

could not rear them, I proceeded to collect all the eggs I could find on that plant, and transfer them to *R. catharticus*, by the simple expedient of pinning the portion of leaf wheron they had been deposited to the most suitable situation on the new shrub. In this manner I procured a large number of larvæ, the food-plant evidently suiting them admirably, as comparatively few failed to grow and wax strong.

On August 4th, a bright, sunny day after several dull ones, I placed a box containing a number of my home-reared *G. rhamni* beneath a clump of brambles and left it open, so that the insects could fly as soon as they felt inclined to. Returning to the spot a couple of hours later, I was surprised to see no less than four males of *cleopatra* hovering over the brambles, but on drawing quietly near their presence was soon explained to me. Beneath each *cleopatra* was the quivering form of a female *rhamni*, with abdomen pointing upwards and wings half open and flattened out in a most unnatural position. The unexpected and unwelcome suitors were most persistent in their court, and by sheer rough treatment one after the other succeeded in forcing the object of its attentions to take to wing, when the pair would soar high in the air and then return low down among the herbage, the female doing her utmost to escape. Later on in the month the wild chase of *rhamni* by *cleopatra* was a matter of common occurrence, though whether any results were obtained is more than doubtful.

At the end of August I had to return to England, and it was necessary to abandon my caterpillars to their own devices. I, however, took with me half a dozen pupæ* (just turned), and about fifty larvæ of *cleopatra*, which were all doing well. On the *R. catharticus* of the hedgerows of Bucks I found no succulent young leaves to offer them, and the want of these made itself apparent at once. Many turned prematurely, and many died. How those that I left behind have fared I know not, but their parents were still on the wing, healthy and strong, up to the end of August, and I am of opinion that they will so have continued through September.

NEW SPECIES OF INDIAN CHRYSIDIDÆ.

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

THE species described in the following paper form part of a collection of Hymenoptera made by me during the past two years at Deesa in Northern Gujarat, Quetta in Baluchistan, and during a two months' trip to Kashmir in 1901.

* Two of these pupæ kindly sent to me by Mr. Purefoy produced fine specimens of *cleopatra* in September last.—R. S.

NOTOZUS KASHMIRENSIS, n. sp.

♀ ♂. Front from above base of antennæ to about half-way to vertex concave and finely striate, the striæ running in a circular direction, with the base of antennæ as centre; remainder of head and thorax somewhat coarsely punctured, except the extreme base of mesonotum, which is finely punctured; abdomen very finely and minutely punctured; inner orbits parallel; mucro conspicuous and very coarsely punctured, rounded at apex; abdomen about the length of the head and thorax united, very convex above, gradually rounded towards the extreme apex, which is transverse or slightly emarginate. Deep metallic blue or blue-green, the antennæ and tarsi rufo-testaceous; wings hyaline at base, the outer half infuscated, tegulæ shining bronzy brown; abdomen and legs covered with a very sparse and short greyish pubescence, only perceptible with a strong lens; the antennæ, when examined under a microscope, are closely punctured and densely hairy. Long. 4-5 mm.

Hab. Kashmir, 5000 ft., on the banks of the Jhelum; several specimens.

This genus has not been previously recorded from India.

ELLAMPUS TIMIDUS, n. sp.

♀. Head, pronotum, and mesonotum shallowly and somewhat irregularly, scutellum, postscutellum, and median segment more coarsely and closely punctured, abdomen impunctate; the incision at the apex of abdomen, characteristic of the genus, small and inconspicuous. Deep metallic blue; antennæ piceous, microscopically hairy; tarsi testaceous; clypeus with a few long hairs, legs with greyish pubescence, head, thorax, and abdomen almost entirely smooth; wings hyaline, nervures testaceous, tegulæ brownish testaceous.

♂. Similar; more conspicuously shining; vertex of head, pronotum, and mesonotum above almost, if not quite, impunctate. Long. 2.5-3 mm.

Hab. Quetta; Peshin; five specimens.

This species has not previously been recorded from India.

HOLOPYGA CUPREATA, n. sp.

♂. Front from below vertex to base of antennæ very concave, and finely transversely striate, head behind ocelli somewhat finely punctured; remainder of head, thorax, and median segment coarsely, abdomen closely and finely punctured; head slightly wider than pronotum, abdomen slightly longer and broader than thorax; a little short, sparse pubescence, visible only with a lens, on the head, legs, and abdomen; a trace of a median longitudinal carina on 2nd abdominal segment. Head and thorax dark blue, the vertex, pronotum, and mesonotum with a greenish tinge; abdomen brilliant coppery golden, scape of antennæ dark blue, flagellum and tarsi very dark testaceous, almost black; wings hyaline at base, the outer half tinged with fuscous, tegulæ black. Long. 5-6 mm.

Hab. Kashmir, 5000-6000 ft.; two specimens.

HEDYCHRIDIUM PERVERSUM, n. sp.

♀ ♂. Vertex of head, and thorax, closely, but not very finely, abdomen minutely and regularly punctured—all the punctures somewhat shallow; front concave, with stiff, white pubescence, which hides the sculpturing; pronotum smaller than the head, its sides almost parallel; posterior angles of median segment acute and conspicuous; abdomen wider than head and thorax. Metallic green, with some bluish reflections, especially about the joints of the segments and near the tegulæ; abdomen with a slight coppery effulgence; flagellum of antennæ dark rufous; the whole of the head, thorax, abdomen, and legs covered with very short greyish pubescence; wings hyaline and iridescent, nervures testaceous, tegulæ metallic blue or blue-green. Long. 2.5–3 mm.

Hab. Peshin; Quetta; five specimens.

The smallest species hitherto described from India.

HEDYCHRIDIUM SELECTUM, n. sp.

♂. Head and thorax closely and finely, postscutellum more coarsely, abdomen minutely and closely punctured; pronotum and head subequal, the former with its sides almost parallel; abdomen wider than thorax, very convex, 3rd segment almost vertical. Dark blue; 2nd abdominal segment with purple reflections; antennæ dark rufous, tarsi testaceous; wings hyaline, their apical margins very slightly darker, nervures and tegulæ testaceous; a little sparse, short, greyish pubescence on head, thorax, abdomen, and legs. Long. 3.5 mm.

Hab. Quetta; a single specimen.

This species is easily distinguished from *H. perversum* above by its being dark blue, and not light green, and by its longer pronotum. The basal nervure is also more sharply curved in the present species than in *H. perversum*.

CHRYSIS JALALA, n. sp.

♀. Slenderly built; head, except front, thorax, and abdomen, closely but not very finely punctured, and very sparsely covered with short greyish pubescence; clypeus emarginate anteriorly, front concave from below a transverse ridge which is situated just below the vertex, covered with a somewhat sparse white pubescence, and finely transversely striate in the centre; head, thorax, and first two abdominal segments of about equal width; head, when viewed from above, equal in size to pronotum; scutellum and postscutellum somewhat more coarsely punctured than the rest of the segments; abdomen as long as the head and thorax united, the 2nd segment with a median longitudinal carina, 3rd segment rounded at apex, with a conspicuous subapical row of foveæ. Dark blue, the clypeus bright green, the pronotum, mesonotum, scutellum and postscutellum, and a spot on the 3rd abdominal segment just above the subapical row of foveæ, green; the first abdominal segment, except the extreme base and a line on the centre above not reaching the apex, and the apical two-thirds of the 2nd abdominal segment bright coppery golden; second and following joints of flagellum of antennæ dark red; tarsi dark

testaceous, almost black; remainder of legs metallic green; wings hyaline, tegulæ dark blue, radial cell closed.

♂. Similar; the patch of blue on the 2nd abdominal segment not transverse, but somewhat wedge-shaped; no green spot on 3rd abdominal segment; antennæ light red below, except the first two joints, which are metallic green. Long. 6.5–9 mm.

Hab. Kashmir, 5000–6000 ft.; three specimens.

CHRYSIS KASHMIRENSIS, n. sp.

♀ ♂. Head closely and regularly, thorax somewhat coarsely punctured and rugose, abdomen with the first segment coarsely punctured, but not rugose, 2nd and 3rd segments finely punctured, especially at base of 2nd segment; the whole insect sparsely pubescent; clypeus slightly emarginate, and with a median carina; front not forming an angle with the vertex, and the puncturing little, if any, finer than on the remainder of head; head, when viewed from above, considerably larger than pronotum; abdomen nearly as long as head and thorax united; pronotum with a slight median depression; a hollow at the base of postscutellum; the 1st and 2nd abdominal segments with an ill-defined median carina; 3rd segment rounded, with subapical foveæ. Dark blue or blue-green; base of mandibles, clypeus and front, scape and first two joints of flagellum of antennæ, and the legs, except the tarsi, light metallic green; mandibles, remainder of flagellum of antennæ, and the tarsi, reddish black; abdomen below light metallic green, the base of the apical segment and two large basal maculæ on 2nd segment, reddish brown; wings hyaline, apex of fore wing with a very slight fuscous tinge, which is sometimes confined to the radial cell; tegulæ dark blue, finely punctured; radial cell of fore wing closed. Long. 9–10 mm.

Hab. Kashmir, 5000–6000 ft.; five specimens.

CHRYSIS QUÆRITA, n. sp.

♂. Rather stoutly built; head, thorax, and abdomen closely, but not very finely, punctured, and covered with a short, sparse, greyish pubescence; head about as wide as pronotum and, when viewed from above, subequal to it; abdomen not quite so long as head and thorax united, vertex overhanging the front, but with no distinct ridge between them; front concave, closely and finely punctured, and with stiff, somewhat sparse, white pubescence; pronotum with a median longitudinal depression; 3rd abdominal segment tri-sinuate, with subapical foveæ. Dark blue, with a greenish tint in some lights; front and scutellum light green; mandibles, antennæ, and tarsi black; wings hyaline, the radial cell subfuscous and closed. Long. 6 mm.

Hab. Deesa; a single example.

CHRYSIS ABUENSIS, n. sp.

♀. Head and thorax finely and rugosely, abdomen finely and closely punctured; a little short greyish pubescence on the cheeks and on 2nd and 3rd abdominal segments; front, basal half of antennæ, and legs with short white pubescence; head at least as wide as pronotum, and, viewed from above, about equal to it; abdomen about the

length of head and thorax united; clypeus convex, its anterior margin slightly concave; a conspicuous { -shaped carina in front of anterior ocellus, and the front below it slightly concave, finely and very closely punctured, the punctures running into striæ, and with a median longitudinal carina; a median longitudinal depression on the basal half of pronotum; 1st and 2nd abdominal segments with a trace of a median longitudinal carina, 3rd segment rounded posteriorly, with subapical foveæ. Dark blue; front, pronotum, and the centre of 1st abdominal segment green; scutellum and large lateral spots on 1st abdominal segment coppery golden; postscutellum bright greenish golden; scape and first two joints of flagellum of antennæ blue or blue-green, remaining joints and tarsi reddish black; fore wing sub-fuscous, hind wing hyaline, radial cell of fore wing closed.

♂. Differs only in having the vertex of the head green, and the mesonotum, and 2nd and 3rd abdominal segments of a greenish blue colour; the eyes are somewhat convergent below, not parallel, as in the female, and the joints of the antennæ are thicker and somewhat shorter. Long. 9-11 mm.

Hab. Mt. Abu; common in September and October.

CHRYSIS CHAVANÆ, n. sp.

♀. Head and thorax closely but somewhat irregularly, abdomen rather more regularly and finely punctured; head wider than pronotum, the latter with sides almost parallel; 1st abdominal segment with a deep median longitudinal indentation at base, 2nd and 3rd segments with traces of a carina, apical segment without teeth, slightly sinuate. Head and thorax dark blue, the mesonotum with greenish reflections; abdomen light metallic green, with a coppery effulgence on 2nd and 3rd segments; legs dark blue; flagellum of antennæ piceous; tarsi dark red or reddish black; the whole insect more or less covered with rather sparse greyish pubescence; wings hyaline, fore wing with the central portion very slightly infuscated, nervures dark testaceous. Long. 6 mm.

Hab. Quetta; a single specimen.

(To be continued.)

ON THE BUTTERFLIES COLLECTED IN EQUATORIAL AFRICA BY CAPTAIN CLEMENT SYKES.

BY EMILY MARY SHARPE.

(Continued from p. 280.)

35. *ACRÆA CÆCILIA* (a variety).—*a*, ♂. March from Usoga to Nandi; April, 1900.

This species has the black spots on the primaries larger, especially those at the end of the discoidal cell. The same thing occurs with the discal spots on the secondaries, the first three being black streaks; with the costal one united to the hind marginal border.