

## HYMENOPTERA NEW TO CEYLON, WITH DESCRIPTIONS OF NEW SPECIES.

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With Plate; and Appendix by Col. Bingham.

THESE notes will deal with the tribes and families described in Col. Bingham's work on the Hymenoptera of British India, Vols. I. and II. (Fauna of British India Series).

The following list, compiled from the volumes in question, gives four tribes with their respective families and relative number of species, showing a total of 193 species recorded from Ceylon, 59 of which are endemic, against a total of 30 species recorded in Sir Emerson Tennent's work on Ceylon about fifty years ago.

The fact that many of our commonest species are not recorded from Ceylon will show what little attention has hitherto been given by collectors to Ceylonese Hymenoptera.

I have to thank Dr. A. Willey, the Director of the Colombo Museum, who has kindly placed at my disposal the Museum collection. My thanks are also due to Messrs. E. E. Green, F. M. Mackwood, Col. N. Manders, R.A.M.C., and Mr. Thos. Bainbrigge Fletcher for the gift of several specimens. Above all, I am indebted to Col. C. T. Bingham for his generous assistance at all times, and for ready help proffered in verifying my identifications and checking several descriptions. It is proposed to continue these notes from time to time when sufficient information and material have accumulated.

The abbreviations "Col. Mus." mean in Colombo Museum.

### Table of recorded Families and Species.

		Already recorded from Ceylon.		Now recorded		New Species.	
		Number of Species.	Endemic.	for First Time.			
Tribe: FOSSORES:—							
Fam.	{ Mutillidæ ..	26	14	8	..	2	
	{ Thynnidæ ..	1	1	—	..	—	
	{ Scoliidæ ..	9	4	—	..	—	
	{ Pompilidæ ..	30	15	9	..	—	
	{ Sphegidæ ..	48	10	10	..	1	
Tribe: DIPLOPTERA:—							
Fam.	{ Eumenidæ ..	15	5	5	..	4	
	{ Vespidae ..	6	1	—	..	—	
Tribe: ANTHOPHILA:—							
Fam.	{ Colletidæ ..	1	1	—	..	—	
	{ Apidae ..	45	8	—	..	1	
Tribe: TUBULIFERA:—							
Fam.	Chrysididæ ..	—	—	—	..	1	
Sub-Fam.	Chrysidinae ..	12	3	—	..	—	
Total		193	62	32		9	

From the above table it will be seen that 32 species have been added to the number previously recorded from Ceylon (according to Bingham's latest work), and the short note on each in the following list is all the available information I can obtain up to the present. The new species, marked with an asterisk, are, so far as I know, described for the first time. To these must be added *Nomia basipicta*, n. sp., and *Chrysis spectrum*, n. sp.

### List of Species now recorded for the First Time from Ceylon.

#### MUTILLIDÆ.

- Mutilla cicatricifera* (André), Nos. 82, 83, 84, Col. Mus. Females, locality unknown.
- Mutilla placida* (Smith), No. 245, Col. Mus. ♀ taken in Northern Province, April, 1904.
- Mutilla interrupta* (Oliv.), No. 86, Col. Mus. ♀ from Matale.
- Mutilla soror* (Sauss.), Nos. 87, 90, Col. Mus.; No. 87 from Pundaluo-ya; No. 90, locality unknown.
- Mutilla pulchriceps* (Cam.), No. 91, Col. Mus. ♀, locality unknown.
- Mutilla subanalis* (Mayr.), No. 93, Col. Mus. ♂, locality unknown.
- \**Mutilla indostana* (Sauss.), No. 96, Col. Mus. ♂ from Pomparippu, April, 1887. The ♀, which was previously unknown, is now described for the first time with the other new species.
- Mutilla pilosella* (Mayr.), No. 98, Col. Mus. ♂ from Kayts, Northern Province, August, 1903.
- \**Mutilla willeyi*, n. sp.; ♀ No. 94, Col. Mus., from Delft.

#### POMPILIDÆ.

##### *Salix*.

- Salix cæruleopennis* (Sauss.), No. 38, Col. Mus. Locality unknown. Regarding this specimen Col. Bingham writes: "I have never seen this species before; answers the description, but is not of slender form, and the wings are lighter in colour." Although the difference is considerable, it would be premature to separate it until further local specimens are available and the difference found to be constant.
- Salix nicevelli* (Bing.), No. 39 ♀, No. 40 ♂, both in Col. Mus., from Balangoda.
- Salix sericosoma* (Smith), No. 47, in Col. Mus., from Matale.

##### *Pompilus*.

- Macromeris violacea* (Lepel), No. 2, Col. Mus. ♀ from Northern Province, July, 1887; another ♀ from Mamadu, Northern Province, April, 1904. A ♂ in Coll. O. S. W., from Habarana, North-Central Province, October, 1902. This very handsome species may be easily mistaken for *Salix madraspatanus*, the females especially closely resembling each other in size and colouration.

*Pompilus unifasciatus* (Smith), No. 29, ♀ Col. Mus., from Tissamaharama, February, 1903. Col. Bingham is now of opinion that *P. bioculatus* (Bing.) and *P. unifasciatus* are one and the same, the former being a variety of the latter. The specimen in question, No. 29, was examined by him, and has some of the characters of both. *P. bioculatus* will therefore be a synonym.

*Pompilus acceptus* (Bing.), No. 44, ♀ in Col. Mus. labelled "Ceylon."

*Pompilus ilus* (Bing.). ♀ in Coll. O. S. W. differs from Bingham's description in having the apical halves of the wings *purple effulgent*, as well as fuscous. Taken at Kandy, August, 1902.

*Pompilus subsericeus* (Sauss.), in Coll. O. S. W. from Colombo, April, 1903, a common species. I have often watched the females burrowing, generally in dry sandy places, but before descending any depth they would leave off and start again in another place.

*Pompilus canifrons* (Smith), No. 265, Col. Mus. ♀ from Nambapana, April, 1904.

#### SPHEGIDÆ.

*Tachytes sinensis* (Smith), No. 128, ♀ Col. Mus., locality unknown.

*Tachytes modesta* (Smith), No. 129, Col. Mus. Common in Colombo, especially in May, June, and July. A very variable insect in size.

*Larra fuscipennis* (Cam.), No. 15, Col. Mus., from Deltota. Common in Colombo in March.

*Liris nigripennis* (Cam.), No. 60, Col. Mus., locality unknown.

*Piagetia ruficornis* (Cam.), No. 130 in Col. Mus., from Palatupana, January, 1902. This species has been common in Colombo in March for three successive years, but I have not observed it here during any other month. I have taken specimens at Ganawatta, north of Kurunegala, in April, 1904. Nothing is on record of its nesting habits. I have often watched it for a long time running about the walls of mud huts as though in search of prey. The only other species recorded from British India, *P. fasciatipennis*, has been recorded from Ceylon.

\**Ammophila basalis* (Smith), No. 73 ♂, No. 72 ♀, in Col. Mus. The former taken at Colombo in November, 1903, and the latter at Henegama (below Balangoda) in April, 1902. I have in my collection four males, two taken in Colombo in November, 1903, and two at Henegama in April, 1902, and two females from Henegama in April, 1902. It is interesting to note that the male of this species was previously unknown. It nearly answers the description of *A. atripes*, but is much smaller and slighter in build—length 15 to 18 mm., exp. 16 to 20 mm.—and is easily distinguished from *A. atripes* by the much lighter colour of the wings, which are very pale fusco-hyaline against the dark fuscous and purple effulgent wings of *A. atripes* ♂.

- Sceliphron coromandelicum* (Lepel), Nos. 147, 148, in Col. Mus., locality unknown. I have in my collection specimens from Henegama, Ganawatta, and Matale, and have seen it in Colombo.
- Spheg splendidus* (Fabr.), No. 24. ♀ in Col. Mus. taken at Kalpitiya. A very handsome species, probably confined to the dry hot districts.
- Spheg ægyptus* (Lepel), No. 54, in Col. Mus., from Puttalam.
- Spheg xanthopterus* (Cam.), Nos. 141, 142, in Col. Mus., from Colombo, January–February, 1902. Very common in Colombo. I have watched a ♀ burrowing in the sand, but she did not complete the nest. It set to work at great speed, scraping with its fore legs and kicking back the sand for some distance behind with its hind legs.

## EUMENIDÆ.

- Montezumia impavida* (Bing.), No. 260, ♀ in Col. Mus. (variety), from Nedunkerni, Northern Province, April, 1904. This is the only specimen I have seen.
- \**Montezumia rufipetiolata*, n. sp. ♂ from Mamadu, Northern Province, in Col. Mus.
- Eumenes edwardsii* (Sauss.), No. 3, ♂ in Col. Mus., taken at Ritigala rock (2,500 ft.), North-Central Province, July, 1887. Another in Coll. O. S. W. from Madulsima, August, 1904. This last varies slightly, and I doubtfully identify it as *E. edwardsii*. Probably a local race.
- Eumenes punctata* (Sauss.), No. 52 (variety) in Col. Mus., from Matale, is the only specimen I have seen.
- Eumenes esuriens* (Fabr.), Nos. 158, 159, ♀ ♀ in Col. Mus., one from Delft island, June, 1903, and the other from Battulu-oya, October, 1902. These vary slightly with the descriptions of the Indian and Burmese forms, but are probably varieties, as the species is variable.
- \**Eumenes ichnogastroides*, n. sp. ♀. Fig. 9. From Nedunkerni, April, 1904, in Col. Mus.
- Rhynchium abdominale* (Illig.), No. 21, ♀ in Col. Mus. from Puttalam, another from Nedunkerni, Northern Province, April, 1904, No. 267. A ♂ in Coll. O. S. W. from Ganewatta, April, 1903.
- \**Labus campanulatus* ♀ n. sp. Figs. 10, 11, 12, 13, Col. Mus. No. 226.
- \**Odynerus subfistulosus*, n. sp. Fig. 8, Col. Mus. No. 224.

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**Descriptions of New Species.**

- \**Mutilla indostana* (Smith). Fig. 6. Col. Mus. No. 222.  
♀ New. ♂ Known.

Taken in cop. with typical *M. indostana* ♂. (Second abdominal segment with two pubescent white spots.) Head and thorax very closely and coarsely punctured, coarser and deeper on the thorax

and running into furrows on median segment. Abdomen closely and finely punctured under the black velvety pubescence. Vertex cheeks and emargination of the thorax covered with recumbent, downy, silvery pile. The whole covered with sparse erect pubescence, thickest on the abdomen, median segment, and vertex. Head and thorax dark ferruginous red, merging into black on the lateral edges of thorax, pronotum, lower portion of face, and behind the eyes. Median segment has a prominent lateral tubercle—similar to male—black, shining, and inclined posteriorly. Abdomen above covered with black pubescence; a large central spot at apex of first segment, two similar spots, one on each side of the centre of second segment, two quadrate spots—their lower corners converging towards the centre—on the third segment, silvery white. Apical segment and ventral portion of abdomen with long whitish pubescence. Length 13 mm. Described from one specimen caught at Nedunkerni, Northern Province, in Colombo Museum No. 222.

\**Mutilla willeyi*, n. sp. ♀. Fig. 7. Col. Mus. No. 94.

Head, thorax, and abdomen very coarsely punctured and granular; head a little narrower than the thorax, the last rather narrowed towards median segment, transverse in front. Black. The whole covered with close recumbent pile golden on the thorax (except the anterior margin, where it is black), first and basal two-thirds of second abdominal segment above. The head, anterior lateral angles of pronotum, lateral round spots on segments 2–5, and medial round spots on posterior margins of second, fourth, fifth segments, the legs, sides, and a thin medial line on first and second segments above—of glistening silvery pile. Profusely studded with long, stiff, erect hairs, which are black on the black and silvery portions, and brown on the golden portions. A prominent sharp keel, ending in a sharp tubercle, dividing the emargination of the sides, the keel fringed with long thin white hairs. Length 12 mm.

This gorgeous little *Mutilla*, the only one I have seen, was captured by Dr. Willey on the little island of Delft off the north-western coast of Ceylon.

\**Eumenes ichnogastroides*, n. sp. Fig. 9. Col. Mus. No. 228.

Head and thorax closely and evenly punctured, finer on the clypeus; petiole and basal segment smooth, polished, and shining; the petiole as long as head and thorax united, gradually broadening towards the apex, a short transverse sulcation just before the apex of same, giving it a flattened appearance. Clypeus convex and widely emarginate. Thorax globular; a fine central longitudinal carina the whole length of the mesonotum. The whole covered with short golden pubescence. Reddish brown. The mesonotum with a black patch anteriorly and a broad black semicircular band

interrupted above. Petiole above black with two rather indistinct yellow streaks on the sides and a yellowish band just before apex. Basal segment with two oval spots laterally and a broad sharply defined band along the basal portion yellow; above this band the segment is black, merging into reddish brown towards petiole; following segments reddish brown touched with yellow on the apical margins. Wings flavo-hyaline along the costal margins, the rest fusco-hyaline with a dark fuscous spot covering half the radial cell and extending down into the cubital cell.

This species may be easily mistaken for *Ichnogaster fraterna* (Bing.), which it resembles in form and especially colouration, but an examination will at once reveal the genus, and the intermediate legs will be found to bear only one tibial calcar, besides the claws of tarsi being dentate, which at once separates it from *Ichnogaster*. Length to anterior margin of basal segment 13 to 14 mm. Expanse 20 to 22 mm.

Nedunkerni, April, 1904.

\**Montezumia rufipetiolata*, n. sp. ♂. Figs. 14, 15.

Col. Mus. No. 223.

Head, thorax, and abdomen smooth, shining, and punctured; the punctures close and even on the front, thorax, basal, and anterior margins of segments 2 and 3; vertex and petiole shining, with few scattered shallow punctures. Median segment rounded and steeply sloped with a deep longitudinal groove; petiole with two lateral blunt teeth about the middle. Clypeus convex and emarginate. Glossy black; the clypeus, except the anterior margin narrowly, a line on the scape in front, a club-shaped mark between the antennæ, the sinus of the eye, a narrow spot behind it, a line along the anterior margin of the pronotum, interrupted in the middle, a marginal band on the basal segment—twice interrupted—and a central spot on margin of second segment, pale yellow. Legs testaceous red, touched with black on the femora. Basal two-thirds of petiole red, apical one-third black; a shallow longitudinal groove on petiole above, rising about the middle and ending abruptly in a hollow, just before reaching the apex. Wings fusco-hyaline, hind wings paler. Length (to margin of first basal segment) 10 mm. Expanse 20 mm.

This species can at once be distinguished from its only ally *M. impavida* by the red on the petiole.

Taken at Mamadu, Ceylon, April, 1904.

\**Odynerus subfistulosus*, n. sp. Fig. 8. Col. Mus. No. 224.

This species differs structurally from typical *O. fistulosus* in the following important respects. The basal three segments as coarsely punctured as head and thorax, the apical two segments without punctures. Clypeus emarginate, scutellum without a furrow,

medium segment produced sharply into a waved ridge, the truncation shining and punctured, not striate. The yellow markings in the sinus of the eyes and behind the latter, the lines on the pronotum, tegulæ, mesopleuræ, the marginal lines of all segments except the second, and the lateral spots and markings on legs, median segment, and ventral segment *absent*. It appears to me that the above differences are sufficient to separate this from *O. fistulosus*.

\**Labus campanulatus*. ♀ n. sp. Figs. 10, 11, 12, 13.

Col. Mus. No. 226.

This species may at once be distinguished from *L. humbertianus* by its larger and heavier build and by the much larger and distinct coarse punctures covering the whole.

Head, thorax, petiole, and basal segment of abdomen very coarsely and evenly punctured, the punctures on the head finer and closer. Clypeus convex deeply emarginate. The pronotum in front laterally toothed. Median segment deeply incised forming a hollow for the petiole, the lateral margins of the incision with two teeth. The petiole broad and heavy, abruptly truncate at its base with a raised ridge at the verge of the truncation above. Basal segment of the abdomen long and campanulate. Black and glossy; the head with obscure silvery pile. The anterior half of the clypeus, the mandibles, the scape beneath, a minute spot between the bases of the antennæ, the apical margins of the petiole and first segment, yellow.

\**Chrysis spectrum*, n. sp., Fig. 3. Col. Mus. No. 227.

Division C, Bingham's Key A,  $b^1$ ,  $b^2$ ,  $a^5$ —close to *C. singalensis*.

Metallic green with golden effulgence. The region of the ocelli, the medial areas of the mesonotum, scutellum, first, second, and third segments of the abdomen above, and the bases of the last two, purplish blue. The blue markings on the head and thorax centrally touched with black. Sides of the mesonotum golden red with fine longitudinal carinæ. First, second, and third segments of the abdomen, laterally, with bright cupreous golden spots extending in a band along the posterior margins of the second segment; the spot on this segment largest and brightest and of deep ruby red. Pronotum touched with golden red. Antennæ black, about as long as pro- and mesonotum united, first two joints of the flagellum touched with golden brown above; the scape in front, and legs more golden than green; the tarsi brown. Pilosity, short, erect, and whitish, fairly abundant; facial hollow finely transversely striate, with rather long whitish recumbent hairs on the sides; head, thorax, and abdomen densely and somewhat evenly punctured, finer and closer on the second and third segments. Head, from the front, about twice as broad as long, widely emarginate posteriorly; eyes large, prominent; clypeus broad, very narrow, sub-parallel and emarginate in the

middle. Anterior ocellus enclosed in a curved indistinct carina, the two ends of which terminate at the verge of the facial hollow. Thorax and medial area rectangular, the anterior lateral angles prominent. Median segment vertical, almost hidden, its posterior lateral angles produced and toothed. Wings hyaline, nervures dark brown, tegulæ dark blue. Abdomen, medially distinctly carinate; the first segment with a medial short broad groove at base with a slight hollow on each side; the third segment with the medial and lateral angles dentate, the margins between the teeth straight, not sinuate, an antiapical series of six foveae on each side of the medial tooth. A magnificently marked species possessing every colour of the rainbow, which its name indicates. Length 7 mm. Expanse 10 to 11 mm. (Four specimens, Colombo.)

\**Nomia basipicta*, n. sp. Figs. 1, 2. Col. Mus. No. 225.

I would place this species in Bingham's Key Class B, Division *b*, *a*<sup>1</sup>, and close to his description of *N. pilipes*, from which it differs in the following respects. Vertex, front, mesonotum, and scutellum without pubescence. Abdomen very finely and closely punctured throughout, the punctures coarser on the margins of the segments. The enclosed space at base of median segment longitudinally rugose. Black, the basal segment red with a dark brownish patch in the centre reaching the margin and a deep V-shaped hollow at base, which is smooth and shining; remaining segments dark brown merging into black on the last three. Post-scutellum and margins of second to fifth abdominal segments thickly covered with very fine white plumose pile having a waxy appearance. Legs dull ferruginous brown; posterior femora with a tubercle beneath. Clypeus and front, from just above bases of antennæ, cheeks, sides of thorax, median segment (except the enclosed space at base), and legs covered with long silvery pubescence. A variety of the above has the whole abdomen brownish black, no red on basal segment. Abundant at Colombo. Length 10 to 12 mm. Expanse 13 to 14 mm.

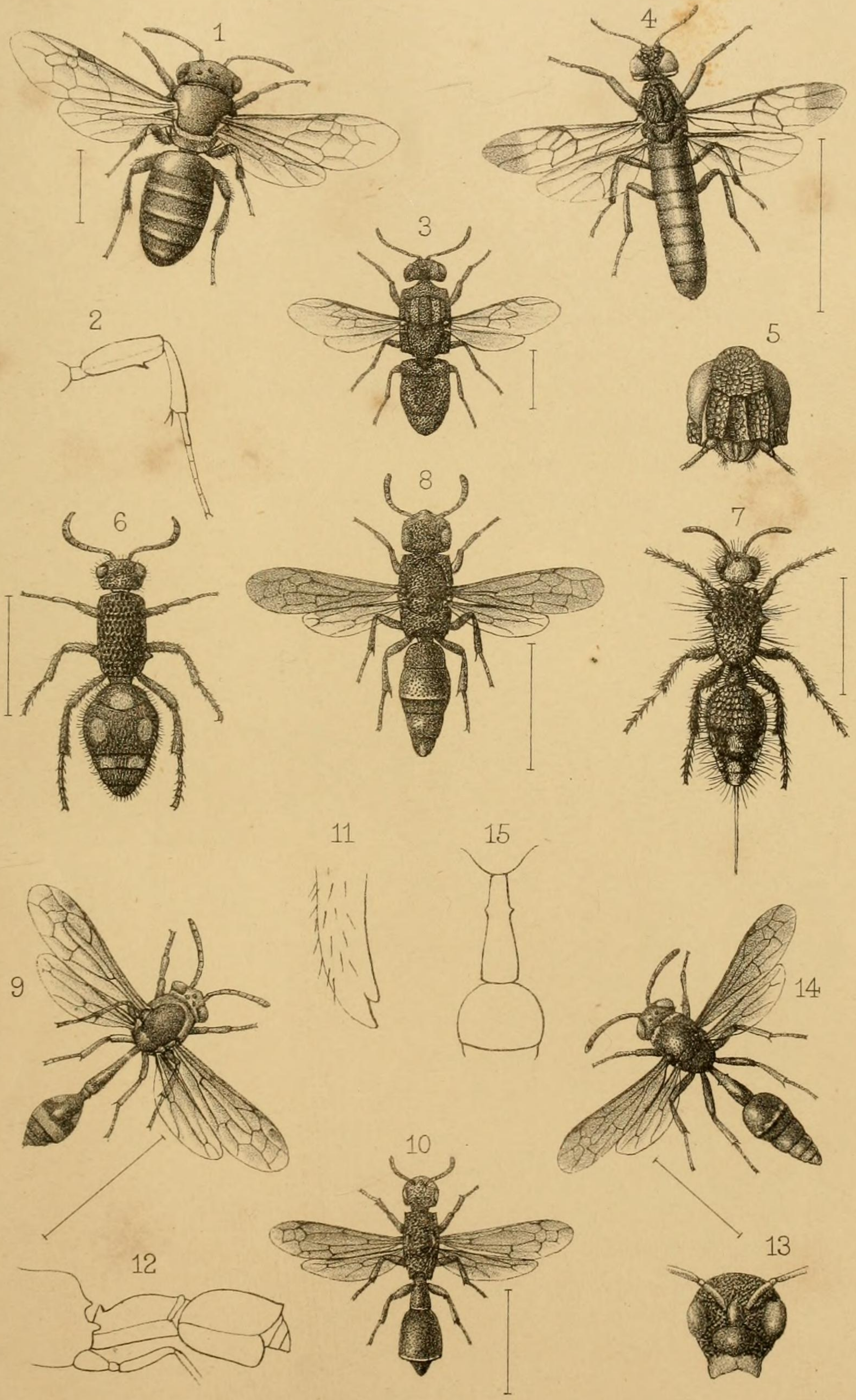
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**Appendix to Mr. Wickwar's Paper by Col. C. T. Bingham.**

*Podalirius wickwari*, form. nov.

♂ Head thorax, and abdomen very dark brown, almost black; legs dark castaneous brown, a narrow transverse band on the anterior margin of the clypeus and the tegulæ of the wings dull yellowish white, the apical margins of the segments of the abdomen very narrowly testaceous. Head clothed with white pubescence, which is long and comparatively dense on the front, on the occiput, behind





West, Newman del. et lith.

WICKWAR. ACULEATE HYMENOPTERA.  
Fig. 4. *Oryssus metallicus* (Bingham.)