossy rocks on mountains, rare]		<i>invenusta</i>
10.	Sternite 8 with dusting extending well posteriorly over whole of inflated area. [autumn]		<i>obsoleta</i>
-	Sternite 8 only dusted near base, leaving much of inflated area shining.		11
11.	Lower basal cell with white patch well towards apex. [spring]		<i>cheethami</i>
-	Lower basal cell with main sub-median white patch further from apex. [spring to autumn]		12
12.	Eyes separated by 0.2 width of rostrum below head. Squama with small dark bristles (as <i>cheethami</i> ) Wings weakly mottled. [spring to autumn]		13
-	Eyes separated by at least 0.5 width of rostrum below head. Wings dark mottled. [late summer & autumn]		14
13.	Pleuron with a very strong dark stripe from neck to below wing (including pteropleuron). Flagellar segment 2 more than half as long as 1. Sternite 8 with cavity either side of keel reaching far back, almost to dust zone. [very long season]		<i>rufina</i>
-	Pleura with darkish stripe from neck to nearly below wing (pteropleuron more weakly marked) [ <i>confusa</i> can look similar]. Flagellar segment 2 half as long as 1. [May to September]		<i>alpium</i>
14.	Eyes separated by four times scape width below head. Stigma dark. Tergite 10 very short on lower margin. [autumn; rare, northern]		<i>limbata</i>

-	Eyes separated by at most two and a half times scape width below head.	15
15.	Abdomen yellow-brown with moderate dark lateral stripes. Wings strongly marbled. Lower basal cell with conspicuous white spot small and usually outwardly concave. [late summer & autumn, rarely spring]	
-	Abdomen with strong dark lateral stripe. Lower basal cell with large white spot that is not outwardly concave. Palps exceptionally long. [late summer, very rare]	


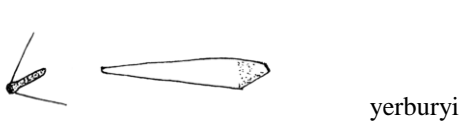
### Subgenus SCHUMMELIA

Very distinctive because the yellowish abdomen has two black pregenital segments black, and in the male the genitalia have a ventral dagger-like process. Vein Cu is unusual since it is straight. Both species live in wet woodland.

#### Key to males





1.	Tergite 9 with three projections on hind margin. Dagger pointed downwards.		variicornis
-	Tergite 9 with only a median process. Dagger pointed obliquely and hind end of abdomen overall more bulbous.		yerburyi

#### Key to Females

1.	Flagellar segments clear orange with contrasting black base. Lower basal cell only dark as a lower apical fringe.		variicornis
-	Flagellar segments murky orange, a bit darker at base. Lower basal cell more broadly darkened about apex. [Take care - scarcer species]		yerburyi

### Subgenus TIPULA



The wings are distinctive because of the white stripe behind the brown costal cell. The male tergite 9 has a pair of median processes on the hind margin (as in *Acutipula* and most *Yamatotipula*); the large rhomboid outer claspers are distinctive.

1.	Eyes narrowly separated beneath the head by 0.2x rostrum width or less. Male inner clasper with lengthened upper process. Female with wings just reaching end of abdomen. (as <i>subcunctans</i> ).	 <p style="text-align: right;">oleracea</p>
-	Eyes broadly separated beneath the head by about half width of rostrum, or more.	 <p style="text-align: right;">2</p>
2.	Antennae with 14 segments (last one very small). Male inner clasper with plain club-like dorsal process. Female with abdomen longer than wings.	 <p style="text-align: right;">paludosa</p>
-	Antennae with 13 segments (as <i>oleracea</i> ). Male inner clasper with club bearing a small wart on anterior side. Female with wings just reaching end of abdomen. (as <i>oleracea</i> ). [October-November]	 <p style="text-align: right;">subcunctans (ex czizeki)</p>



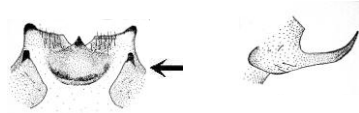
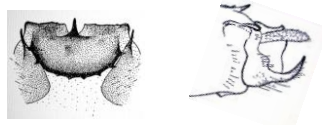
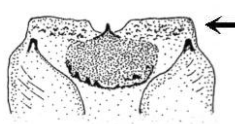
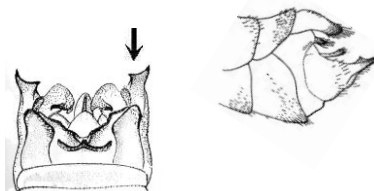
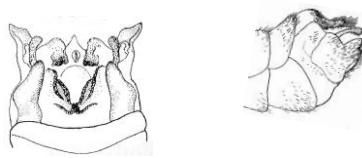
### Subgenus VESTIPLEX

Mottled winged species of woodland and mountains. Thoracic stripes pale in centre with dark borders (not unique to subgenus). Male genitalia very distinct, with upturned spur or spine at top outer corner (in side view). Female cerci are uniquely upturned at the apex, with a saw edge below.

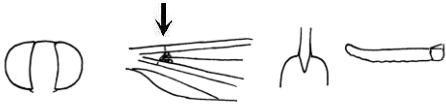


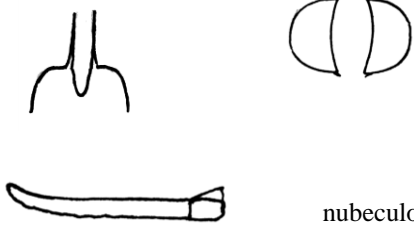
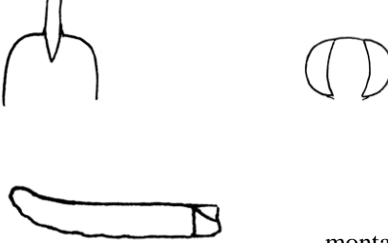
#### Key to male Vestiplex

1.	Tergite 9 square-ended.	 <p style="text-align: right;">2</p>
-	Tergite 9 very deeply cleft into two narrow lobes.	 <p style="text-align: right;">4</p>



2	Tergite 9 with smooth hind margin. Flagellar segments simple.	 <p style="text-align: right;">scripta</p>
-	Tergite 9 with a strongly chitinised arc-shaped ridge bearing blunt teeth and a median notch bearing a tooth; Antenna with knobbly segments. [mountains]	 <p style="text-align: right;">3</p>
3	Tergite 9 with blunt lateral spines. The glossy arcuate ridge with short median tooth, not nearly reaching lateral spines.apically; dorsally sternite 10 with thicker hooked spine.	 <p style="text-align: right;">montana</p>
-	Tergite 9 with pointed lateral spines; apically with long median spine; dorsally with very wide glossy area reaching lateral spines. [doubtfully listed from GB]	 <p style="text-align: right;">[excisa]</p>
-	Intermediate. Resembles <i>montana</i> in that glossy area is limited and does not reach lateral spines, and <i>excisa</i> in that the hind margin is straighter and lacks points. Abdomen dark grey. [not GB but widespread on European mountains]	 <p style="text-align: right;">[hemiptera]</p>
4.	Tergite 9 with shorter lateral lobes, concave externally Sternite 10 with process on hind apical corners obliquely truncate and almost twin-spined at apex. [rare]	 <p style="text-align: right;">hortorum</p>
-	Tergite 9 with longer sinuous lateral lobes, with bulge to outside. Sternite 10 with short simple process on hind apical corner. [rare]	 <p style="text-align: right;">nubeculosa</p>

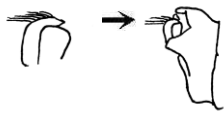

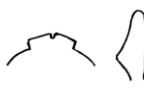


Key to Female Vestiplex




1.	Wing tips extend beyond end of abdomen; basal cells usually with a dark spot at base. Face narrow, no wider than an eye (view from in front).	 <p style="text-align: right;">scripta</p>
-	Wing short, not reaching end of abdomen; basal cells clear.	2
2.	Femora distinctly dark-tipped (as scripta). Sternite 8 with broad triangular bases to twinned tails (view from below). Cerci thicker at base and rapidly narrower apically. [rare]	 <p style="text-align: right;">hortorum</p>
-	Femora not distinctly dark-tipped. Sternite 8 with slender tails, deeply cleft between them (as scripta).	 <p style="text-align: right;">3</p>
3	Face narrow. Cerci narrow. [rare]	 <p style="text-align: right;">nubeculosa</p>
-	Face wider than an eye. Cerci broad and blunt. [mountains]	 <p style="text-align: right;">montana</p>

### Subgenus YAMATOTIPULA


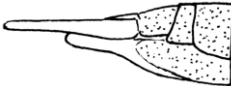
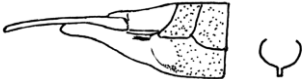
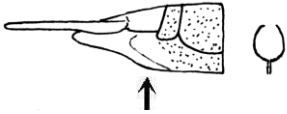
The thorax usually has a thin dark median thoracic stripe in addition to the paired dark stripes (except *pruinosa*). Abdomen with black lateral stripes with dorsal part of tergites pale. (or mainly black in *marginata*). Wings not mottled though with some darkening by veins, or plain tinged or with chocolate front margin to wing. Species of water margins and seepages.

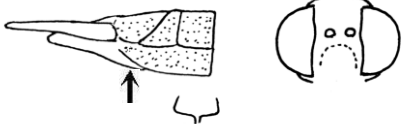

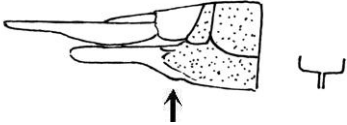
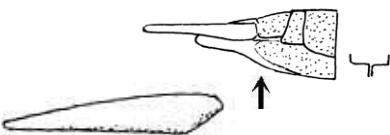
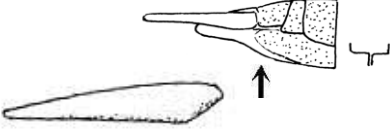
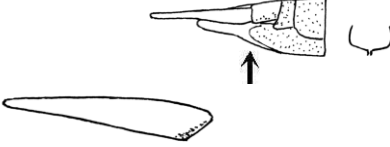
#### Key to male Yamatotipula

1.	Tergite 9 orange-brown; brighter in fresher specimens.		2
-	Tergite 9 grey or blackish, at least most of the tergite.		4
2.	Wings with chocolate costal cell (front edge). Inner clasper with a wisp of fine yellow hairs sweeping back from hind corner.		<i>marginella</i> (ex <i>marginata</i> )
-	Wings and inner clasper lacking above features.		3
3.	Wings plain brownish or greyish with darker grey stigma. Tergite 9 with projections at hind corners as well as a median pair of projections.		<i>pruinosa</i>
-	Wings brown-tinged, stigma not conspicuous. Tergite 9 with an apical pair of wide blunt projections.		<i>pierrei</i> (ex <i>solstitialis</i> )
4.	Tergite 9 with median apical projection with a single black knob. [rare]		<i>coerulescens</i>
-	Tergite 9 with median projection divided into a pair of black knobs.		5

5.	Outer clasper squarish. Visible part of base of inner clasper with a sharp vertical ridge (absent in <i>lateralis</i> , the species most likely to cause confusion). A smallish species with rather uniformly brownish relatively broad wings.		<i>couckeii</i>
-	Outer clasper normally at least twice as long as broad (in <i>lateralis</i> occasionally shorter and more like <i>couckeii</i> ). Wings often less uniformly tinged, with whitish areas of membrane, and more elongate.		6
6.	Outer clasper leaf-shaped; about the same size as the visible portion of the inner clasper.		<i>lateralis</i>
-	Outer clasper curved, broadly blunt and with bulge at base behind; longer and larger than the visible portion of the inner clasper.		<i>montium</i>

Key to female Yamatotipula

1.	Wings with dark chocolate costal cell.		<i>marginella</i>
-	Costal cell not dark chocolate coloured.		2
2.	Sternite 8 dust-free on hind part of bulbous area.		3
-	Sternite 8 with whole of bulbous area dusted.		4
3.	Wings plain greyish or brownish with darker grey stigma. Sternite 8 with dusting extending only a little posteriorly under the bulge.		<i>pruinosa</i>
-	Wings more generally with vague markings. Sternite 8 without dusting extending posteriorly under bulge. [rare]		<i>coerulescens</i>

4.	Face very wide, at least the width of an eye throughout. Typically small (wing length c. 13 mm) and with rather uniformly brownish wings. Sternite 8 with slight keel (as <i>montium</i> , a large species). [Antennae mainly blackish]	 <p style="text-align: right;">couckeii</p>
-	Face narrower. Generally larger species (c. 14+ mm) but do not rely on size alone.	 <p style="text-align: right;">5</p>
5.	Wings with rather uniform brown tinge. Antennae mainly yellowish. Keel below sternite 8 abruptly broadened near base.	 <p style="text-align: right;">pierrei</p>
-	Wings usually greyer, with white mark below stigma less obscure. Antennae usually mainly blackish. Keel below sternite 8 more gradually widening.	 <p style="text-align: right;">6</p>
6.	Sternite 8 with deep keel and very flat on underside of bulges. Tergite 10 often completely dusted but can be dust-free to a varying extent. Lower basal cell dark along lower margin.	 <p style="text-align: right;">lateralis</p>
-	Sternite 8 with weaker keel and often less flattened on the underside of the bulges. Tergite 10 usually shining on top and abruptly dusted at sides. Lower basal cell dark at apex only. Some specimens very large (wing length up to 22 mm).	 <p style="text-align: right;">montium</p>