

Characteristics of the family Tabanidae

The family Tabanidae, including 3 subfamilies in North America, is characterized by a combination of the following ten characters:

- Three similar flattened pads (pulvilli) beneath the tarsal claws at the tip of the tarsus (Fig. 1). In most fly families there are 2 lateral pulvilli (one right, one left) and a central bristle-like empodium. In tabanids and a few related families the empodium resembles a lateral pulvillus.

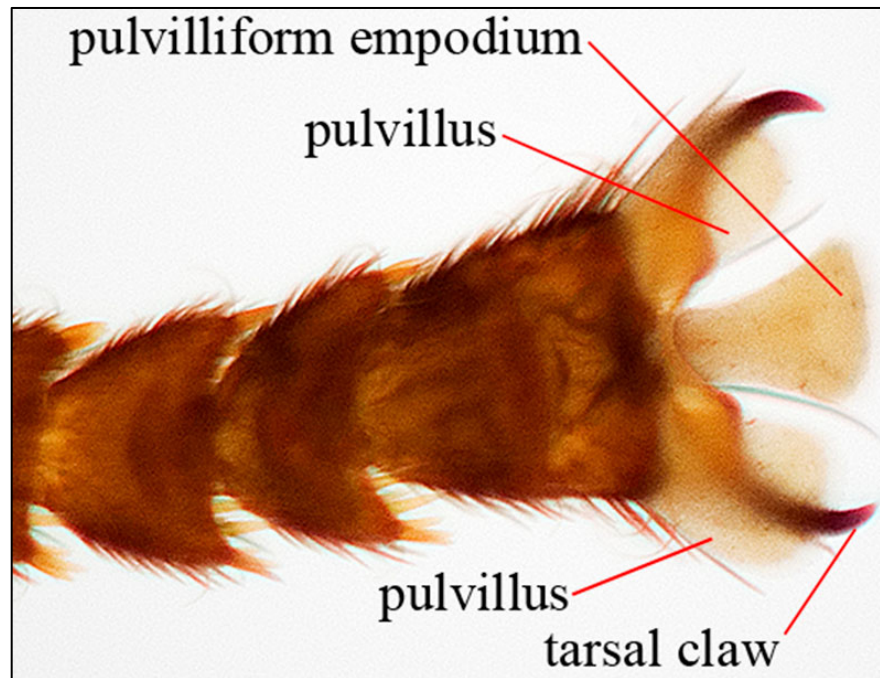


Fig. 1. Ventral view of tarsus of mid leg of female *Hybomitra nuda* (McDunnough) showing the pulvilliform empodium (microscope slide preparation).

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➤ Antenna with a scape, pedicel and annulated flagellum (Fig. 2a); the basal flagellomeres (segments of the flagellum), may be fused into a plate (Fig. 2b) and the apical flagellomeres may be fused into a stylus (Fig. 2b);

Fig. 2a. Antenna of female *Chrysops niger*.

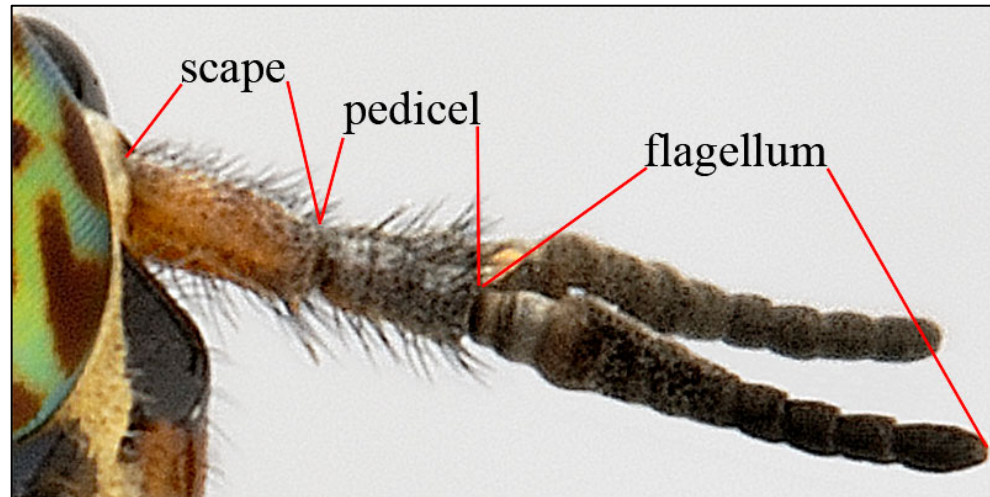
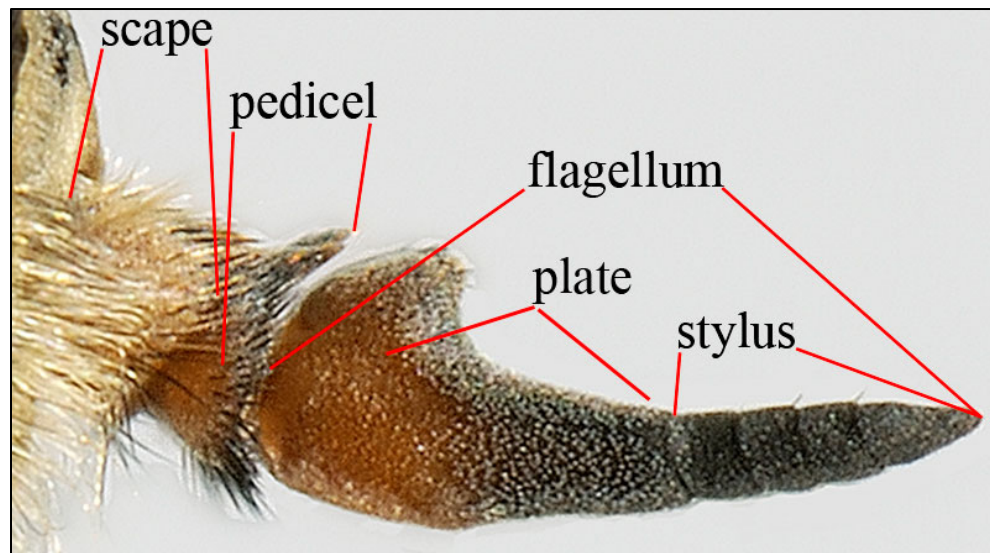


Fig. 2b. Antenna of female *Hybomitra affinis* (Kirby).



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- Costa vein (C) extending beyond the apex of the wing (Fig. 3a)
- Radial cell 1 (r_1) in wing open to C (Fig. 3b)
- Fused radial veins 2 and 3 (R_{2+3}) meeting C far beyond end of radial vein 1 (R_1) (Fig. 3a)
- Discal cell of wing much longer than wide (Fig. 3b)
- Wing venation with a widely divergent fork near apex of wing such that veins R_4 and R_5 always terminate on either side of wing tip (Figs. 3a, 3b)

Fig. 3a. Wing of *Chrysops excitans*

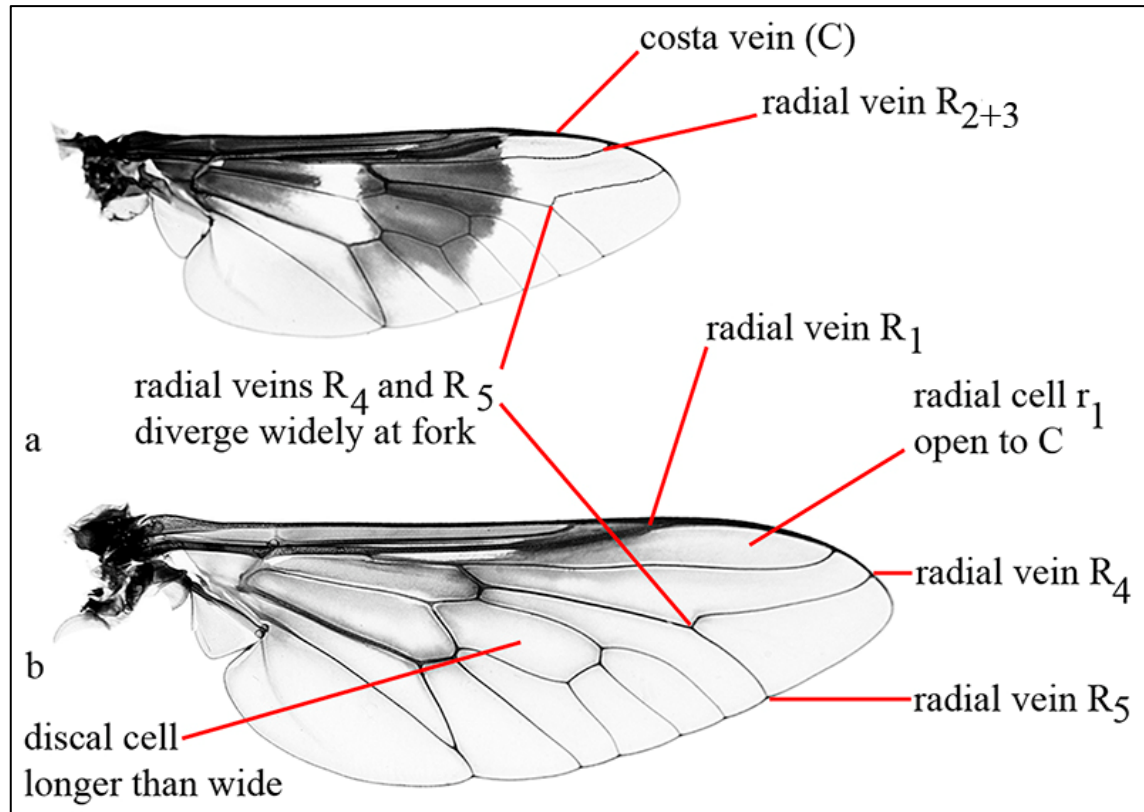


Fig. 3b. Wing of *Hybomitra nuda*

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- Subscutellum strongly developed (only slightly enlarged in *Stonemyia*) although usually hidden below the large scutellum (Fig. 4b)
- First abdominal tergite deeply notched at middle of hind margin (Fig. 4b)
- Upper and lower calypteres large and subequal (Fig. 4c)

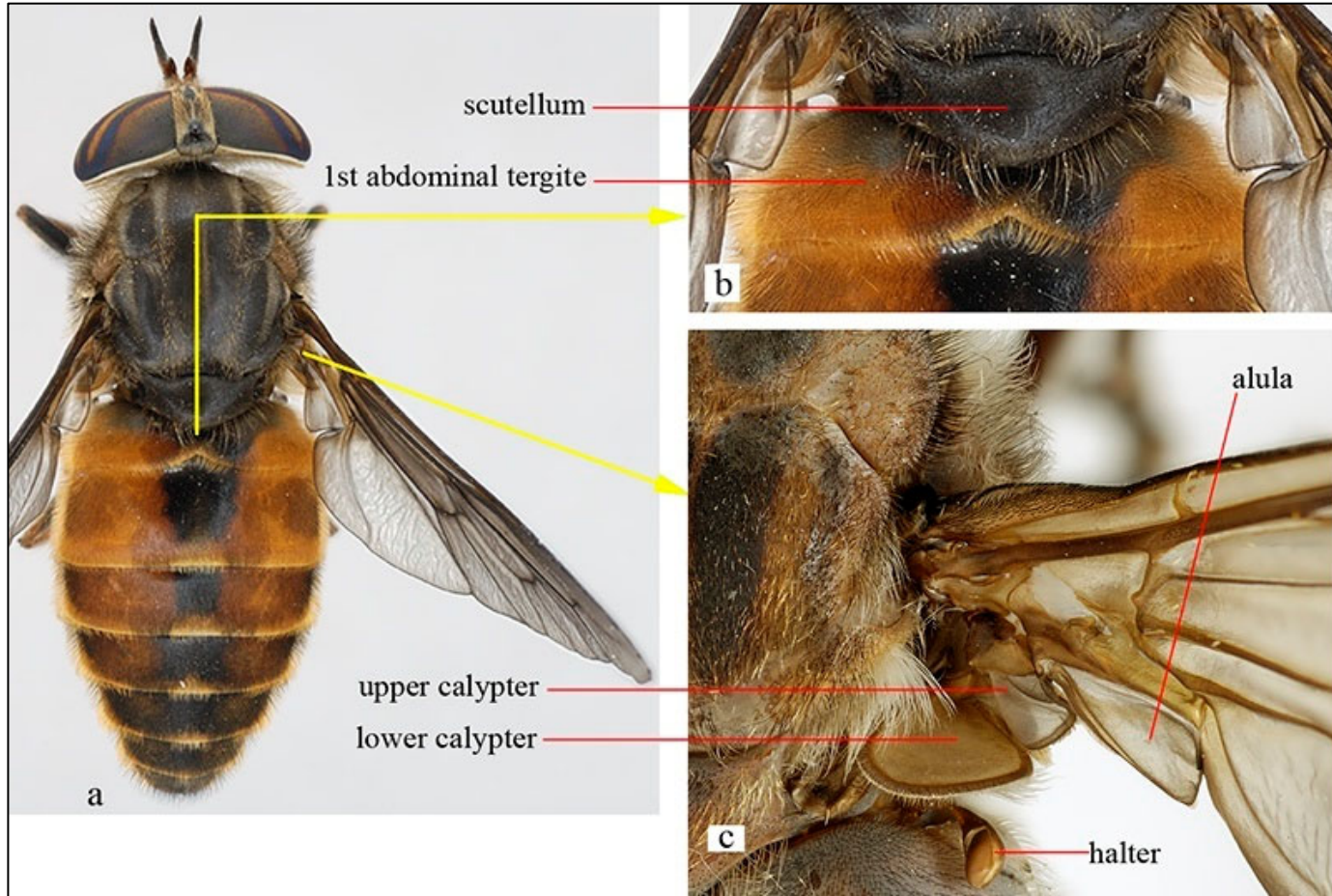


Fig. 4a, b. Dorsal view of *Hybomitra affinis*.

Fig. 4c. Base of right wing of female *Tabanus novaescotiae* Macquart.