

key to genera and species in Vespidae (genera modified from Carpenter)

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| 1 | First segment of metasoma elongate and strongly petiolate | 2. |
| – | First segment of metasoma triangular or transverse in dorsal view, sometimes raised and concave ventrally but not petiolate | 8. |
| 2 | (1). First segment of metasoma enlarged apically, about twice as long as wide; eusocial species making paper nests, predominantly orange-brown with yellow marks | Rhopalidia marginata |
| – | First segment of metasoma nearly parallel-sided, only slightly broader at apex than at base, over twice as long as wide | 3. |
| 3 | (2). Mid tibia with two spurs; mesosoma predominantly black with narrow yellow marks and metasoma predominantly yellow | Mischocyttarus flavitarsis |
| – | Mid tibia with one spur; coloration variable, but if the metasoma is predominantly yellow than the mesosoma is as well | 4. |
| 4 | (3). Body with extensive yellow markings | 5. |
| – | Lacking yellow marks, entirely black or with only red | 6. |
| 5 | (4). Basal 3/4 of petiole, basal third of metasomal T2, propodeum, and scutellum red | Delta esuriens |
| – | Petiole red over basal half or less, T2 without red coloration and with a pair of yellow spots at the base, propodeum black with yellow marks laterally, scutellum yellow | Delta campaniforme |
| 6 | (4). Metasoma largely red except the second segment; wings subhyaline, usually only slightly yellowish | Delta latreillei petiolare |
| – | Body entirely black; wings distinctly pigmented | 7. |
| 7 | (6). Wings brownish but transparent, lacking iridescence | Delta pyriforme philippinense |
| – | Wings black, nearly opaque, with violet iridescence | Delta curvata |
| 8 | (1). Metasoma abruptly declivous basally, anterior face vertical with a carinate margin. | Vespula |
| – | Metasoma tapering towards the base, anterodorsal margin of first segment rounded | 9. |
| 9 | (8). Eye with a complete ring of yellow dorsally; first segment of metasoma with a triangular black mark that is as long as wide | Vespula pensylvanica |
| – | Eye with yellow pigment interrupted dorsally and usually posteriorly; first segment of metasoma with a triangular black mark that is wider than long, or all black basally | Vespula alascensis |
| 10 | (8). Pronotum with an oblique humeral carina separating dorsolateral and ventrolateral faces; tegula truncate posteriorly; small, <12 mm, black with yellow apical bands on T2-6 | Pachodynerus nasidens |
| – | Pronotum lacking a humeral carina, evenly curved; tegula tapered posteriorly; usually much larger, if smaller then with only one or two bands on the metasoma | 11. |
| 11 | (10). Mid tibia with one spur or none; mesosoma nearly all black, sometimes with small yellow or red spots, metasoma with at most one or two narrow yellow or red bands, body often entirely black; solitary | 12. |
| – | Mid tibia with two spurs; mesosoma and metasoma with extensive yellow and/or red markings; eusocial. Polistes | 13. |
| 12 | (11). Tegula laterally semicircular, about as long as wide and evenly rounded; anterior face of pronotum usually with weak impressions medially | Nesodynerus |
| – | Tegula with length exceeding width, little curved laterally; anterior face of pronotum smooth | Euodynerus |

- 13 (11). Mesosomal pleura (including propodeum) almost entirely yellow; dorsal stripes of propodeum broad 14.
 – Pleura predominantly black, with prominent yellow stripes in *P. exclamans* 15.
- 14 (13). Mesoscutum with a pair of elongate longitudinal yellow stripes near middle; metasoma usually with narrow, sinuate black bands Polistes olivaceus
 – Mesoscutum with a pair of widely separated square yellow marks; metasoma almost entirely yellow or with parallel-sided red bands Polistes carnifex
- 15 (13). Mesoscutum, pronotal lobes, and metasomal terga with contrasting yellow and red coloration; mesepisternum and lateral propodeum each with a nearly complete yellow stripe; generally smaller species Polistes exclamans
 – Body black with yellow or reddish-yellow marks, lacking distinct red and yellow coloration; mesepisternum and lateral propodeum with small yellow marks; generally larger 16.
- 16 (15). Mesoscutum with a pair of longitudinal yellow stripes Polistes jokohamae
 – Mesoscutum entirely black Polistes aurifer