

Cephalops

1. Anal vein only faintly indicated, fading out before meeting wing margin (Fig. 1) *pannonicus*

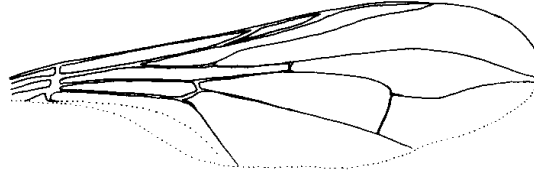


Fig. 1 *C. pannonicus* wing.

- Anal vein clearly present, as distinct as Cu and joining Cu before wing margin (Fig. 2 & Fig. 3) . 2

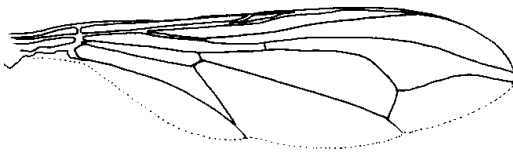


Fig. 2 *C. aeneus* wing.

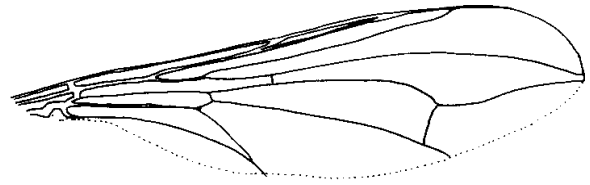


Fig. 3 *C. vittipes* wing.

2. Cross vein r-m meeting vein m1+2 in basal part of discal cell (Fig. 2 & Fig. 3); antennal segment 3 obtuse below; abdomen long and slender. Male phallic duct bifid. Female postpronotal lobe yellow 3
- Cross vein r-m meeting vein m1+2 near middle of discal cell (as in Fig. 1); abdomen shorter, more compact. Male phallic duct trifid. Female postpronotal lobe black 4
3. Distal part of m1+2 strongly undulating (Fig. 2). Male postpronotal lobe yellow; surstyli long and slender. Female ovipositor base longer than piercer and lacking a tubercle above (Fig. 4) ... *aeneus*
- Distal part of m1+2 almost straight (Fig. 3). Male postpronotal lobe dark; surstyli shorter and broader with blunt tip. Female ovipositor with base as long as piercer and with a tubercle above (Fig. 5) *vittipes*

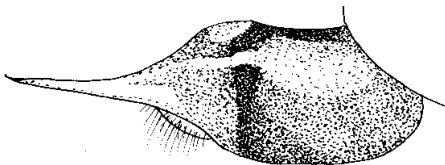


Fig. 4 *C. aeneus* ovipositor from side.

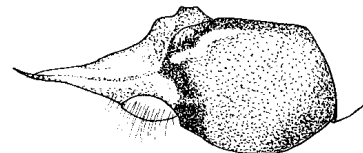


Fig. 5 *C. vittipes* ovipositor from side.

4. All femora undusted behind, shiny on at least the ventral half. Male segment 8 with membranous area not reaching hypopygium (Fig. 6). Female ovipositor Fig. 7 *obtusinervis*
- Only hind femora undusted and shining behind, fore and mid-femora dulled with dust. Male segment 8 with membranous area reaching hypopygium 5

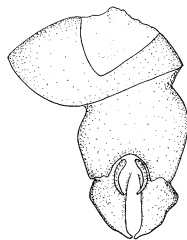


Fig. 6 *C. obtusinervis* male terminalia from below.

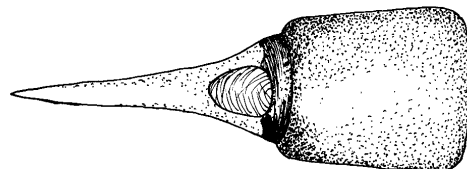


Fig. 7 *C. obtusinervis* ovipositor from below.

5. Hind tibia with antero-median bristles longer than the width of the tibia at that point; margin of scutellum with relatively long strong bristles. Male segment 8 with membranous area large,

- inflated, in dorsal view reaching forward to tergite 5 (Fig. 8 & Fig. 9). Female ovipositor Fig. 10 & Fig. 11..... *carinatus*
- Hind tibia with antero-median bristles no longer than tibia at that point; margin of scutellum with no more than fine hairs. Male segment 8 with membranous area not so large and inflated, not reaching forward to segment 5 6

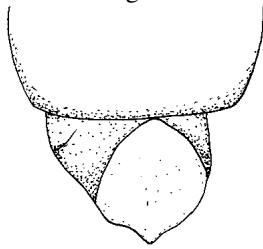


Fig. 8 *C. carinatus* male segment 8 dorsal view.

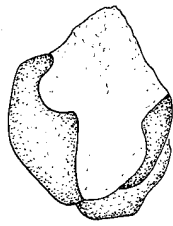


Fig. 9 *C. carinatus* male segment 8 caudal view.

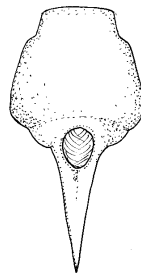


Fig. 10 *C. carinatus* ovipositor from below.

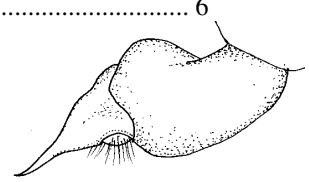


Fig. 11 *C. carinatus* ovipositor lateral view

- 6. Sides of tergites 1-3 (often also tergite 4) with conspicuous yellow patches occupying whole length of segment (Fig. 12). Femora yellow. Female ovipositor viewed from below with piercer long and abruptly contracted near apex (Fig. 13) *perspicuus*
- Tergites usually entirely black in ground colour (occasional female *ultimus* can have irregular pale patches on the sides of tergites 2 and 3). Male femora with at least a median black ring (females often with yellow femora). Female ovipositor with piercer either shorter or evenly tapering to a point..... 7

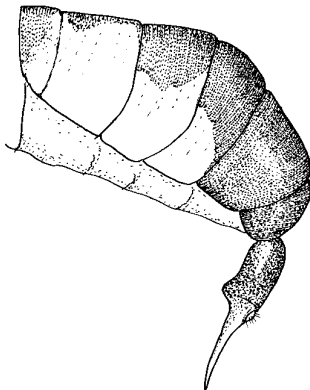


Fig. 12 *C. perspicuus* female abdomen

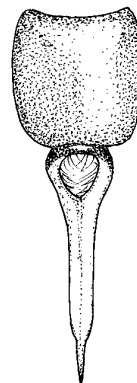


Fig. 13 *C. perspicuus* ovipositor from below

- 7. Males 8
- Females..... 13
- 8. Femora dark with only knees and small area close to trochanters yellowish; tergites 1-4 entirely dulled by dusting, even on extreme lateral margins. Phallic guide very short, phallic ducts simple tubes (Fig. 14)..... *ultimus*
- Femora with black median ring and contrasting yellow knees and base; tergites 3 and 4 more or less shining, undusted, at least laterally (sometimes only obscurely so on tergite 3) 9
- 9. Phallic guide simple, pointed (Fig. 15 & Fig. 16) 10
- Phallic guide with two widely spread points (ankyroid) (Fig. 17)..... 11
- 10. Tergite 2 partly shining laterally. Phallic ducts widening apically with cup-like tips (Fig. 15) *signatus*
- Tergite 2 entirely dusted and thus dull. Phallic ducts simple tubes, not widening apically (Fig. 16) *straminipes*

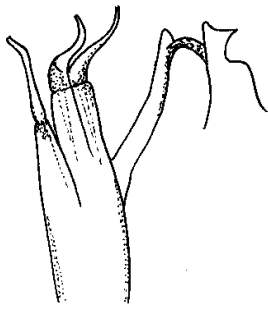


Fig. 14 *C. ultimus* phallic guide & ducts.

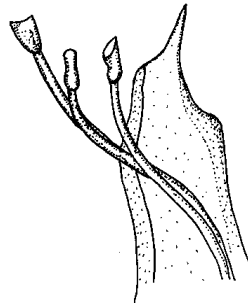


Fig. 15 *C. signatus* phallic guide & ducts.

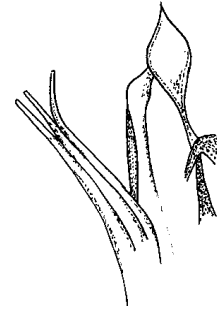


Fig. 16 *C. straminipes* phallic guide & ducts.

11. Stem of phallic guide short, not or barely longer than the apical point (variations shown); phallic ducts approximately equal in length, apical part of shortest duct clearly overlapping those of the two longer ducts (Fig. 17).....*varipes*
- Stem of phallic guide long, conspicuously longer than the apical point; phallic ducts unequal, one much shorter than the other two, apical part of shortest one not or barely overlapping with those of the longer ducts..... 12
12. Points of phallic guide shorter and more robust; phallic ducts slender, apical parts hardly wider than tubes (Fig. 18).....*penultimus*
- Points of phallic guide long and slender; phallic ducts with conspicuously widened, cup-like apical parts, much wider than tubes (Fig. 19).....*subultimus*

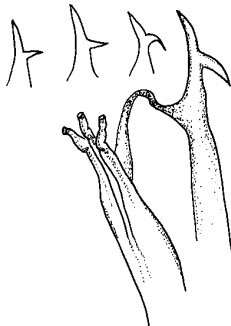


Fig. 17 *C. varipes* phallic guide & ducts.

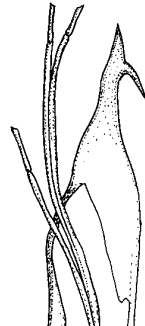


Fig. 18 *C. penultimus* phallic guide & ducts.

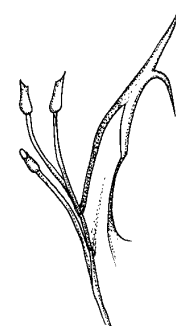


Fig. 19 *C. subultimus* phallic guide & ducts

13. Frons shining in front of ocellar tubercle to about half way to the antennal bases, undusted area clearly more than twice the length of the ocellar tubercle (Fig. 20)*penultimus*
- Frons largely dusted, only small area in front of ocellar tubercle shining, about as long as length of ocellar tubercle 14

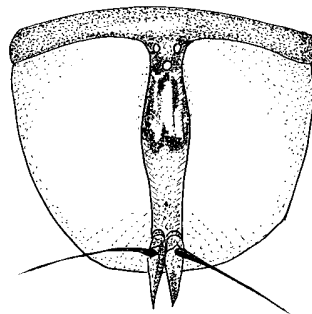


Fig. 20 *C. penultimus* female head from above

14. Ovipositor with piercer long, more than twice as long as anal opening; in profile narrow at base and usually slightly down-curved (Fig. 21 & Fig. 23)..... 15
- Ovipositor with piercer short, less than twice as long as anal opening; in profile broader at base and usually straight (Fig. 26, Fig. 28 & Fig. 30) 16

15. Femora, tarsi and third flagellomere yellow; ovipositor Fig. 21 & Fig. 22 *ultimus*
 - Femora usually with a black median ring, at least some darkening on hind femora dorsally, tarsi with apical segment darkened, third flagellomere brown; ovipositor Fig. 23 & Fig. 24 *varipes*



Fig. 21 *C. ultimus*
ovipositor lateral view.

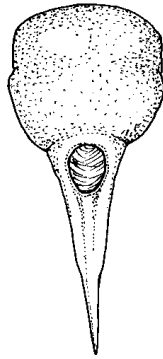


Fig. 22 *C. ultimus*
ovipositor from below.

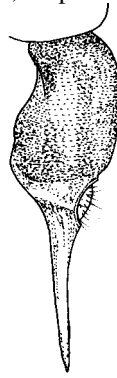


Fig. 23 *C. varipes*
ovipositor lateral view.

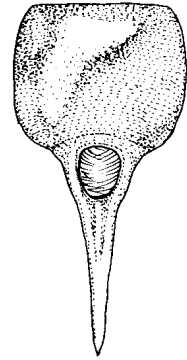


Fig. 24 *C. varipes*
ovipositor from below.

16. Ovipositor from below strongly constricted at base of piercer such that angle between piercer and basal part 90 degrees (Fig. 25); in profile proximal part of piercer angled on internal surface (Fig. 26)..... *straminipes*
 - Ovipositor from below not constricted at base of piercer, transition to basal part relatively smooth (Fig. 27 & Fig. 29); in profile proximal part of piercer on internal surface straight or concave before joining basal part (Fig. 28 & Fig. 30) 17

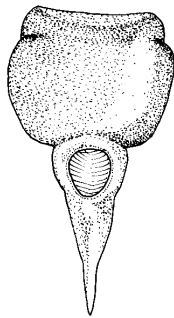


Fig. 25 *C. straminipes* ovipositor from below.



Fig. 26 *C. straminipes* ovipositor lateral view.

17. Ovipositor from below wide at the level of the anal opening as in Fig. 27 (females of this scarce species are very similar to the next and identification requires careful comparison with *subultimus*) *signatus*
 - Ovipositor from below narrower at the level of the anal opening as in Fig. 29 *subultimus*

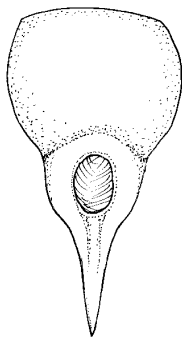


Fig. 27 *C. signatus*
ovipositor from below.

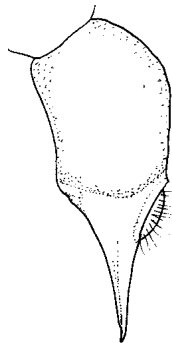


Fig. 28 *C. signatus*
ovipositor lateral view.

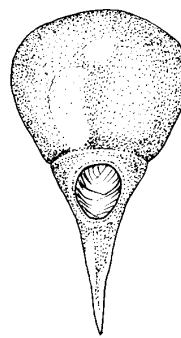


Fig. 29 *C. subultimus*
ovipositor from below.

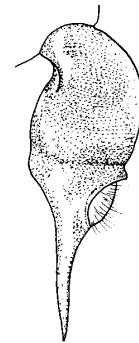


Fig. 30 *C. subultimus*
ovipositor lateral view.

