

The sculpture of the propodeum is apparently very variable and suitable characters are rarely found in this segment for species differentiation. The shape of the propodeum, however, is much more important than its sculpture. Although not used in this paper, the form of the scutellum, its adjacent lateral areas combined with their punctation, the scutellar fovea and its crenulations, all may be found useful characters for specific determinations. The venation of the wings may provide characters of specific value and have been used by Wilkinson and Nixon. The present paper uses only the relative length of the 1st abscissa of the radius to the intercubital vein, and the angle, if any, at the junction of these two veins.

Sexual dimorphism must be taken into account when assessing the value of a character for specific determination. In some cases males are definitely darker than females, while the reverse may be the case in other species. There are also indications that the punctation may show constant differences between the sexes. For instance, sexual dimorphism occurs in *Apanteles tasmanica*, the legs of the females are generally darker than those of the males. Wilkinson (1928, p. 120) states that the sexes of this species may be incorrectly associated, but I do not think so, as I have examined a series of specimens reared from the same host, which all emerged about the same time, and the males and females showed striking differences in the colour of their legs.

KEY TO SPECIES OF APANTELES OCCURRING IN NEW ZEALAND

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| 1. 2nd abdominal tergite strongly transverse (Fig. 5) | 2 |
| 2nd abdominal tergite not strongly transverse, although usually somewhat shorter than the 3rd tergite (Fig. 4) | 5 |
| 2. Mesonotum finely but closely punctate, the punctures distinct (Figs. 1 and 2) | 3 |
| Mesonotum with shallow and more widely spaced punctures, in places obsolete, the punctures minute; legs mainly blackish or strongly infuscated (Fig. 3) | <i>demeter</i> Wlk. |
| 3. Tegulae testaceous; anterior coxae dark testaceous, sometimes strongly infuscated; legs mainly dark testaceous; mesonotum coarsely and closely punctate. | <i>tasmanica</i> Cam. |
| Tegulae strongly infuscated or black; all coxae either entirely black or entirely testaceous; mesonotum more finely punctate | 4 |
| 4. All coxae entirely black; tegulae black; all legs almost entirely infuscated, save for apical quarter of anterior femur; metacarp equal to length of stigma | <i>sicarius</i> Marsh. |
| All coxae testaceous; tegulae strongly infuscated or black; legs entirely testaceous; metacarp longer than stigma | <i>carposinae</i> Wlk. |
| 5. Hind coxae rugosely punctate above; tegulae testaceous | 6 |
| Hind coxae finely punctate above, never rugosely so; tegulae strongly infuscated or black | <i>glomeratus</i> (Linn) |
| 6. Anterior and middle coxae mainly testaceous, although sometimes infuscated; 3rd tergite virtually impunctate, save for a single transverse row of minute punctures; cocoon white | <i>ruficrus</i> (Hal.) |
| Anterior and middle coxae strongly infuscated or entirely black; 3rd tergite with minute punctation; cocoon pale cream | <i>plutellae</i> Kurdj. |

Apanteles demeter Wilkinson.

Apanteles demeter Wilkinson, *Stylops* 3 (7); 154; 1934.

Described by Wilkinson from specimens collected by D. Miller and L. J. Dumbleton near Palmerston North in the North Island of New Zealand. This species, which was reared from *Tortrix* sp. (Lepidoptera), belongs to a group of species that have the thorax compressed dorso-ventrally and the mesonotum, scutellum, metanotum and the anterior part of the propodeum virtually on the