XVI DESCRIPTIONS OF THREE MALE MUTILLIDS FROM INDIA

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Mutilla dives. Sm. o

Head, thorax and legs black, abdomen varying from ferruginous to dark castaneous, the apical segments almost black; the joints of the flagellum and the tarsi castaneous.

Pubescence glittering silvery white, short and thick on the face, front, posterior margin of the prothorax, and propleurae; very dense and matted on the median segment; short and thin on the scape and the basal joints of the flagellum; on the apical joints of the abdominal segments it forms transverse bands which are entire on the two basal segments and abraded from the middle on the third and the following segments; long and erect hairs behind the vertex, on the sides of the thorax, on the legs and the basal abdominal segment.

Head coarsely punctate, punctures visible only on the portion between the eyes and the ocelli, front above the base of the antennae raised, face between the lower portions of the inner orbits and the sides of the clypeus scooped out; the clypeus above bearing two longitudinal keels which are blunt at the apex.

Mesonotum above deeply punctured, punctures with a tendency to run into longitudinal striae, the disc with a median longitudinal carina above and four parallel grooves, two on each side of it, those nearer to the carina running across the entire length of the mesonotum and the outer ones over the posterior half only.

Scutellum excavate at base, rising to a prominent tubercle posteriorly; median segment depressed below the surface of the postscutellum, somewhat flat above, only very slightly sloping towards the sides from the middle, which is consequently raised a little and appears like a medial longitudinal carina, apex truncate; metapleurae covered with large and shallow punctures. Abdomen above shining, sparsely punctured, punctures getting closer laterally.

Wings dark fuscous with a purple effulgence, basal third clear hyaline; there is a faint white streak in the first cubital, a sharper one in the second cubital, and a spot in the second discoidal cell of the forewing.

Length 12—15 mm. Expanse 18—23 mm.

Described from 10 specimens.

Hab. Punjab, Lyallpur (G. R. Dutt and T B. Fletcher); Bihar, Chapra (Mackenzie).

In the Pusa collection we had a few examples of this species from Chapra in the box of unidentified Mutillids. It could not be referred to any previously described species, but came very close to Mutilla fumipennis, described by Bingham in the Journal of the Bombay Natural History Society, Vol. XII, p. 118, pl. A, fig. 6. Mr. Fletcher brought a few more specimens of it from Lyallpur in August 1911. On referring to the Pusa collection again, I was struck with the fact that we had this undescribed male Mutillid only from localities from which we had Mutilla dives ? Later on in September 1911 when I went to Lyallpur I netted this species "in cop" with Mutilla dives? and this settled the question definitely.

Mutilla lilliputiana, Andre. &

Head, thorax, legs, base of the first abdominal segment and the apical two segments black, the remaining segments red; the pubescence on the front, vertex, pronotum, sides of the scutellum, and the base of the median segment golden; on the face, sides of the clypeus, along the outer orbits of the eyes white, few erect hairs on the mesonotum, and the scutellum brownish, erect hairs forming somewhat ill-defined bands on the apical margins of the basal five segments, ferruginous.

Head, thorax, and abdomen punctured, punctures on the head, scutellum and abdomen fine, deep and coarse on the mesonotum, large and shallow on the median segment which appears consequently widely and strongly reticulate. On the clypeus a very distinct tubercle is noticeable. On the posterior half of the mesonotum there are two longitudinal grooves present, the second abdominal segment bears a prominent transversely compressed gibbosity above, the median segment is rounded posteriorly.

Wings fusco-violaceous, paler towards base; a white streak is visible in the first, second and third cubital cells and a spot in the second discoidal cell of the forewing.

Length 7—10 mm. Expanse 14—18 mm.

Described from one specimen.

Hab. Coorg, Pollibetta (T B. Fletcher).

Mr. Fletcher captured two males "in cop" with M. lilliputiana females at Pollibetta in October 1915.

Mutilla agnata, Andre. &

Closely resembles *M lilliputiana*, Andre, with the difference that it is a bigger insect and has the pubescence on the posterior margin of the pronotum short and dense and richer in colour, the mesonotum bears a medial longitudinal carina in addition to the parallel grooves; the median segment is obliquely truncate, the basal portion very widely and strongly reticulate, bearing two parallel carinae in the middle, reaching up to the verge of the truncated portion of the segment; the clypeus without any tubercle, the basal portion of the third, fourth and fifth abdominal seg-

ments transversely aciculate; white streak in the 3rd cubital cell shorter in length.

Length 13 mm. Expanse 25 mm.

Described from a single specimen.

Hab. Coorg, Sidapur, 3,000 ft.

I have ascribed this male to this species with some hesitation, because it was not taken "in cop." There are only two points in favour of this conclusion; the first is that a few M agnata Q were found in the same locality about the same date; and the second is that this species looks very much like M utilla lilliputiana σ . And as the female M agnata very closely resembles the female M. lilliputiana (the resemblance has been noted by Bingham also; vide Fauna India, Hymenoptera, Vol. I, p. 11), it is possible that the male which looks so much like the male M. lilliputiana may be the male M agnata.