

ECOLOGICAL NOTES ON A FEW HYMENOPTERA ASSOCIATED WITH LAC

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(Received February 15, 1981)

This is a continuation of observations [1] on a few hymenoptera associated with lac and with a pseudo-lac insect. One enemy of the genuine lac insects is *Eublemma amabilis* of which the caterpillars are predacious. In turn *E. amabilis* has its own enemies, the most common being the chalcid, *Eupelmus tachardiae*, How. Its female has been illustrated before [1]. Its male is being offered now as Fig. 1. Its biology has been discussed previously by others and by the present author [2] in 1925. The point to observe is that it is an ectoparasite and never found in the body of the lac insect itself, although stated by Glover [3] to that effect. Another enemy of *E. amabilis* caterpillars, again as an ectoparasite, is *Elasmus claripennis*. Cam. Cameron had created a new tribe and a new genus for it, originally naming the insect *Cyclopleura claripennis*. I however was the first to correct the generic identification showing that the insect should be an *Elasmus* species. I had two insects

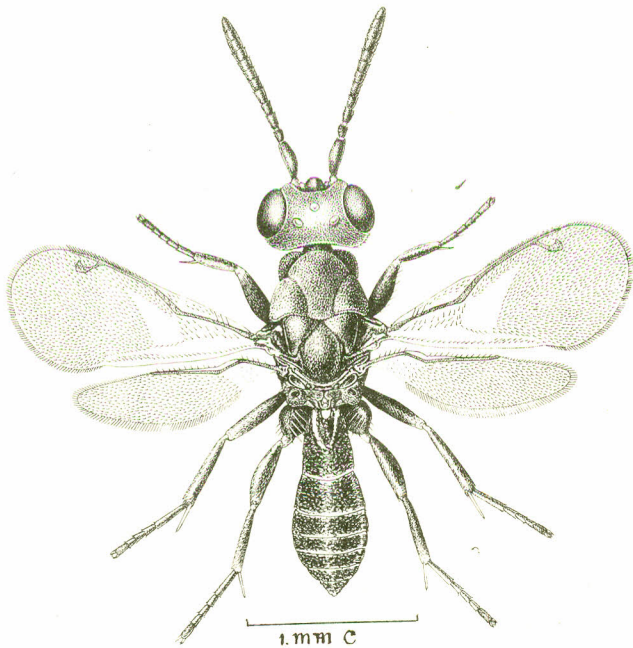


Fig. 1. *Eupelmus tachardiae*, male, ectoparasite of *Eublemma amabilis*.

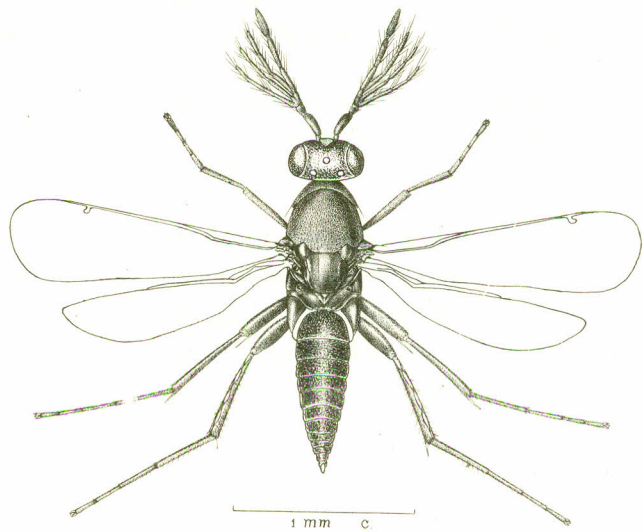


Fig. 2. *Elasmus claripennis*, male, ectoparasite of *E. amabilis*.

belonging to this genus, one I renamed as *Elasmus claripennis* and the other *E. colemani*. Unfortunately I had only one specimen of the latter and while it was being drawn accidentally the specimen got damaged beyond recognition. It was a shorter and more plumpy insect.

The common species of *Elasmus* as *E. claripennis* has also been discussed by others, the latest authority being Varshney [4]. Now the male of *E. claripennis* has never been recorded; it is now depicted in Fig. 2. Seeing how the female insect could be collected in relatively larger numbers the rarity of the male has remained a problem. Literature on the biology of the insect is also very meagre.

There is a braconid, now called *Blachus tachardiae*, Cam. Fig. 3 here, which Cameron had originally named *Ectadiophatous tachardiae*. When I examined the material from which the above insect was reared caterpillars of *Strathmopoda theoris*, Meyr were relatively more. Applying the idea of "differential diagnosis", in this case, *Blachus tachardiae*, appeared to be the ectoparasite of the caterpillars of *Strathmopoda theories*. The caterpillars of this moth are equally predacious upon lac and as far as I know no

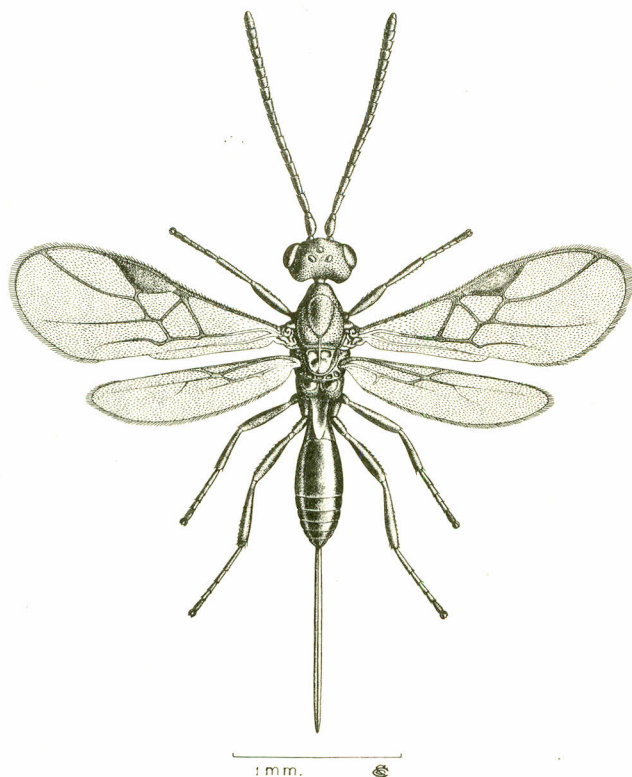


Fig. 3. *Blachus tachardiae*, female, probably ectoparasite of *Strathmopoda theoris*, a predacious parasite of lac.

parasite of *S. theoris* has been recorded in the literature. This further suggests the probability of looking upon *Blachus tachardiae* as parasitic on *S. theoris* caterpillars.

It has been suggested by Imms and Chatterjee [4] that the cultivated species of lac stand in potential danger of sharing parasites with other allied insects. Now a common wax insect which was a new species is *Ceroplastes Vassiereyi*, Madh. This wax insect grows on *Dedonia viscosa*, and is quite common in Bangalore. The parasite of this wax insect was the chalcid, *Anicetus dedonia* which is specific to it. The other allied scale-insect was the Pseudolac insect, now to be named, *Paratachardina silvestri*, Madh, according to Varshney (5). It proved to be a pest of sandalwood tree, and was also frequently found on *Guazuma tomentosa*, on which *Kerria Communis*, the lac insect, was regularly found. The main host plant of *Paratachardina silvestri*, however, was *Ixora parviflora* which was relatively common. But the parasite of *P. silvestri* proved to be a new chalcid, *Tachardinaphagus Irfanali*, Madh. Its female is shown in Fig. 4, and the male in Fig. 5, both having been kindly drawn by Chelvaraj (C). This Encyrtus species was never reared from commercial lac. There are two allied pseudo-lac insects, the other being *Paratachardina lobata* which has a purple colour. Its colour can be traced to its malpighian tube which is also purple. The secretion coat of *Paratachardina silvestri* is orange yellow. Its malpighian

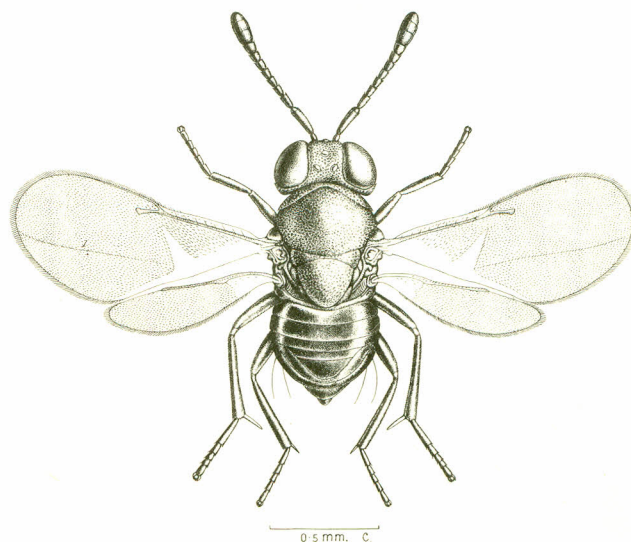


Fig. 4. *Tachardinaphagus irfanali*, female endoparasite of *Paratachardina silvestri*.

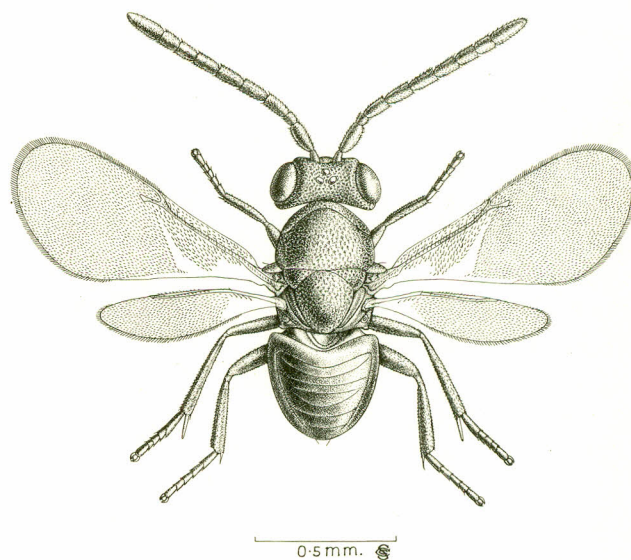


Fig. 5. *T. irfanali*, male, parasite of *P. silvestri*.

tubes are likewise yellow. I had the secretion coat of the pseudolac insect, *P. silvestri* compared with that of the genuine lac insect, known to be orange-yellow. Spectroscopically the two pigments proved to be qualitatively the same. In this light I did expect a chalcid would share *P. silvestri* with a genuine lac insect but observations did not confirm the assumption.

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