

NEW SPECIES OF INDIAN CHRYSIDIDÆ.

BY MAJOR C. G. NURSE, Indian Staff Corps.

(Continued from vol. xxxv. p. 308.)

The next seven species are quadridentate, and as the identification of the Indian quadridentate Chrysididæ is by no means easy, I have made out the following key, which should be of assistance in separating them. It will be observed that at least two species, viz. *C. gujaratica* and *C. lucinda*, have the sexes dissimilar, the female only having golden or coppery effulgence. I have taken both sexes of these species under circumstances which leave no doubt as to their affinity:—

- A. Teeth of 3rd abdominal segment more or less acute.
- a. Abdomen with golden or coppery effulgence.
- a¹. 1st, 2nd, and 3rd segments with golden or coppery effulgence.
- a². Stoutly built; length 7–10 mm.
- a³. Thorax bright metallic green *gujaratica* ♀.
- b³. Thorax steel-blue *cupreiventris*.
- b². More slenderly built; under 7·5 mm.
- a³. 1st segment of tarsi very light testaceous *zobeida*.
- b³. 1st segment of tarsi dark reddish black *quettaensis*.
- b¹. 1st and 2nd segments with golden or coppery effulgence *lucinda* ♀.
- c¹. 2nd and 3rd segments with golden or coppery effulgence *autocrata*.
- d¹. Two spots on apical segment with golden effulgence *speculata*.
- b. Abdomen entirely blue or green.
- a¹. Wings more or less fuscous.
- a². Head smaller than pronotum *fuscipennis*.
- b². Head as large as pronotum *cotesi*.
- b¹. Wings entirely hyaline.
- a². Green or bluish-green.
- a³. Stoutly built; length 7–9 mm.
- a⁴. Tegulæ green *lucinda* ♂.
- b⁴. Tegulæ blue *gujaratica* ♂.
- b³. Slenderly built; under 7 mm.
- a⁴. With subapical foveæ *balucha*.
- b⁴. Without subapical foveæ *obliterata*.
- b². Blue or greenish blue.
- a³. Head, thorax, and abdomen of equal width.
- a⁴. Lateral teeth of 3rd abdominal segment much shorter than median *bahadur*.
- b⁴. Lateral teeth not much shorter than median *thalia*.
- b³. Head, thorax, and abdomen not of equal width *seraxensis*.
- B. Teeth of 3rd abdominal segment distinctly blunt... .. *hoggei*.

CHRYSIS GUJARATICA, n. sp.

♀. Robustly built; head, except clypeus and front, thorax, and abdomen closely, but not very finely punctured, the puncturing of the mesonotum, scutellum, postscutellum, and base of the 1st abdominal segment being somewhat coarser, and less close than on the other portions; head at least as wide as pronotum, and about equal to it in size when viewed from above; clypeus sparsely punctured, rounded and very slightly emarginate anteriorly; 2nd joint of flagellum of antennæ nearly as long as the 3rd and 4th united; a ridge in front of the anterior ocellus, and the front below this ridge forming a sharp angle with the vertex, the front being thickly covered with long snow-white pubescence, which hides the sculpturing; pronotum with the sides parallel, and a median longitudinal depression, which scarcely reaches the apex; mesonotum with two short sublateral longitudinal lines, parallel with the sides of the median quadrate division; first two segments of the abdomen of the same width as the thorax, 3rd segment somewhat narrower, the whole abdomen being nearly as long as the head and thorax united; 3rd abdominal segment rounded, with four sharp teeth, the inner ones the longest; an ill-defined median carina on 2nd and 3rd segments above. Light metallic green, the abdomen, especially on the 2nd and 3rd segments, with a coppery tint; mandibles metallic green at base, light red in the centre, black at apex; antennæ dark red; tarsi testaceous; head, thorax, and abdomen covered with short, sparse, white pubescence; wings hyaline, tegulæ dark shining blue, radial cell of fore wing not quite closed at apex.

♂. Similar, but of a darker green, and without the coppery effulgence; 2nd and 3rd joints of flagellum subequal. Long. 7-9 mm.

Hab. Deesa. I found a large colony of this species about a bank in which two species of *Anthidium* (*A. saltator*, Nurse) and a species which I identify somewhat doubtfully as *A. pulchellum*, Klug, were breeding. I presume that the *Chrysis* is parasitic on one or both of these species. It may be worth noting that I had collected for three years at Deesa before I came across this species, and then found it in large numbers within a mile of my house.

CHRYSIS BAHADUR, n. sp.

♀. Head, thorax, and abdomen closely, but not very finely punctured, and with very sparse greyish pubescence; clypeus sparsely punctured, its apex transverse; an irregularly quadrate enclosure below the anterior ocellus, the front below it being very concave; head wider than pronotum, and, when viewed from above, about half as large again as it; abdomen nearly as long as head and thorax united; a median longitudinal depression on the pronotum, and another on the 1st abdominal segment; 2nd and 3rd abdominal segments with a median longitudinal carina, 3rd segment quadridentate, with subapical foveæ, the teeth sharp, and resembling those of *Stilbum splendidum*. Dark blue-green or green-blue; clypeus and front lighter green; 3rd abdominal segment with a purple tinge; basal two joints of flagellum of antennæ with stiff, white pubescence, remainder

of flagellum dark red; tarsi black; wings hyaline, or subhyaline, radial cell closed.

♂. Similar, but of a deeper blue, almost mauve, colour; flagellum of antennæ black. Long. 7-8 mm.

Hab. Kashmir; three specimens obtained at various elevations between 5000 and 9000 ft.

CHRYSIS LUCINDA, n. sp.

♀. Stoutly built, cylindrical; head, thorax, and abdomen closely and regularly, but not very finely punctured; front concave, with stiff white pubescence, which hides the sculpturing; pronotum nearly as large as head, with a median indentation at base; 2nd abdominal segment with a trace of a carina, 3rd segment quadridentate, the teeth acute, with a subapical row of foveæ. Head, thorax, and legs, except the tarsi, metallic green, the central quadrate division of the mesonotum and the joints of the segments inclining to dark blue; 1st and 2nd abdominal segments coppery golden, 3rd segment dark blue, its apex sometimes dark green; antennæ dark rufous; tarsi testaceous; pubescence on head, thorax, abdomen, and legs short and greyish; wings hyaline, fore wing with a very slight fuscous tinge, nervures dark testaceous, tegulæ greenish blue, finely punctured.

♂. Similar; the antennæ lighter rufous; the 1st and 2nd abdominal segments bright metallic green, without any coppery effulgence. Long. 7-8.5 mm.

Hab. Quetta; several specimens.

(To be continued.)

ON A NEW SUBSPECIES OF *ISODEMA ADELMA*, FIELD.

BY PERCY I. LATHY, F.E.S.

ON comparing some Lepidoptera from Thibet with Chinese forms in Mr. Adams's collection, I noticed among the series of *Isodema adelma*, Feld., an example with an extremely narrow band. I find that this specimen, which came from the Honrath collection, is Felder's type, and bears the locality "Shanghai." This example agrees well with the figure in 'Reise Novaræ,' and I think the Central and Western Chinese and Thibetan forms differ sufficiently to receive a varietal name.

I give below the chief points of difference between this race and the type:—

ISODEMA ADELMA VAR. *LATIFASCIATA*, VAR. NOV.

Differs in the much larger cream-coloured patch within cell, the patches between upper median nervule and submedian nervure twice the size of those in typical *adelma*; the submarginal lunules of both wings below not nearly so well developed.

Hab. Central China, Western China, and Thibet.