Fam. PELECINIDÆ.

This family contains but one genus—the well-known *Pelecinus*. This genus has been relegated to the Evaniidæ by many authors, from which, however, it differs in many respects. In my opinion it is much more nearly allied to the Proctotrupidæ, to which Haliday (Hymen. Brit., 'Oxyura,' p. 2) referred it. It may possibly be regarded as the type of a distinct group.

PELECINUS.

1. Pelecinus polyturator. (Tab. XVIII. figg. 13, ♀; 14, ♂.)

Ichneumon polyturator, Drury, Illustr. of Nat. Hist. ii. p. 77, t. 40. f. 4[1].

Pelecinus polyturator, de Romand, Guérin's Mag. Zool. 1840, Ins. t. 49. f. 1; Klug in Germar's Zeitschr. Ent. iii. p. 382.

Pelecinus politurator, Westw. Trans. Ent. Soc. Lond. iii. p. 249, t. 14. f. 1.

Ichneumon polycerator, Fabr. Gen. Ins. p. 245. nos. 51, 52; Spec. Ins. i. p. 430; Mant. Ins. i. p. 265; Ent. Syst. Emend. ii. p. 162; Gmelin, Syst. Nat. i. p. 2691.

Pelecinus polycerator, Fabr. Syst. Piez. i. p. 111; Latr. Gen. Crust. et Ins. iii. p. 255; Lep. de St.-Farg. & Serv. Encyl. Méth. x. p. 29; de Romand, Guérin's Mag. Zool. 1840, Ins. t. 48. ff. 1, 2; Say, Amer. Ent. i. p. 29, t. 15; Complete Writings, i. p. 29, t. 15.

Ichneumon libellula, Christ, Naturg. Class. Nomencl. Ins. p. 352, t. 36. f. 1.

Pelecinus tibiator, Perty, Del. Anim. Artic. Brasil. p. 131, t. 26. f. 8.

Pelecinus clavator (Latr.), Lep. de St.-Farg. & Serv. Encycl. Méth. x. p. 30.

Hab. North America.—Mexico, Cordova (*Höge*); British Honduras (*Blancaneaux*); Guatemala, Cerro Zunil, Zapote, Capetillo, Dueñas, Calderas, San Gerónimo, Purula, Senahu, San Juan in Vera Paz (*Champion*); Nicaragua, Chontales (*Belt*); Costa Rica, Cache (*Rogers*); Panama, Bugaba, Volcan de Chiriqui (*Champion*).—South America, Colombia to Brazil; Antilles, Jamaica[1].

A species of universal distribution in the warmer regions of the New World, ranging from the United States to Brazil. It shows considerable variation in sculpture. A common insect in the forest-region of Guatemala and the State of Panama, ascending from the sea-level to an elevation of about 5000 feet (*Champion*).

2. Pelecinus thoracicus.

Pelecinus thoracicus, Klug in Germar's Zeitschr. Ent. iii. p. 384, t. 2. fig. 5[1].

Hab. Mexico[1].

Fam. PROCTOTRUPIDÆ.

The European species only of Proctotrupidæ (or "Oxyura" as they are sometimes called) have been at all studied, so it is not possible to offer any remarks on their distribution in the tropics.

Subfam. *SCELIONINÆ.*

Seventeen genera have been formed to contain the European species of this subfamily; four only of these have been recognized in America, namely *Alaptus*, *Cosmocoma*, *Anaphes*, and *Scelio*, but others undoubtedly exist there. Many of the species are egg-parasites.

SCELIO.

Scelio, Latreille, Hist. Nat. Ins. xiii. p. 226 (1804).

1. **Scelio erythropoda.** (Tab. XVIII. fig. 16, ♀.)

Niger, pilosus, rugoso-punctatus, vel scapo antennarum pedibusque rufis; alis flavescenti-hyalinis, nervis testaceis. ♀.
Long. 5½–7 millim.

Hab. GUATEMALA, Cerro Zunil 4000 to 5000 feet, Volcan de Atitlan 2500 to 3500 feet (*Champion*); PANAMA, Caldera in Chiriqui 1200 feet (*Champion*).

Head and thorax roughly rugose all over; abdomen closely covered with longitudinal striations, except at the junction of the segments, this part being smooth and shining, the sides also striolated. Mesonotum without sutures. Antennæ as long as the head and thorax together; second joint a little curved, as long as, if not longer than, the third; the remaining joints are short, being broader than long, and becoming thicker towards the bluntly conical apex; the middle joints are produced a little on the lower side; the apical joints are closely united.

TRIMORUS.

Trimorus, Förster, Hymen. Stud. ii. p. 101 (1856).

Trimorus is distinguished from the other genera of Scelioninæ with broad basal segment to the abdomen (the other segments being of nearly equal size) by the postscutellum bearing spines, and by the mesonotum being divided into three areæ by the sutures of the parapsides.

In these respects the species here described may be regarded as a *Trimorus*; but, as Förster's description of the genus is so laconic, I think it quite possible it may be proved hereafter to belong to a different genus.

Trimorus is only known from Europe.

1. **Trimorus luteus.** (Tab. XVIII. fig. 20.)

Luteus, capite, antennis, abdominis basi et apice late nigris; alis fumatis, basi late flavescenti-hyalinis. ♀.
Long. 5½ millim.

Hab. PANAMA, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

Head roughly punctured all over; thorax covered with shallow large punctures, which are stronger on the scutellum; the base of the abdomen strongly striated, the striations continued to the middle of the end of the third segment, but becoming very much finer and closer; the rest of the abdomen coarsely punctured. Mandibles large, acute, projecting. Antennæ with the second joint thicker and a very little shorter than the third, the latter double the length of the fourth; the other joints are twice as broad as long, and almost double the breadth of the scape; the scape and the base of the flagellum are more or less obscure testaceous. The collar is more or less blackish close to the head and legs. Scutellum sharply raised from the scutum all round; the base rounded, as is also the top; at the apex it is more truncated, and bears a well-defined keel and has an inward slope. Metanotum large, flat, the sides straight, projecting at the outer edges into a blunt tooth and retreating from there to the centre (so that the apex is semicircular), and with a border all round. On the postscutellum are two large stout black teeth, joined at the base. Mesopleura hollow, striated. Mesonotal sutures wide, shallow, somewhat canaliculated.

The abdomen in the typical *Trimorus* is said to be rather long; but this is not the case with the present species, in which it is only a little longer than the head and thorax together.

Subfam. *DIAPRINÆ.*

The European forms only of this small subfamily have been studied to any appreciable extent, the American species being scarcely known.

PARAMESIUS.

Paramesius, Westwood, Lond. & Edinb. Phil. Mag. i. p. 129 (1832).

Paramesius will, no doubt, prove to be numerous in species when more attention has been paid to the genus. It has not hitherto been recorded from beyond Europe.

A. *Postscutellum bearing a thick curved spine; third joint of the antennæ at least three times the length of the second; vertex raised, separated by furrows from the sides.*

1. **Paramesius fasciatipennis.** (Tab. XVIII. fig. 18, ♀.)

Niger, pedibus piceo-rufis; petiolo quam segmentum 2^{m} fere longiore; alis fumatis, albo-fasciatis. ♂ ♀. Long. 6–7 millim.

Hab. PANAMA, Bugaba, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

Antennæ pilose; second joint about one third of the length of the third, the latter a little longer than the fourth, the fifth shorter than the preceding, the sixth distinctly longer than broad, the seventh thicker and scarcely longer than broad; the remaining joints much thicker, broader than long; the apical joint conical and thinner, if any-

thing shorter than the twelfth. Vertex raised, completely surrounded by a hollow; behind in the middle, and clearly separated from the surrounding parts, is a hollow projecting hood-like process, beneath which the prothorax is attached; eyes bordered all round. Mesonotal sutures deep, wide. In front of the scutellum is a wide transverse furrow; the foveæ at the base of the scutellum are longer than broad, narrowest at the base, where they approach each other; on either side of the scutellum is a similar but smaller fovea. Petiole not much shorter than the second segment; a deep channel in the centre, there being another channel along each side. On the head behind, on the prothorax, on the metapleura, and on the underside of the petiole are thick masses of white woolly hair, thickest on the head and prothorax; the apex of the abdomen bears some long hairs. Wings hairy, the apex ciliated; beyond the stigma, on either side, are two somewhat triangular white fasciæ; the apex is white, with a fuscous cloud at the extreme end, this cloud being sometimes united to the black central part at its middle; the basal part bears some lighter clouds. The base of the flagellum is usually, and the petiole and abdomen are sometimes, more or less piceous.

The male has the antennæ closely pilose, of nearly uniform thickness throughout, the third joint more than one third longer than the fourth, the latter curved at the base; otherwise as in the female.

2. **Paramesius maculipennis.** (Tab. XVIII. figg. 11, ♂; 12, ♀.)

Niger, pedibus piceo-rufis; petiolo quam segmentum 2^{m} dimidio breviore; alis fumatis, albo-fasciatis. ♂ ♀. Long. 6–7 millim.

Hab. Panama, Bugaba, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

Similar in coloration to the preceding species, but differing as follows:—The antennæ are longer and thicker, and the third joint is longer compared to the fourth; the centre of the mesonotum is raised, this raised portion being carinated towards the scutellum, and there is a wide hollow on either side of it; there is another hollow beyond and external to this one; and touching the transverse furrow in front of the scutellum is a deep fovea, twice as long as broad. The foveæ at the base of the antennæ are wider and deeper, and there is another large fovea outside them; at the side of the scutellum behind there is a large deep fovea open at the apex. The petiole is much shorter and wider, and in the middle of the central channel is a ridge which extends to near the middle.

The base and the apical joints of the antennæ are usually piceous-red, and the thorax and abdomen are more or less tinged with the same colour.

B. *Postscutellum pyramidal; second joint of the antennæ scarcely half the length of the third; vertex not separated by furrows from the sides.*

3. **Paramesius canaliculatus.** (Tab. XVIII. fig. 24, ♀.)

Niger, flagello, antennarum basi pedibusque rufo-piceis; alis fumatis, apice fere hyalinis. ♀.
Long. 4½ millim.

Hab. Mexico (*Sallé*).

Antennæ with the second joint one half shorter than the third, the fifth one fourth shorter than the fourth, and the sixth thicker and shorter than the fifth; the seventh and eighth joints globular, as broad as long; the remaining joints (forming the club) much wider, broader than long, the last joint bluntly conical, and narrower and a very little shorter than the twelfth. Head with a few long scattered black hairs; the woolly hair on the collar moderately thick, griseous. Foveæ at the base of the scutellum large, longer than broad, finely punctured. Postscutellum pyramidal. Petiole three times as long as broad, deeply and widely channelled in the middle; the sides and lower surface covered with woolly hair. The wings are subhyaline beyond the stigma, this hyaline portion forming an elongated fascia close to the border, but clearly separated from the hyaline part at the apex; the stigma scarcely projects downwards from the costa.

C. *Postscutellum pyramidal, but not so much elevated in the centre; the second joint of the antennæ as long as the third; vertex not separated by furrows from the sides.*

4. **Paramesius chiriquensis.** (Tab. XVIII. fig. 15, ♀.)

Niger, nitidus, geniculis tarsisque piceis; alis fere fumatis, nervis fuscis. ♀.
Long. fere 4½ millim.

Hab. Panama, Volcan de Chiriqui 8000 feet (*Champion*).

Antennæ scarcely so long as the thorax and abdomen united; sparsely clothed with hair, the basal joint more distinctly so; the latter as long as the following three joints united; the second joint nearly as long as the third, which is about one third longer than the fourth; the eighth to the twelfth joints broader than long, and gradually becoming broader outwardly; the thirteenth twice as long as the twelfth and conical at the apex. Head and thorax with scattered hairs; parapsidal furrows complete; three foveæ at the base of the scutellum; postscutellum pyramidal; metanotum irregularly and roughly reticulated. Petiole nearly three times longer than broad, with two stout keels down the centre and one on either side; the base of the first segment with three grooves, the central groove the longest. Tibiæ covered with stiff white hairs.

SPILOMICRUS.

Spilomicrus, Westwood, Lond. & Edinb. Phil. Mag. i. p. 129 (1832).

This genus contains numerous European species; it has been recorded from North America.

1. **Spilomicrus tinctipennis.** (Tab. XVIII. fig. 17, ♀.)

Niger, basi flagello antennarum, petiolo pedibusque rufo-piceis; alis fere fuscis. ♀.
Long. $1\frac{3}{4}$ millim.

Hab. PANAMA, Bugaba (*Champion*).

Antennæ as long as the abdomen and half of the thorax united; second joint shorter than the third, the latter longer than the fourth, the fifth as long as broad; the other joints all broader than long, and becoming gradually broader towards the apex, the penultimate joint being more than twice as broad as long; the last joint conical, longer than broad, and longer than the preceding. Pronotum covered with white woolly hair. Postscutellum with a long, stout, curved spine. Petiole margined; the space enclosed by the keels finely punctured. The posterior femora have an indistinct border on the lower side, and at the base a blunt projecting tooth.

Subfam. *DRYINÆ.*

The raptorial claws of the fore legs are a distinctive feature of this subfamily. Species of Dryinæ are known from almost all parts of the world.

GONATOPUS.

Gonatopus, Ljungh, Weber's Beitr. zur Naturk. p. 161 (1810).

The species of this genus are all apterous in both sexes, this character readily distinguishing *Gonatopus* from the allied forms.

a. *Head and mesothorax punctured.*

1. **Gonatopus testaceus.** (Tab. XVIII. figg. 22, ♂; 23, ♀.)

Testaceus, antennarum articulis 4°–6^{m} abdominisque basi nigris. ♂ ♀.
Long. 7 millim.

Hab. PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

The first four joints of the flagellum are very slender, the other joints thicker but becoming more slender again towards the apex; the third joint is as long as the following two together. The vertex is distinctly margined at the top; from the carina the head slopes on either side, and is but slightly excavated either before or behind; the front is a little hollowed on each side of the central keel; the face is semi-perpendicular; the upper part of the head is finely punctured, glabrous; the lower

orbits of the eyes on the inner side are bordered with white depressed hair. Thorax covered with long fuscous hairs; prothorax obsoletely punctured; mesothorax closely punctured, striated over the coxæ, the anterior neck-like part margined at the sides, broader than long, its teeth blunt; metathorax punctured, transversely striated. Abdomen broad, tapering to a blunt point behind, the apex brownish, sparsely covered (especially on the sides of the dorsum) with long, white, glistening hairs. The coxæ are, for the greater part, black behind; the posterior pair are almost entirely black; on the underside they are covered with long white hair; the hinder pair are very finely punctured; the anterior pair are almost shorter than the trochanters. All the tarsi are black at the base, and the posterior tibiæ are black at the apex.

2. **Gonatopus palliditarsis.** (Tab. XVIII. fig. 21, ♀.)

Rufo-testaceus, thorace, antennarum articulis 5°–7^{m} abdominisque basi nigris, tarsis pallide testaceis. ♂ ♀.
Long. 7–9 millim.

Hab. PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

The antennæ become thickened from the fifth joint, and have their third joint nearly as long as the fourth and fifth together. Front deeply excavated, almost shining, finely punctured, sparsely pilose; over each antenna is a large fovea, and between the foveæ the head projects, this part being finely shagreened; the lower part of the orbits of the eyes bears long, depressed, silvery-white hairs. Mandibles pale testaceous, the teeth piceous. Thorax covered with rather long scattered hairs; prothorax smooth, shining, obscurely punctured in front; mesothorax almost cylindrical in front, narrow, becoming wider towards the apex, finely punctured and transversely striated, the striations becoming coarser towards the apex; scutellum almost impunctate, shining; metathorax transversely striated. Abdomen broad in the middle, rather flat, shorter than the thorax. Anterior legs much longer than the body. Coxæ finely punctured; the anterior pair more than one fourth longer than the trochanters.

The punctuation varies in intensity on the head and thorax. Sometimes the middle of the mesothorax is quite smooth, especially above, and this is nearly always the case with the pronotum. The centre of the front is often broadly black; and the back of the abdomen is sometimes suffused with fuscous.

3. **Gonatopus albomarginatus.** (Tab. XIX. fig. 1.)

Niger, antennarum basi, ore pedibusque rufo-testaceis, coxis pro parte genibusque posterioribus nigris, abdominis segmentis albo-marginatis. ♂ ♀.
Long. 6–7 millim.

Hab. PANAMA, Bugaba 800 to 1500 feet, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

Antennæ with the third joint slender, longer than the preceding two together; the

fourth joint a little longer than the fifth; the other joints subequal, much thicker than those preceding, scarcely becoming attenuated towards the apex. Head much excavated behind, not margined; closely and finely punctured all over, except above the mouth. The upper and outer orbits of the eyes bear a few rather long fuscous hairs, and the lower orbits on the inner side some closely pressed white ones. Thorax glabrous; pronotum emarginated in the middle in front, obscurely punctured. Basal region of the mesothorax one half longer than broad, margined behind and at the sides, depressed above in the middle, and clearly separated from the other part, obscurely punctured and pallid testaceous in colour; at its apex, on each side, is a blunt tooth; the anterior half of the mesothorax behind this part is transversely striated, the rest finely punctured and obscurely, transversely striated. Metathorax flat, transversely striated; its centre truncated, becoming hollowed towards the apex. Abdomen a little shorter than the thorax. Anterior coxæ rather longer than the trochanters.

The basal three joints of the antennæ and the apical joint also are testaceous; but in one specimen the latter is black. The legs are sometimes entirely without black; and the abdomen in some examples is testaceous, and only black on the top. *G. albomarginatus* seems to vary considerably in colour and also in the intensity of the punctuation of the upper surface.

4. **Gonatopus orbitalis.** (Tab. XIX. fig. 3.)

Niger, antennis (apice excepto), facie, orbitis oculorum infra tarsisque rufo-testaceis. ♀.
Long. 5 millim.

Hab. PANAMA, Volcan de Chiriqui 3000 to 4000 feet (*Champion*).

Antennæ stout, and becoming gradually thickened towards the apex; the basal joint curved and not much thicker than the second; the third joint shorter than the following two, the fourth longer than the fifth; the other joints become gradually shorter and thicker to the penultimate, the latter being more than half the length of the preceding; the last five joints are black. The head is opaque, alutaceous, and sparsely covered with long, white hair; it is not much excavated either above or behind; there is no carina leading from the ocelli to the face. Thorax sparsely covered with rather long white hairs; prothorax smooth, shining. The narrow basal part of the mesothorax is a little longer than broad, finely rugose, margined at the sides, and without tubercles, the posterior portion is smooth and shining at the base, the remaining parts and the mesopleuræ being transversely striated. Metathorax transversely striated. Pro- and mesosternum finely punctured; the latter with a stout keel down the centre and separated from the pleura by a wide and almost impunctate furrow. Abdomen sparsely covered with long white hairs. Fore and hind coxæ finely punctured, especially at the sides; the former about the same length as the trochanters. The anterior knees and the base and apex of the trochanters are testaceous; and the anterior femora and tibiæ are more or less piceous beneath.

b. *Head and mesothorax shining, impunctate.*

5. **Gonatopus dromedarius.** (Tab. XIX. fig. 2.)

Niger, nitidus, antennarum articulis 1°, 2°, 5°, 6° testaceis, pedibus rufis, coxis nigris, tarsis anticis apiceque coxarum albis, tarsis posticis pallide testaceis. ♀.

Long. 6 millim.

Hab. PANAMA, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

Antennæ slender, slightly thickened towards the apex; the third joint double the length of the first. Head broad, shining, impunctate, moderately depressed above; the orbits of the eyes in front broadly obscure brownish; the tips of the mandibles piceous. Thorax shining; metanotum shining, striated, the striæ widely separated. The prothorax above rises into a broad hump behind; the posterior part of the mesothorax and the anterior portion of the metathorax also form a hump. The anterior neck-like part of the mesothorax is longer than the posterior part, the posterior half being also white; the raised margin separating the two is sharp and distinct; behind this the mesothorax, laterally, is striolated.

6. **Gonatopus apicalis.** (Tab. XIX. fig. 4.)

Niger, coxis subtus trochanteribusque albidis, ore, femoribus posterioribus subtus, genibus, tibiis posterioribus tarsisque pallide testaceis; antennis testaceis, articulis 8°–10^{m} nigris. ♀.

Long. 6·5 millim.

Hab. PANAMA, Volcan de Chiriqui 3000 to 4000 feet (*Champion*).

Antennæ with the third joint not much longer than the fourth and fifth joints together, the fourth a little longer than the fifth; from the latter the joints are thicker than the third and fourth; the basal joint of the scape is black above, yellowish-testaceous for the rest; the basal joints of the flagellum are obscure fuscous above. Head with the front flat, deeply excavated, margined, convex and almost perpendicular behind; smooth, shining, impunctate, bearing a few rather long hairs behind; the face, the inner orbits of the eyes to a little above the middle, and the lower part of the front in the centre are obscure yellowish or whitish-testaceous. Thorax smooth, shining, except the metathorax, the latter being transversely striated and the striations wide apart; the narrow front region of the mesothorax is more than double as long as broad, margined at the sides, and bears two obtuse tubercles towards the middle; the pronotum and the mesothorax bear a few rather long white hairs, and the metanotum is closely covered with similar hairs. The bases of the abdominal segments are faintly punctured, opaque. Anterior coxæ a little longer than the trochanters.

DRYINUS.

Dryinus, Latreille, Hist. Nat. Ins. xiii. p. 228 (1804) [sec. Förster, Hymen. Stud. ii. p. 90 (1856)].

This genus is apparently more numerously represented in tropical than in temperate regions.

The group of D. MACULICORNIS.

Vertex depressed; occiput concave; ocelli in a triangle; eyes converging in front; third joint of the antennæ double the length of the first; third joint of the anterior tarsi double the length of the fourth; prothorax above bluntly keeled, longer than the mesothorax; parapsidal furrows obsolete; body rather long, narrow.

1. **Dryinus maculicornis.** (Tab. XIX. fig. 5.)

Niger, antennis testaceis cum articulis 5°–7^{m} nigris, clypeo mandibulisque albis, tarsis abdominisque apice testaceis. ♂ ♀.
Long. 6 millim.

Hab. PANAMA, Bugaba 800 to 1500 feet, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Antennæ with the apical five joints of the flagellum thicker than the basal joints; joints 7–9 brownish beneath; the basal joint white on the lower side, fuscous above. Head closely punctured, covered (especially along the eyes) with long white hair; the clypeus in the middle and the tips of the mandibles piceous; palpi fuscous. Thorax covered with rather long white hair; the pro- and mesothorax closely and somewhat strongly punctured, the former laterally, on the lower side, finely, longitudinally aciculated; metanotum coarsely, longitudinally striolated. Abdomen scarcely so long as the thorax; the basal three segments finely aciculate, the apical segment almost impunctate. The legs are sparsely covered with white hair; more or less black above, the front part white at the apex, the femora and tibiæ more or less brownish beneath; the coxæ and anterior trochanters are obscure brownish-testaceous. The wings are milky-white at the extreme base between the transverse basal nervure and the base of the stigma (which is white), and fusco-hyaline in front of the stigma.

2. **Dryinus alticola.** (Tab. XIX. fig. 6.)

Niger, antennarum articulo 5° tarsisque testaceis; alis fuscis, fascia medio apiceque hyalinis. ♀.
Long. fere 6 millim.

Hab. PANAMA, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

Head closely, longitudinally, and rather strongly punctured; vertex scarcely depressed; a narrow keel runs down from the ocelli; palpi whitish. Prothorax finely longitudinally striated; the posterior part raised into a rather long hump, which is rather sharp in the centre. Mesothorax closely and rather strongly punctured;

metanotum coarsely longitudinally striolated, the striæ almost running into reticulations; metapleuræ punctured, the punctures running into striations. Abdomen smooth, shining, shorter than the thorax. Wings as in *D. maculicornis.*

Apart from the difference in the coloration of the legs and antennæ, *D. alticola* is separated from *D. maculicornis* by the vertex being scarcely depressed, and the prothorax above distinctly separated into a lower anterior and a raised posterior part; and also by the longer metathorax and the stouter antennæ.

The group of D. RUFICEPS.

Vertex slightly depressed; occiput almost transverse; anterior ocellus considerably in front of the posterior; eyes converging in front; third joint of the antennæ more than double the length of the first, the latter a little longer than the fourth; third joint of the anterior tarsi longer than the fourth; prothorax bluntly keeled in the centre above; parapsidal furrows obsolete.

3. **Dryinus ruficeps.** (Tab. XIX. fig. 7.)

Rufus, medio antennarum, meso-, metathorace coxisque posticis nigris.
Long. 7 millim.

Hab. PANAMA, Bugaba (*Champion*).

Antennæ inserted in the lower third of the head; the joints becoming slightly thickened from the fifth; the third joint as long as the following three joints together; the fourth joint a little longer than the fifth, the latter being longer than the sixth; the apical joint one half longer than the preceding. Head longitudinally striated; behind it is but slightly convex; front excavated; eyes converging anteriorly; the orbits of the eyes with short pale hair; the two posterior ocelli situated at the extreme rear, the front ocellus larger and placed at a considerable distance from them. Prothorax half the length of the mesothorax, bluntly and roundly ridged in the back and with a fine keel in the centre; the back transversely striated, the sides obscurely rugose; its apical margin is whitish-yellow. Mesothorax coarsely rugose; in front is a smooth, impunctate part, narrower and flatter than the rest and separated from it by a ridge; scutellum raised, separated from the scutum by a wide, nearly straight, groove; pleuræ densely covered with long white pubescence. Metanotum separated from the mesonotum by a slightly curved furrow; behind this furrow is a more distinctly curved and deeper one; the metathorax is rugosely reticulated, and behind it is closely covered with white pubescence which hides the reticulations. Wings: there is a rather long mark at the base of the costal cellule, a narrower one at the end of the discoidal cellule (stretching nearly across the wing), and a broad one at the stigma.

An example probably referable to the same species has the tibiæ inclined to white in front and lined with black behind, and the abdomen with three broad black bands.

The group of D. MELANOCEPHALUS.

Vertex convex, not depressed; occiput transverse; ocelli in a triangle; eyes parallel; third joint of the antennæ about one third longer than the first; head well-developed behind, narrowed behind the eyes; prothorax shorter than the mesothorax; parapsidal furrows almost complete.

4. **Dryinus melanocephalus.** (Tab. XIX. figg. 15, 26, *var.*)

Niger, thorace, ore, antennarum articulis 1°–5^{m}, femoribus tibiisque anticis rufis, mesosterno basique femorum anticorum nigris; alis hyalinis, fusco-bifasciatis.

Long. 4–5 millim.

Hab. PANAMA, Bugaba, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Antennæ stout, thickened towards the apex, sparsely pilose. Head covered with rather long white or fuscous pubescence; coarsely rugose, the rugæ running into reticulations. Eyes margined. Thorax covered with long white hair, sparsely punctured, the metanotum at the sides transversely striolated; prothorax laterally deeply excavated; mesonotum almost impunctate; the parapsidal furrows deep, wide, not reaching to the scutellum. Abdomen shining, impunctate. Legs covered with rather long white hairs; anterior tibiæ considerably thickened.

The amount of red on the legs varies; the tegulæ are black, and usually the mesonotum near them is marked with black; the tarsi are more or less marked with testaceous; and the base of the abdomen beneath is sometimes piceous-red, and the apex is sometimes testaceous.

5. **Dryinus nigricans.** (Tab. XIX. fig. 8.)

Niger, coxis trochanteribusque anterioribus albis, ore, mandibulis, apice tarsorum, antennarum articulis 5° et 6° abdominisque apice testaceis; alis fumatis, basi et fascia medio hyalinis. ♀.

Long. 6 millim.

Hab. PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Antennæ pilose, thickened towards the apex; the basal joint whitish beneath, and scarcely twice the length of the second. Head and thorax opaque, finely punctured, densely covered with white hair; parapsidal furrows distinct, but not very broad or deep; the furrow in front of the scutellum wide and deep; metanotum finely punctured, obscurely reticulated towards the base. Abdomen smooth, shining, impunctate, and as long as the thorax. The femora bear some rather long scattered hair, and the tibiæ and tarsi are covered with a closer and thicker pile; the anterior femora are considerably thickened, and whitish beneath. Wings: the radial nervure is angled in the middle, and extends to the apex; the transverse humeral nervure is received shortly before the transverse basal nervure; the stigma is black, white at the base; the extreme base, a fascia in front of the transverse basal nervure, and a stripe in front of the stigma are clear white; the apex is fainter than the middle portion.

The group of D. CHIRIQUENSIS.

Head as in D. melanocephalus; *prothorax scarcely so long as the mesothorax, quadrate (but, if anything, longer than broad), flat above, the sides straight; parapsidal furrows obsolete; metathorax with a rounded gradual slope.*

Chiefly distinguished from the *D. melanocephalus* section by the obsolete parapsidal furrows, the longer and straighter prothorax, and the radial nervure being almost obsolete from a little beyond the apex of the stigma. The antennæ are missing from the example of the single species I include in this group.

6. **Dryinus chiriquensis.** (Tab. XIX. fig. 9.)

Niger, mandibulis, basi et apice abdominis pedibusque rufo-testaceis, geniculis, coxis anterioribus tarsisque pallidis, apice femorum posticorum nigris. ♂.

Long. 5 millim.

Hab. PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Head wide, longitudinally striolate-reticulate; sparsely covered with white hair. Prothorax somewhat strongly punctured and covered with long white hair; mesothorax sparsely pilose, almost impunctate; metathorax punctured, with six small upper and three large lower areæ. Abdomen a little shorter than the thorax, shining, impunctate. Wings in greater part hyaline; there is a narrow smoky line on the transverse basal and humeral nervures, and a broad stripe at the stigma (which is white except at the apex), and the apex is also slightly clouded; the radial nervure does not extend much beyond the stigma.

The group of D. ALBITARSIS.

Vertex not depressed; occiput short, convex; eyes parallel; third joint of the antennæ shorter than the first and about one fourth longer than the second; prothorax shorter than the mesothorax.

7. **Dryinus albitarsis.** (Tab. XIX. fig. 10.)

Niger, ore, antennis, coxis, trochanteribus, femoribus tibiisque anticis rufo-testaceis, tarsis pallidis; alis hyalinis, fusco-bifasciatis, stigmate nigro, cum basi alba. ♂.

Long. fere 3 millim.

Hab. GUATEMALA, Panajachel 5000 feet (*Champion*).

Antennæ stout, longer than the head and thorax united; almost glabrous. Head finely rugosely punctured, sparsely clothed with short white hairs; eyes margined. Prothorax rugosely punctured (more coarsely so than the head), the pronotum behind not so strongly, and more shining than the rest; mesonotum aciculated; scutellum shining, impunctate; metathorax longitudinally rugosely punctured, with a curved

transverse keel where it bends downwards, and above this keel some longitudinal ones. Abdomen shining, the base laterally obscure brownish. The hind coxæ are, for the greater part, black above; the middle femora are brownish beneath; the tips of the tarsi are blackish. The wings are whitish-hyaline; the small fascia at the transverse basal nervure is irregular, that at the stigma is broad, extends right across, and is of equal breadth; the radial nervure does not extend much beyond the stigma.

Subfam. *BETHYLINÆ.*

This subfamily approaches very closely to the "aculeate" section of the Hymenoptera, and has been by some authors (*e. g.* Haliday) placed among them. The trochanters have only one joint.

SCLERODERMA.

Sclerodermus, Latreille, Gen. Crust. et Ins. iv. p. 119 (1809).
Scleroderma (Klug), Westwood, Trans. Ent. Soc. Lond. ii. p. 164 (1839), and 1881, p. 117; S. Saunders, Trans. Ent. Soc. Lond. 1881, p. 109.
Sclerochroa, Förster, Hymen. Stud. ii. p. 95 (1856).

The name *Sclerochroa* was substituted by Förster on account of *Scleroderma* being preoccupied for a genus of fungi. I do not, however, accept the rule that the same name cannot be used in Botany and Zoology.

Scleroderma has a wide range over the globe.

1. Scleroderma soror.

Scleroderma soror, Westw. Trans. Ent. Soc. Lond. 1881, p. 123, t. 5. fig. 5 [1].

Hab. MEXICO (*Coffin* [1]).

APENESIA.

Apenesia, Westwood, Thes. Ent. Oxon. p. 170 (1874); Trans. Ent. Soc. Lond. 1881, p. 130.

Apenesia appears to differ chiefly from *Scleroderma* in having the tibiæ and tarsi thickly spinose, these parts in *Scleroderma* being bare or but slightly pilose.

Four species have been described: two from the Malay region, one from the Amazons, and another from Nicaragua.

1. Apenesia chontalica.

Apenesia chontalica, Westw. Trans. Ent. Soc. Lond. 1881, p. 131, t. 7. ff. 3, 3 *a–d* [1].

Hab. NICARAGUA, Chontales [1] (*Belt*).

2. **Apenesia flavipes.** (Tab. XIX. fig. 11, ♀.)

Fulva, nitida, antennis pedibusque flavis. ♀.
Long. 6 millim.

Hab. PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Differs from *A. chontalica* in being 3½ millim. longer; in having the abdomen as long as the head and thorax united (in *A. chontalica* it is not much longer than the thorax); in the base of the mesonotum being triangular and not curved laterally, the sides being quite straight; and in the metathorax being narrowed in the middle and not at the base. The tips of the mandibles are black; the basal two joints of the anterior tarsi are sharply produced at the apex.

EPYRIS.

Epyris, Westwood, Lond. & Edinb. Phil. Mag. i. p. 129 (1832).

Epyris is numerously represented in the Neotropical region, and contains some (for the group) large and striking species. It is but poorly represented in the Old World.

A. *Prothorax short, the pronotum raised abruptly above the prosternum and broader than long; the lower discoidal cellule distinct; head rugosely punctured.*

1. **Epyris rugifrons.** (Tab. XIX. fig. 12.)

Niger, pilosus, capite prothoraceque rugosis, metanoto reticulato; alis fuscis. ♂.
Long. 10 millim.

Hab. GUATEMALA, Las Mercedes 3000 feet, Cerro Zunil 4000 to 5000 feet (*Champion*).

Antennæ as long as the thorax and abdomen united, densely covered with long white hair; the basal joint as long as the third. Head strongly rugosely punctured, covered with long fuscous hair; a small depressed impunctate space in front of the ocelli; mandibles punctured. Prothorax rugosely punctured, covered with long fuscous hair; a broad transverse furrow at the apex of the pronotum. Mesonotum sparsely punctured laterally, and bearing there some rather long fuscous hair; parapsidal furrows complete. Scutellum sparingly punctured, pilose. Metanotum irregularly keeled and reticulated; the top narrowed towards the apex (giving it a somewhat triangular shape); the apex semiperpendicular, irregularly punctured or blistered. Abdomen elongate oval in shape, shining, impunctate, the apex red and pilose. Legs densely covered with a greyish pile, which is very close and stiff on the tibiæ and tarsi. Claws bifid.

2. **Epyris coxalis.**

Niger, capite punctato, scapo antennarum, coxis, trochanteribus femorumque basi albis; alis fuscis, apice violaceis. ♂.
Long. fere 9 millim.

Hab. PANAMA, Bugaba (*Champion*).

Antennæ thick, densely pilose, the first joint a little longer than the third. Head shining, covered with shallow widely separated punctures; antennal depressions deep and wide; mandibles almost impunctate. Thorax sparsely punctured, the punctures very shallow. Parapsidal furrows not reaching to the scutellum; the transverse furrow in front of the latter wide and deep. Scutellum almost without punctures. Metanotum irregularly punctured and blistered; a stout keel runs down the centre and a wide and deep furrow down either side; the apex with a moderate slope; the sides transversely striated. Abdomen shining, the sides and ventral surface inclining to piceous. Femora and tibiæ sparsely, the tarsi densely, pilose.

3. **Epyris erythropoda.** (Tab. XIX. fig. 14.)

Niger, capite rugoso, antennis, ore, mandibulis, pedibus abdominisque apice rufis; alis hyalinis, cum fascia medio fumata; tegulis testaceis; coxis nigris. ♂.
Long. 10 millim.

Hab. PANAMA, Bugaba, Volcan de Chiriqui 3000 to 4000 feet (*Champion*).

Antennæ shorter than the thorax; the scape bare, shining, curved, longer than the third joint; the flagellum densely pilose, tapering perceptibly towards the apex; the third joint somewhat longer than the fourth. Head not much broader than the mesothorax, rather long, sparsely covered with long fuscous hairs, rugosely punctured; a shining furrow in the centre between the eyes; antennal tubercles large, reddish, a sharp projecting keel between them; mandibles with some large separated punctures, shining, the teeth black; palpi rather long, pilose, testaceous. Pro- and mesothorax bearing large punctures; the sternum and pleuræ more strongly punctured than the upper sides, except a shining impunctate space on the hinder part of the mesopleura; scutellum shining, finely but not closely punctured. The base of the metanotum bears some stout longitudinal keels; the rest of the flat posterior part is strongly transversely striolated, the two hinder parts being separated by a stout curved keel; the centre is depressed; the semiperpendicular apex is closely and strongly transversely punctured, except at the extreme top, the latter being excavated and the centre hollowed; the deep oblique depression at the base of the metapleuræ is shining and striated. Abdomen shining; the apex blunt, depressed in the centre, and very pilose, the hairs being fulvous. Legs densely pilose. Wings: radial nervure curved at the base; the recurrent nervure very faint, almost obsolete.

B. *Prothorax elongated, longer than broad, the pronotum not raised abruptly above the prosternum; the lower discoidal cellule usually obliterated; head smooth or but slightly punctured.*

4. **Epyris viridis.** (Tab. XIX. fig. 16.)

Viridis, flagello antennarum abdomineque nigris, trochanteribus, tibiis tarsisque testaceis; alis fumatis, apice fusco-violaceis, stigmate nigro. ♀.

Long. 7 millim.

Hab. GUATEMALA, San Juan in Vera Paz (*Champion*).

Antennæ stout; the first joint as long as the following three joints united; the second joint a little longer than the third. Head shining, finely punctured; eyes large, not reaching to the mandibles but near to the front ocellus, being situated more to the rear than to the front. Pronotum finely aciculated, and bearing some scattered punctures, the pleuræ and sternum impunctate. Mesonotum finely aciculated, without punctures; the parapsidal furrows complete, slightly converging towards the scutellum, narrow; a deep elongate fovea on the mesopleuræ. Metanotum with five distinct keels down the centre and another down the side, a keel round the top of the apex and another down the centre of the latter; between the central keels it is transversely but rather irregularly striolated; the sides and apex are finely transversely, the pleuræ longitudinally, striolated. The apex of the abdomen is acutely pointed and brownish; the segments at their point of junction are also of this colour.

As with most metallic-green species, the green runs into blue and coppery shades.

5. **Epyris nitidiceps.** (Tab. XIX. fig. 17.)

Niger, nitidus, capite fere punctato, antennis, mandibulis, pedibus abdominisque apice rufis; alis fumatis, stigmate et nervis pallide testaceis. ♂ ♀.

Long. ♀, 9 millim.; ♂, fere 6 millim.

Hab. PANAMA, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

Antennæ a little longer than the thorax; the scape bare; the flagellum shortly pilose; basal joint thickened, curved on the lower side, and as long as the following three joints united; the second and third joints subequal and a little shorter than the fourth. Head shining, bearing fine scattered punctures. Mandibles finely punctured, sparsely covered with glistening white hairs; apical tooth blackish, acute; opposite to the latter are two short blunt teeth. Pro- and mesothorax shining, sparsely and very finely punctured; scutellum impunctate. Metanotum with five keels in the centre, the central keels straight, the lateral ones more curved; the keeled central portion is transversely striated; the apex is semiperpendicular; the sides are smooth, the central part hollowed and transversely striated; the non-striated parts of the metathorax are indistinctly aciculated. Abdomen shining. Legs (especially the femora) stout; the tibiæ and tarsi covered with a stiff bristle-like pile; tips of the tarsal joints blackish.

The insect I treat as the male of the same species is similar to the female in coloration and sculpture. The flagellum is sparsely pilose, and the basal joint of the antennæ is (if anything) shorter than the third, the latter being longer than the fourth. The femora (particularly the hinder pair) incline to fuscous.

6. **Epyris testaceipes.** (Tab. XIX. fig. 18.)

Niger, sparse punctato, antennis basi late, tegulis, pedibus abdominisque apice testaceis; alis fere hyalinis, apice fumatis. ♂ abdomine brunneo-testaceis.
Long. 6 millim.

Hab. PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).

Antennæ a little longer than the thorax; the first joint curved, longer than the second and third joints united; the third joint longer than the fourth, and fully three times the length of the second; joints 3–13 densely pilose. Head almost alutaceous, covered with shallow scattered punctures; behind and laterally bearing some rather long fuscous hairs; eyes large, reaching to the base of the mandibles and behind to the front ocellus; mandibles finely punctured, reddish, sparsely covered with white hairs, the teeth blackish. Pro- and mesothorax alutaceous, sparsely punctured, clothed with scattered fuscous hairs. Prothorax above somewhat shorter than the mesothorax; dilated at the apex. Parapsidal furrows complete. There are no foveæ at the base of the scutellum; the latter is more sparsely punctured than the mesonotum. Metanotum at the base and down the centre (except at the apex) irregularly reticulated and with a keel down the middle; the sides and apex (which has a semiperpendicular slope) finely rugose. Abdomen broader than the thorax; the sides covered with pale hair. Wings: radial nervure broadly curved; second discoidal cellule open at the apex.

Not unlike the male of *E. nitidiceps*; but that differs from the same sex of *E. testaceipes* in having foveæ at the base of the scutellum, in the parapsidal furrows being deeper, wider, and not reaching to the base of the mesonotum, in the eyes being much smaller and not reaching to the ocelli, in the legs being reddish (not testaceous), in the apex of the metanotum not being rugose, and in the antennæ being longer.

7. **Epyris multicarinatus.** (Tab. XIX. fig. 13.)

Niger, basi et apice femorum, apice coxarum, trochanteribus, tibiis tarsisque anticis, ore mandibulisque rufis; capite fere punctato; metanoto striolato; alis fumatis.
Long. 6 millim.

Hab. PANAMA, Volcan de Chiriqui 2000 to 4000 feet (*Champion*).

First joint of the antennæ longer than the second, third, and fourth joints united; the latter a little longer than the second and blackish at the apex (the other joints absent). Head and thorax shining, almost impunctate; eyes large, reaching nearly to the mandibles, but not to the ocelli; the latter are placed quite close to the

occiput; mandibles finely punctured. Prothorax as long as the mesothorax, dilated behind. Parapsidal furrows narrow, shallow, complete. Scutellar foveæ large, deep. Metanotum with seven stout keels down the centre; the sides shining, impunctate; the apex almost perpendicular. Abdomen acute at the apex, shining; the fourth and following segments testaceous.

8. **Epyris bugabensis.** (Tab. XIX. fig. 19.)

Niger, basi antennarum rufa, tegulis pedibusque pallide testaceis, coxis fere albis; alis hyalinis, apice fumatis, nervis stigmateque fusco-testaceis.
Long. 5 millim.

Hab. PANAMA, Bugaba (*Champion*).

Antennæ as long as the head and thorax united; the flagellum somewhat densely covered with long hairs; the first joint scarcely longer than the second and third joints united; the latter longer than the fourth and four times the length of the second. Head shining, sparsely punctured; eyes scarcely reaching to the base of the mandibles nor to the ocelli; mandibles finely punctured. Pro- and mesothorax shining, impunctate, the former shorter than the latter. Paraspidal furrows moderately wide, not reaching to the scutellum; the latter is without distinct foveæ and impunctate. Metathorax longer than the mesothorax; the metanotum is transversely striolated, and with two stout keels down the centre; the apex is strongly aciculated. Apex of the abdomen truncated, pilose. The femora (especially the anterior pair) are of a redder hue than the tibiæ; the hinder pair are fuscous above and beneath.

9. **Epyris guatemalensis.** (Tab. XIX. fig. 20.)

Niger, sparse punctato, flagello antennarum testaceo, tibiis tarsisque piceis; alis fere hyalinis, nervis stigmateque testaceis. ♀.
Long. 4 millim.

Hab. GUATEMALA, near the city (*Champion*).

Antennæ as long as the thorax; the first joint strongly curved, as long as the following two joints united; the second and third joints subequal. Head flat, narrower than the thorax, obscurely alutaceous; eyes oval, a little longer than the basal joint of the antennæ, situated close to the mandibles and before the middle. Pro- and mesonotum shining, the former longer than the latter. Parapsidal furrows reaching to the scutellum, but not to the base of the mesonotum. Scutellar foveæ shallow, round. Metanotum finely longitudinally rugose, the central part more strongly so than the lateral, the more rugose central part narrowed towards the apex; the apex semiperpendicular, finely rugose. Abdomen shorter than the thorax, shining, the apex obscure piceous.

PARASIEROLA.

Parasierola, Cameron, Trans. Ent. Soc. Lond. 1883, p. 197.

This genus agrees with *Isobrachium* in not having parapsidal furrows; but differs in having a complete upper discoidal cellule, the lower one being entirely absent. There is a distinct prostigma, in which point it differs from *Epyris*. Its nearest allies are *Sierola* and *Goniozus*; the former is readily known from *Parasierola* by the complete radial cellule, the latter by the incomplete upper discoidal cellule.

So far as at present known, the genus is confined to America.

1. **Parasierola lata.** (Tab. XIX. fig. 21.)

Nigra, nitida, capite sparse punctato, ore, trophi, tegulis, antennis pedibusque rufo-testaceis; alis fuscis, basi fumatis, nervis fusco-testaceis, stigmate nigro. ♀.

Long. 5 millim.

Hab. PANAMA, Bugaba (*Champion*).

Antennæ scarcely so long as the thorax; the first joint enlarged, a little shorter than joints 2–4 united; the third joint double the length of the second and somewhat longer than the fourth; the intermediate joints are broader than long; the thirteenth is one half longer than the preceding. Head large, scarcely so wide as the thorax, almost shining, covered with large scattered punctures; transverse behind; a narrow keel runs down from the centre to the mouth; eyes oblong, situated in the middle. Thorax shining, impunctate, except the metanotum at the sides, the latter parts being shagreened; a deep, wide, transverse furrow at the base of the scutellum. Abdomen as long as the thorax, becoming gradually narrowed to the apex; the segments unequal. Wings: the upper discoidal cellule is longer than broad; the lower nervure straight; the upper nervure curved; the basal nervure is the larger.

2. **Parasierola opaca.** (Tab. XIX. fig. 23.)

Nigra, opaca, antennis, mandibulis pedibusque rufo-testaceis, femoribus posticis nigro-lineatis; alis hyalinis, apice fere fumatis, nervis pallidis, stigmate fusco. ♀.

Long. 4 millim.

Hab. GUATEMALA, Mirandilla 1700 feet (*Champion*).

First joint of the antennæ as long as the second and third joints united; the second, third, and fourth joints subequal. Head slightly broader than the mesothorax, opaque, alutaceous, with scattered punctures; clypeus carinate; eyes oblong. Prothorax broader than long, if anything shorter than the mesothorax, alutaceous, almost shining. Scutellum more shining than the mesonotum; its transverse furrow shallow, indistinct. Metanotum opaque, shagreened; the centre raised into an elongated triangle; the apex shining, semiperpendicular, not separated from the flat basal part. Abdomen longer

and not much narrower than the thorax. The base of the hind coxæ is black; the hind femora are broadly lined above and beneath with black. Wings: the discoidal cellule is rounded at the apex, where it is double the width of the base; the lower side is longer than the upper.

3. **Parasierola palliditarsis.** (Tab. XIX. fig. 22.)

Nigra, antennis articulis 1°–9^{m} rufo-testaceis, apice coxarum, trochanteribus, geniculis, tibiis tarsisque albo-testaceis, tegulis fuscis; alis fumato-hyalinis, nervis testaceis, stigmate fusco. ♀.
Long. 4 millim.

Hab. GUATEMALA, Mirandilla 1700 feet (*Champion*).

Head alutaceous, semiopaque; the clypeus carinate; eyes large, oblong, situated nearer the front than behind; occiput slightly convex. First joint of the antennæ longer than the following two joints united; the third joint a little longer and thinner than the second and double the length of the fourth. Mandibles piceous. Prothorax longer than broad, longer than the mesothorax, alutaceous; mesonotum more shining, shagreened; scutellum shining, impunctate or nearly so, the transverse furrow at its base shallow; metanotum finely rugose, the centre shining and impunctate. Abdomen as long as and broader than the thorax, becoming narrower from the second segment; the segments at their points of junction are testaceous. Wings: the upper discoidal cellule is truncated at the base and apex, of nearly equal length above and beneath; the upper and lower nervures but slightly curved.

MESITIUS.

Mesitius, Spinola, Mem. Accad. Torino, ser. 2, xiii. p. 72 (1853).
Isobrachium, Förster, Hymen. Stud. ii. p. 96 (1856); Marshall, Ent. Monthly Mag. x. p. 222 (1874).

Westwood (Trans. Ent. Soc. Lond. 1881, p. 125) refers *Heterocœlia*, Dahlbom (Hym. Europ. ii., Chrysididæ, p. 21), to *Mesitius*; but as *Heterocœlia* (supposing that it agrees with it in other respects) has complete parapsidal furrows, I am rather doubtful if it can be regarded as synonymous. The wings are very much as in *Epyris*, but the hind pair are less developed or much more indistinct.

The genus is European, but has not, I think, been recorded previously from any part of America.

1. **Mesitius longicollis.** (Tab. XIX. fig. 24.)

Niger, opacus, metanoto striolato, antennis, trochanteribus, femoribus ex parte, tibiis tarsisque rufo-testaceis; alis hyalinis, nervis pallide testaceis. ♀.
Long. fere 5 millim.

Hab. MEXICO (*Sallé*).

Antennæ scarcely so long as the thorax; the first joint curved, nearly as long as the

following three joints united; the second and third joints subequal; the other joints nearly equal in length. Head and thorax opaque, rather densely pilose, finely punctured, alutaceous; the metanotum transversely striated, and with five keels down the centre; the metapleuræ finely rugose. Head elongated, as broad as the thorax; the occiput margined, scarcely transverse; eyes small, oval, situated in the middle. Prothorax longer than the mesothorax, becoming considerably broader towards the apex. Scutellum with some minute shallow punctures, narrowed towards the apex; the depression at its base wide and deep. Metathorax longer than the prothorax; the apex margined at the top, and with a slight slope. Abdomen shorter than the thorax, shining, impunctate, pilose towards the apex; the segments brownish at their point of junction. The mandibles are piceous-red; the tegulæ pale testaceous. The anterior and posterior femora are more or less blackish, the intermediate femora marked with black behind.

CALYOZA.

Calyoza, Westwood, Trans. Ent. Soc. Lond. ii. p. 56, t. 7. figg. 11 *a–c* (1837); Thes. Ent. Oxon. p. 157 (1874).

I am exceedingly doubtful if the species described below can be referred to *Calyoza* (an African genus); but having only one sex I do not think it is advisable to form a new genus for its reception.

1. **Calyoza (?) westwoodi.** (Tab. XIX. fig. 25, ♂.)

Capite, pro- et mesothorace nigro-cæruleis, metathorace abdomineque nigris, antennis fuscis, tibiis tarsisque testaceis; alis fere hyalinis, nervis pallide testaceis. ♂.

Long. fere 4 millim.

Hab. PANAMA, Bugaba (*Champion*).

Antennæ apparently 13-jointed; the basal joint more than double the length of the second; the third joint not half the length of the second; the fourth joint nearly as long as the first, produced into a sharp point at the apex; the fifth joint produced still more, but not forming a ramus; the succeeding joints each with a rather long ramus, the rami gradually becoming shorter towards the apex. Mandibles large, minutely toothed, the apical tooth not much larger than the others. Front between the antennæ acutely carinate; eyes large, indistinctly margined, situated in the middle; ocelli in a triangle. Prothorax large, transverse, quadrate, wider than long; a distinct keel in front and along the edge of the pronotum and above the sternum. Parapsidal furrows complete, sinuated. There is a large fovea on either side of the base of the scutellum, the two foveæ being united by a shallow furrow. Wings with the median and submedian cellules complete; the radial cellule open at the fore margin; the other cellules obsolete; there is an indistinct prostigma.

Head, pro- and mesothorax, with the scutellum, closely and finely punctured, shining. Metanotum very shining, finely transversely striated, and with three longitudinal keels in the middle; the central keel straight, the lateral ones curved inwardly; there are two transverse keels across them near the centre; the apex is almost perpendicular, keeled at the top, and with a keel down the middle. Abdomen shining, the base hollowed in the middle. The base of the antennæ and the apical six joints are obscure testaceous; the other joints fuscous-black. The coxæ and the greater part of the femora are black; the four hinder tibiæ are in great part fuscous-black. The front legs are stout, the femora especially; the middle legs are more slender than the posterior. The anterior spurs are long, curved, and slender.

Fam. CHRYSIDIDÆ.

Comparatively few species of this elegant family are known from the Neotropical region. The North-American Chrysididæ have been monographed by Aaron (Trans. Am. Ent. Soc. xii. pp. 209–248); this author divides the family into four subfamilies, all of which are represented in our fauna.

Subfam. *CLEPTINÆ.*

Cleptes is the only genus included hitherto in this subfamily; but the characters given for the group by Aaron will have to be altered if *Amisega* is to be included in it.

AMISEGA.

Antennæ 13-jointed, inserted immediately over the mouth. Eyes large, parallel, reaching near to the base of the mandibles, and almost to the back of the head. Prothorax quadrate, broader than long, slightly narrowed in front and shorter than the mesothorax. Parapsidal furrows complete. Postscutellum simple, not projecting. Metathorax and median segment with a gradual slope to the apex, and without teeth or projections of any kind; a margined furrow runs down the centre and on either side of the metanotum. Abdomen with four segments; the basal two segments large and subequal, the apical segment small. Marginal cellule elongated, complete.

This genus agrees with *Cleptes* in having the face convex, without an antennal groove, and in the form of the abdomen; but it differs in having the prothorax broader than long and not much narrowed in front, as well as being shorter than the mesothorax, and in having the metathorax rounded and not angled laterally.

I include in *Amisega* a single species from the State of Panama.

1. **Amisega cuprifrons.** (Tab. XX. figg. 2, 2 *a*.)

Viridis, antennis, abdomine pedibusque nigro-cæruleis, capite cupreo; capite, pro- mesothoraceque punctatis; alis fumatis.

Long. 9 millim.

Hab. PANAMA, Bugaba (*Champion*).

Head strongly punctured, sparsely covered with long black hairs. Pronotum more

strongly and coarsely punctured; the prosternum shining, obscurely punctured. Mesonotum not so strongly punctured as the pronotum, the centre more finely than the sides; mesopleuræ and sternum coarsely punctured. Metanotum almost impunctate, except at the sides; median segment with scattered, shallow, indistinct punctures; metapleuræ excavated, impunctate. Abdomen glabrous above; the ventral surface (especially at the apex) bearing long black hair and finely punctured; the upper surface obsoletely punctured. Legs stout, covered with pale hair, which is longest on the coxæ; the latter are punctured. The pro- and mesothorax have coppery tints; the metathorax has a decided bluish tinge.

Subfam. *ELAMPINÆ.*

Seven genera are recorded by Aaron from North America as belonging to this subfamily; but three only are known to me from our region.

NOTOZUS.

Notozus, Förster, Verh. Ver. pr. Rheinl. x. p. 331 (1853); Aaron, Trans. Am. Ent. Soc. xii. p. 217 (1885).

Eight North-American species of this genus are known.

1. **Notozus nitidus.** (Tab. XX. figg. 3, 3 *a.*)

Notozus nitidus, Aaron, Trans. Am. Ent. Soc. xii. p. 218 [1].

Hab. North America, Montana and California [1].—Mexico, Presidio (*Forrer*).

HEDYCHRUM.

Hedychrum, Latreille, Hist. Nat. Crust. et Ins. iii. p. 317 (1802); Aaron, Trans. Am. Ent. Soc. xii. p. 222 (1885).

A widely distributed genus.

1. **Hedychrum violaceum.**

Hedychrum violaceum, Brullé, Hist. Nat. Ins. Hymén. iv. p. 51; Norton, Trans. Am. Ent. Soc. vii. p. 238; Aaron, Trans. Am. Ent. Soc. xii. p. 223 [1].

Hedychrum asperum, Brullé, Hist. Nat. Ins. Hymén. iv. p. 52; Norton, Trans. Am. Ent. Soc. vii. p. 238.

Hedychrum wiltii, Cresson, Proc. Ent. Soc. Phil. iv. p. 305; Norton, Trans. Am. Ent. Soc. vii. p. 237.

Hedychrum louisianæ, Norton, Trans. Am. Ent. Soc. vii. p. 237.

Hab. North America, United States [1], generally distributed.—Mexico [1].

According to Aaron this is a very variable species.

HEDYCHRIDIUM.

Hedychridium, Abeille de Perrin, Ann. Soc. Linn. de Lyon, xxxvi. p. 35 (1879); Aaron, Trans. Am. Ent. Soc. xii. p. 221 (1885).

This genus (or subgenus) merely differs from *Hedychrum* in the claws having a small

perpendicular tooth in the middle, this being absent in *Hedychrum*; the latter has the claws cleft at the apex.

1. **Hedychridium cressoni.**

Hedychrum cressoni, Norton, Trans. Am. Ent. Soc. vii. p. 239[1].

Hab. MEXICO[1].

2. **Hedychridium guatemalense.** (Tab. XX. figg. 4, 4 *a*.)

Green, with bluish and golden reflections. Head and thorax coarsely rugosely punctured, the scutellum and metanotum more strongly than the mesonotum; the central part of the metanotum narrowed towards the apex; the sides of this central part with a distinct margin, and raised above the edges of the metanotum, which are roughened by irregular striæ, and not coarsely punctured; the sides project at the apex into an acute triangular projection; the mesopleuræ are coarsely rugosely punctured; the metapleuræ are deeply excavated, smooth, shining, and impunctate. Abdomen shining; the base concave; the first and second segments are closely punctured; the third segment is more strongly punctured, especially behind, and is depressed round the extreme apex; the latter is slightly incised in the middle; the second segment is large, bluish in the middle and at the base; the ventral surface is sparsely punctured, and keeled down the middle. The legs are sparsely covered with rather long white hair; the hind coxæ are finely punctured; the hind tibiæ are grooved and rather rough on the outer side; the apical joints of the tarsi are blackish; the claws have a single median tooth, much smaller than the terminal. The front is moderately hollowed, keeled down the centre and transversely striated. The mandibles are black. Looked at from above the head in front is transverse and nearly so behind; the ocelli are placed almost in the centre.

Length 9 millim.

Hab. GUATEMALA, Zapote, Panzos (*Champion*).

3. **Hedychridium miliare.** (Tab. XX. figg. 5, 5 *a*.)

Head concave in front and behind; the front deeply excavated, the excavation reaching near to the ocelli, and shining; at the top smooth, the lower half transversely striated and keeled down the centre; mandibles and palpi brownish; the ocelli are placed nearer the frontal excavation than the occiput. The head and pronotum are rugosely punctured, the mesonotum much more strongly so; the scutellum, mesopleuræ, and metanotum are still more strongly punctured; the pro- and metapleuræ are deeply excavated, smooth, and shining. The sides of the metathorax at the apex project into a blunt, shining, impunctate, knob-like point. Abdomen closely punctured, the sides of the first and third segments more strongly than the second (especially the latter

towards the apex); the third segment has a short, shining, impunctate furrow immediately before the apex in the centre; the ventral surface is shining and punctured, but not strongly so. The hind coxæ and femora are punctured; the four hind tibiæ are furrowed and bear some large scattered punctures; the apical joints of the tarsi are brownish.

Length 8 millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

A smaller insect than *H. guatemalense*, and easily known from it by the apex of the abdomen not being notched, and by its having a short, broad, and deep furrow in the centre. In both species the postscutellum is as in *H. dimidiatum* (Say) and *H. viride* (Cresson); in all four there is a triangular punctured area below the postscutellum.

Subfam. *CHRYSIDINÆ.*

Of this subfamily only two American genera are known—*Chrysis* and *Stilbum*. The latter is American on the authority of Aaron, who (Trans. Am. Ent. Soc. xii. p. 243) records *S. amethystinum* (Fabr.) from Ontario, a species known from the Palæarctic, Oriental, and Australian regions.

CHRYSIS.

Chrysis, Linnæus, Syst. Nat. ed. xii. i. p. 947 (1767).

The most extensive genus of Chrysididæ. Forty North-American species are known, and many inhabit the Neotropical region. It has a wide range over the Old World.

i. *Apical margin of the third abdominal segment entire.*

1. **Chrysis mexicana.** (Tab. XX. figg. 10, 10 *a*.)

Dull emerald-green, with bluish tints on the legs and thorax; broad, obovate, covered densely with a moderately long fuscous pubescence. Head, pro- and mesonotum closely and uniformly punctured; metanotum with the punctures larger, more irregular, and more widely separated; pleuræ with the punctures still larger, and running into reticulations; basin of face not very deeply excavated, transversely striated. Lateral margin of metathorax acutely triangularly pointed, punctured. Abdomen with the first and second segments uniformly covered with shallow, clearly separated punctures; the third segment more strongly punctured; the base of the first segment almost transverse. Apical margin of the third segment rounded (but not forming an arc of a circle, not being broad enough), entire, the base not angled; the apex without pits, but with a distinct margin, in front of which there is a narrow groove. Antennæ black, the

scape metallic green. Legs green, punctured, covered with long fuscous hair; the tarsi black, the spurs pale. Wings smoky, somewhat paler at the base.

Length 8 millim.

Hab. MEXICO, Zacatecas city (*Höge*).

Two specimens from Presidio (*Forrer*) apparently also belong to this species. They are smaller (scarcely 7 millim.), and have the abdomen more strongly punctured, duller, and with scarcely any blue tints; but otherwise do not differ appreciably.

2. **Chrysis sonorensis.** (Tab. XX. figg. 9, 9 *a*.)

Green, with cobalt-blue spots, the head with brassy tints; narrowish, linear; closely and uniformly punctured, but if anything more strongly on the head, pro- and metathorax; the abdomen not so strongly and more closely punctured than the thorax, the third segment with a coarser punctuation than the second. Basin of face with a very shallow excavation, punctured. Eyes small, oblong. Lateral angles of the metathorax not projecting much, and not outwardly, the projection not reaching to the apex of the metathorax, which is rounded inwardly between the apex of the projection and the centre. Abdomen longer than the thorax, the base scarcely excavated; the apex of the third segment raised, projecting upwards (especially in the centre), broadly, but not deeply, retreating backwards in the middle; the eight distinct foveæ are large, longer than broad, and moderately deep in the centre, becoming ill-defined laterally; the third segment is depressed somewhat broadly at the base, broadly raised in front of the foveæ; the foveæ-bearing part of the segment is distinctly narrower than the rest of the segment. The pubescence is long, sparse, and fuscous. Antennæ green, black towards the apex. Legs green, with blue tints, and covered with pale hair; tarsi black. Wings clear hyaline, scarcely infuscated towards the base.

Length 8 millim.

Hab. MEXICO, Northern Sonora (*Morrison*).

Closely allied to *C. tota*, Aaron (olim *integra*, Cresson, nec Fabr.); but the latter is longer (10–12 millim.), and has not the basin of the face excavated, the eyes "nearly circular," the posterior angles of the metathorax divergent, and the foveæ much smaller and round.

ii. *Apical margin of the third abdominal segment notched in the middle.*

3. **Chrysis quadri-tuberculata.** (Tab. XX. figg. 7, 7 *a*.)

Green, with slight bluish reflections; the head and thorax covered with rather long fuscous hair; the abdomen with a short pale pubescence on the base and apex, the second segment being almost glabrous. Head and thorax coarsely and uniformly

punctured; the abdomen with the punctuation much less coriaceous, more scattered, and shallower. Basin of face shining, transversely striated; the sides densely covered with white hair. There is a transverse keel above the face, the keel being prolonged in a half-circle so as to enclose the lower ocellus. Above the ocelli are four large, shining, impunctate tubercles; the inner pair blue, and nearer each other than are the lateral ones from them. The posterior lobes of the metathorax large, coarsely punctured, and divergent. Abdomen a little longer than the thorax; the third segment notched and raised in the middle, projecting on either side of the notch into a broad distinctly separated lobe, the notch wider than the lobes, the latter shining and impunctate; the foveal groove wide and deep; the foveæ large, deep, blue, roundish, and closely set, although few in number. Antennæ green, black at the apex. Tarsi blackish. Wings hyaline, slightly infuscated in front.

Length 8 millim.

Hab. GUATEMALA, Capetillo (*Champion*).

A stout and broad insect. The peculiar tubercles on the vertex clearly ally it to *C. faceta*, Aaron, from Colorado; but that species has the abdomen metallic scarlet and gold, with ruby reflections, forming a striking contrast to the colour of the thorax.

iii. *Apical margin of the third abdominal segment with three teeth.*

4. **Chrysis parvula.** (Tab. XX. figg. 6, 6 *a*.)

Chrysis parvula, Fabr. Syst. Piez. p. 176; Dahlbom, Hymen. Eur. ii. p. 191, t. 10. f. 106; Norton, Trans. Am. Ent. Soc. vii. p. 242; Aaron, Trans. Am. Ent. Soc. xii. p. 231, t. 8. ff. 46 & 47[1].

Chrysis carinata, Say, Ann. Macl. Lyc. i. p. 82; Complete Writings, i. p. 384.

Chrysis tridens, Lep. de St.-Farg. & Serv. Encycl. x. p. 495 (*Pyria*); Brullé, Hist. Nat. Ins. Hymén. iv. p. 46.

Chrysis mucronata, Brullé, Hist. Nat. Ins. Hymén. iv. p. 45; Norton, Trans. Am. Ent. Soc. vii. p. 242.

Chrysis 3-*dentata*, Dahlbom, Dispos. Hymen. p. 15.

Chrysis virens, Cresson, Proc. Ent. Soc. Phil. iv. p. 309.

Hab. NORTH AMERICA, United States[1].—MEXICO[1], Northern Sonora (*Morrison*), Presidio (*Forrer*); GUATEMALA, El Reposo 800 feet, San Gerónimo (*Champion*); NICARAGUA, Chontales (*Janson*); PANAMA (*Boucard*).—SOUTH AMERICA, Brazil.

A widely distributed and variable species.

5. **Chrysis selenia.**

Chrysis selenia, Costa, Ann. del Mus. Zool. del Univ. di Napoli (Anno ii. 1862), 1864, p. 67, footnote no. 4[1].

" *C.* angustata, ano tridentato, scutello conico, capite thoraceque crasse punctatis; viridis, abdominis dorsi segmento primo macula minuta indeterminata, secundo margine baseos coarctato maculaque postica transverse semilunata, tertio margine baseos in lineam mediam posterius continuato margineque postico

obscure violaceis; segmenti ultimi serie ante-apicali a carina in dentem apicalem medium terminata divisa, margine apicali polito: subtus viridi-auratus; antennis, scapo et flagelli basi exceptis, fuscis.—Longit. mill. 8."

"Specie intermedia tra la *lunigera* e la *parvula*: riunendo le macchie dorsali del secondo e terzo anello addominale della prima specie, con i margini basilari degli stessi anelli strangolati e coloriti come nella seconda."

Hab. MEXICO [1].

iv. *Apical margin of the third abdominal segment with four teeth.*

* *The third abdominal segment without foveæ or a furrow before the teeth.*

6. Chrysis fasciata.

Chrysis fasciata, Fabr. Syst. Piez. p. 175; Dahlbom, Hym. Eur. ii. p. 197 [1].
Chrysis punctatissima, Spinola, Ann. Soc. Ent. Fr. 1840, p. 200 [2].

Hab. MEXICO, Ventanas 2000 feet (*Forrer*); GUATEMALA, San Gerónimo (*Champion*); PANAMA (*Boucard*).—SOUTH AMERICA, Cayenne [2], Brazil [1].

The specimen from Guatemala is brilliant emerald-green, the abdomen green with a decided bluish tinge; and, if anything, the punctuation seems stronger than usual.

7. Chrysis montezuma.

Dark purple, with brassy and greenish reflections. Head and thorax coarsely and strongly punctured, the punctures on the scutellum longer, rounded, and more widely separated; the second and third segments of the abdomen uniformly punctured; the first segment with the punctures larger and more widely separated. The sides of the basin of the face are striated and covered with longish white hair; the centre is almost impunctate. The third abdominal segment is depressed transversely near the base; there is no depression nor foveæ before the apical teeth, which are large, acutely triangular, and of nearly uniform size. Antennæ black, the scape dull bronzy. Wings hyaline, slightly infuscated, the stigma and nervures pale fuscous.

Length 11 millim.

Hab. MEXICO, Valladolid in Yucatan (*Gaumer*).

Besides the differences in coloration this species is considerably broader and stouter than *C. fasciata*; and the basal segment of the abdomen is not so strongly trilobed. The third segment becomes gradually narrowed towards the apex, which is not quite so truncated as in *C. fasciata*; the depression at its base is more sharply defined, and the punctuation is deeper and stronger; the teeth are shorter and the incisure narrower. The separation between the pro-, meso-, and metathorax is more clearly marked, especially if looked at from the side.

An example of what is perhaps the same species agrees with the type in all tangible points, except that the apex of the third abdominal segment is depressed, the depression separating the tooth-bearing part from the rest of the segment, and that this part is almost impunctate.

** *The third abdominal segment with foveæ and a furrow.*

8. **Chrysis cœrulans.** (Tab. XX. fig. 11, 11 *a*.)

Chrysis cœrulans, Fabr. Syst. Piez. p. 173; Dahlbom, Hymen. Eur. ii. p. 212, t. 11. 110; Radoskovsky, Horæ Soc. Ent. Ross. iii. p. 305, t. 4. f. 19; Brullé, Hist. Nat. Ins. Hymén. iv. p. 38; Aaron, Trans. Am. Ent. Soc. xii. p. 236[1].

Chrysis nitidula, Brullé, Hist. Nat. Ins. Hymén. iv. p. 37.

Chrysis bella, Cresson, Proc. Ent. Soc. Phil. iv. p. 312.

Hab. North America, United States[1].—Mexico, Northern Sonora (*Morrison*), Presidio (*Forrer*); Guatemala, San Gerónimo, Paraiso (*Champion*); Costa Rica, Cache (*Rogers*); Panama (*Boucard*), Volcan de Chiriqui 2000 to 3000 feet (*Champion*).—South America, Cayenne.

A variable species in colour, size, and sculpture, and also in the form of the apical teeth.

9. **Chrysis panamensis.** (Tab. XX. figg. 8, 8 *a*.)

Brilliant emerald-green; a band across the mesonotum, a mark on the metanotum, and two broad bands, united by a longitudinal one, on the second abdominal segment, violet. Head and thorax coarsely and uniformly punctured; basal segment of the abdomen covered with large, round, clearly separated punctures; the other segments with the punctures much smaller and shallower, but stronger on the apex of the third Basin of face punctured, but very slightly in the centre; above it the vertex is reticulated, and there is a ∩-shaped keel which encloses the lower ocellus. The teeth on the third abdominal segment are short and triangular; the incisions broad and shallow; the foveæ are placed in a shallow narrow groove; there are two large central foveæ, the others being small and indistinct; in front of the groove the segment bears some small, scattered, shallow punctures. The base of the abdomen has three shallow depressions. The apex of the metathorax in the middle projects into a blunt, curved, nipple-like projection, above which the metanotum is raised.

Length 12 millim.

Hab. Panama, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

A longer and narrower (compared with the length) insect than *C. cœrulans*, and *inter alia* readily known from it by the projecting middle of the metathorax. The wings, moreover, are not so dark, especially at the base; and the sculpture is stronger.

10. **Chrysis rastellum.**

Chrysis rastellum, Brullé, Nat. Hist. Ins. Hymén. iv. p. 32[1].

Hab. MEXICO[1].

v. *Apical margin of the third abdominal segment with six teeth.*

11. **Chrysis pilifrons.** (Tab. XX. figg. 13, 13 *a*.)

Head and thorax dark green, mixed with dark purple; the abdomen of a brighter green, marked with broad purplish stripes across the segments. Head and thorax uniformly covered with large (comparatively) round punctures; the pleuræ with much deeper punctures; first abdominal segment with the punctures larger and more widely separated than on the second and third segments. Basin of face punctured laterally, the middle almost impunctate; the sides covered with long white hair. The rest of the head and thorax sparsely covered with long fuscous hair; the abdomen glabrous, except towards the apex. There is a ⌐¬-shaped keel below the ocelli. The base of the first abdominal segment is broadly, but not deeply, excavated (not divided into three lobes). The teeth on the third segment are equal in size, and almost equally distant one from another; the lateral margin is straight, except that it bulges out at the first tooth; the pits are indistinct, forming mere ill-defined depressions in the furrow, which is broad and moderately deep; the apex of the segment is impunctate or nearly so. Antennæ black, the basal three joints green. Wings infuscated, lighter towards the apex.

Length 12 millim.

Hab. PANAMA (*Boucard*).

12. **Chrysis proxima.** (Tab. XX. figg. 12, 12 *a*.)

Similar in colour and sculpture to the preceding (*C. pilifrons*), but smaller (8–9 millim.). The basin of the face much more densely covered with white hair (only the extreme centre being bare); there is no transverse keel above it, but a ∩-shaped keel starts from near the eyes above the depression and encloses the lower ocellus. The lateral margin of the third abdominal segment has a distinct curve, and the outermost tooth is not placed at the extreme edge, as in *C. pilifrons*, but at a little distance from it; the teeth are smaller and more irregularly placed; the incisions are unequal—the central is the largest; there is no distinct groove or pits, although they are very faintly indicated; and the base of the abdomen is distinctly trilobate.

Hab. PANAMA (*Boucard*).

Subfam. *PARNOPINÆ.*

A very distinct group, readily known by the elongated trophi. Two North-American species have been described.

PARNOPES.

Parnopes, Fabricius, Syst. Piez. p. 177 (1804).

1. **Parnopes fulvicornis.** (Tab. XX. figg. 1, 1*a*.)

Viridis, rugoso-punctata, flagello antennarum, tegulis, postscutello, geniculis, femoribus, tibiis, tarsis abdominisque apice, fulvis; alis hyalinis, apice fere fumatis.

Long. 9 millim.

Hab. Mexico, Presidio (*Forrer*).

Face densely covered with white hair, the hair concealing the sculpture; vertex strongly punctured; clypeus dull fulvous; mandibles black at the base and apex, the middle part fulvous. Thorax much more strongly punctured than the head; the punctuation on the centre of the mesonotum less strong than on the pronotum and scutellum; mesopleuræ densely covered with white hair; postscutellum deeply and roundly incised at the apex; the sides almost truncated; the sides of the scutellum and postscutellum densely pilose. Abdomen strongly punctured (but less so than the thorax); the segments depressed at the apex, this part being fulvous and covered with white pile (the pile longer and denser at the sides); apical segment with an elongated deep wide fovea on either side, the foveæ being separated by a partition which is depressed in the centre, and does not reach the level of the part of the segment behind it; the extreme apex spinose, the centre bearing two spines which are longer and thicker than the others; the ventral surface scarcely punctured, dull fulvous, darkest in the centre. Legs covered with a white pile. The head and thorax have a coppery tint, and the abdomen a bluish tinge. The parapsidal furrows are scarcely indicated; the pronotum has a depression in the middle, especially noticeable in front.

P. edwardsii, Cresson, from California and Vancouver, has the apex of the postscutellum entire; and *P. chrysoprasina,* Smith, from North Carolina, has the apex of the postscutellum incised. The latter differs from *P. fulvicornis* in having the postscutellum and the abdomen green, and the wings fulvo-hyaline; and no mention is made in the description of the white pubescence so characteristic of *P. fulvicornis.*

SUPPLEMENT.

THE following species of Tenthredinidæ, Cynipidæ, Figitidæ, Chalcididæ, Trigonalidæ, and Proctotrupidæ have been described or noticed by me since the preceding pages were published *. Some errata in the published text and plates are also corrected here.

STRONGYLOGASTER (p. 4).

11. **Strongylogaster melanostoma.**

Strongylogaster melanosoma, anteà, p. 10.

The specific name of this species is incorrectly printed on p. 10.

16. **Strongylogaster leucostoma.**

Strongylogaster leucosoma, anteà, p. 12.

29. **Strongylogaster rogenhoferi.**

Strongylogaster rogenhoferi, Camer. Trans. Ent. Soc. Lond. 1884, p. 483 [1].

Hab. MEXICO, Orizaba (*Bilimek, in Mus. Vind. Cæs.* [1]).

30. **Strongylogaster fumipennis.** (Tab. XX. fig. 15.)

Strongylogaster fumipennis, Camer. Trans. Ent. Soc. Lond. 1884, p. 484 [1].

Hab. MEXICO [1].

BLENNOCAMPA (p. 31).

7. **Blennocampa bicolorata.**

Blennocampa bicolorata, Camer. Trans. Ent. Soc. Lond. 1884, p. 483 [1].

Hab. MEXICO, Chapultepec and Orizaba (*Bilimek, in Mus. Vind. Cæs.* [1]).

EMPHYTUS (p. 35).

1. **Emphytus aztecus.**

Emphytus aztecus, Camer. Mem. & Proc. Manch. Lit. and Phil. Soc. i. p. 163 (1888) [1].

Hab. MEXICO, Orizaba (*F. D. G. and H. H. Smith* [1]).

* [The types of the species marked with an asterisk cannot now be found.—ED.]

Subfam. *NEMATINA* (to precede the subfamily *Hylotomina*, p. 35).

NEMATUS.

Nematus, Jurine, Nouv. méth. Class. Hymén. p. 59 (1807).

1. **Nematus mexicanus** *.

Nematus mexicanus, Camer. Trans. Ent. Soc. Lond. 1884, p. 481 [1].

Hab. MEXICO, Northern Sonora (*Morrison* [1]).

EUURA (to follow the genus *Nematus*).

Euura, Newman, Ent. Mag. iv. p. 259 (1837).
Cryptocampus, Hartig, Fam. d. Blatt- und Holzwesp. p. 221 (1837).

1. **Euura mexicana.** (Tab. XX. fig. 17.)

Euura mexicana, Camer. Trans. Ent. Soc. Lond. 1884, p. 482 [1].

Hab. MEXICO, Northern Sonora (*Morrison* [1]).

HEMICHROA (to follow the genus *Euura*).

Hemichroa, Stephens, Illustr. Brit. Ent., Mand. vii. p. 55 (1835).
Leptocerca, Hartig, Fam. d. Blatt- und Holzwesp. p. 228 (1837).

1. **Hemichroa nigricans** *. (Tab. XX. fig. 16.)

Hemichroa nigricans, Camer. Trans. Ent. Soc. Lond. 1884, p. 482 [1].

Hab. MEXICO, Northern Sonora (*Morrison* [1]).

HYLOTOMA (p. 35).

Hylotoma basimacula (p. 36). (Tab. XX. fig. 14.)

The reference to the figure was omitted on p. 36.

PTILIA (p. 43).

5. **Ptilia crassula.** (Tab. XX. fig. 18.)

Ptilia crassula, Camer. Trans. Ent. Soc. Lond. 1884, p. 484 [1].

Hab. MEXICO, Northern Sonora (*Morrison* [1]).

6. **Ptilia luteiventris.**

Ptilia luteiventris, Camer. Trans. Ent. Soc. Lond. 1884, p. 485 [1].

Hab. MEXICO, Northern Sonora (*Morrison* [1]).

7. **Ptilia nigerrima.** (Tab. XX. fig. 19.)

Ptilia nigerrima, Camer. Trans. Ent. Soc. Lond. 1884, p. 485 [1].

Hab. MEXICO, Northern Sonora (*Morrison* [1]).

ANDRICUS (to follow the genus *Synergus*, p. 72).

Andricus, Hartig, in Germar's Zeitschr. f. Ent. ii. p. 185 (1840).
Aphilothrix, Förster, Verh. zool.-bot. Ges. Wien, xix. pp. 331, 336 (1869).

This is a dimorphic genus, *Andricus* being the spring bisexual and *Aphilothrix* the autumnal agamic (unisexual) form.

1. **Andricus (Aphilothrix) aztecus.** (Tab. XX. fig. 23.)

Andricus (*Aphilothrix*) *aztecus,* Camer. Ann. & Mag. Nat. Hist. (6) xix. p. 261 (1897) [1].

Hab. MEXICO, Northern Sonora (*Morrison* [1]).

AULAX (to follow the genus *Andricus*).

Aylax, Hartig, in Germar's Zeitschr. f. Ent. ii. p. 186 (1840).
Aulax, Dalla Torre, Cat. Hymen. ii. p. 119 (1893).

1. **Aulax rufipes.** (Tab. XX. fig. 21.)

Aulax rufipes, Camer. Trans. Ent. Soc. Lond. 1884, p. 485 [1].

Hab. MEXICO (*Bilimek, in Mus. Vind. Cæs.* [1]).

EUCŒLA (to precede the genus *Cothonaspis*, p. 73).

Eucoila, Westwood, Mag. Nat. Hist. vi. p. 494 (1833).
Eucœla, Dalla Torre, Cat. Hymen. ii. p. 15 (1893).

1. **Eucœla claripennis** *.

Eucoila claripennis, Camer. Mem. & Proc. Manch. Lit. and Phil. Soc. ii. p. 14 (1889) [1].

Hab. MEXICO, Vera Cruz (*H. H. Smith* [1]).

2. **Eucœla mexicana** *.

Eucoila mexicana, Camer. Mem. & Proc. Manch. Lit. and Phil. Soc. ii. p. 14 (1889) [1].

Hab. MEXICO, Orizaba (*F. D. G. and H. H. Smith* [1]).

3. **Eucœla marginicollis** *.

Eucoila marginicollis, Camer. Mem. & Proc. Manch. Lit. and Phil. Soc. ii. p. 15 (1889) [1].

Hab. MEXICO, Orizaba (*F. D. G. and H. H. Smith* [1]).

4. **Eucœla incisa.**

Eucœla incisa, Camer. Trans. Ent. Soc. Lond. 1884, p. 486 [1].

Hab. MEXICO (*Bilimek, in Mus. Vind. Cæs.* [1]).

COTHONASPIS (p. 73).

2. **Cothonaspis rufiventris.**

Cothonaspis rufiventris, Camer. Trans. Ent. Soc. Lond. 1884, p. 486 [1].

Hab. MEXICO (*Bilimek, in Mus. Vind. Cæs.* [1]).

GRONOTOMA (to follow the genus *Cothonaspis*, p. 73).

Gronotoma, Förster, Verh. zool.-bot. Ges. Wien, xix. pp. 342, 346 (1869).

1. **Gronotoma gracilicornis** *.

Gronotoma gracilicornis, Camer. Mem. & Proc. Manch. Lit. and Phil. Soc. ii. p. 15 (1889) [1].

Hab. MEXICO, Orizaba (*F. D. G. and H. H. Smith* [1]).

ANACHARIS (to precede the genus *Balna*, p. 73).

Anacharis, Dalman, Anal. Ent. p. 96 (1823).

Megapelmus, Hartig, in Germar's Zeitschr. f. Ent. ii. p. 186 (1840).

1. **Anacharis mexicanus.** (Tab. XX. fig. 22.)

Megapelmus mexicanus, Camer. Trans. Ent. Soc. Lond. 1884, p. 487 [1].

Hab. MEXICO (*Bilimek, in Mus. Vind. Cæs.* [1]).

IBALIA (to follow the genus *Anacharis*).

1. **Ibalia ruficollis.** (Tab. XX. fig. 20.)

Ibalia ruficollis, Camer. Trans. Ent. Soc. Lond. 1884, p. 488 [1].

Hab. MEXICO, Pinos Altos in Chihuahua (*Buchan-Hepburn* [1]).

SMICRA (p. 78).

52. **Smicra ardens.**

Smicra ardens, Camer. Ann. & Mag. Nat. Hist. (6) xix. p. 262 (1897) [1].

Hab. MEXICO, Orizaba (*F. D. G. and H. H. Smith*).

53. **Smicra divinatrix.**

Smicra divinatrix, Camer. Ann. & Mag. Nat. Hist. (6) xix. p. 263 [1].

Hab. HONDURAS. Ruatan I. (*Gaumer* [1]).

54. **Smicra fasciola.**

Smicra fasciola, Camer. Ann. & Mag. Nat. Hist. (6) xix. p. 264 (1897) [1].

Hab. MEXICO, Northern Sonora (*Morrison* [1]).

55. **Smicra armillata.**

Smicra armillata, Camer. Ann. & Mag. Nat. Hist. (6) xix. p. 264 (1897)[1].

Hab. MEXICO, Orizaba (*F. D. G. and H. H. Smith*[1]).

LIRATA (p. 102).

Lirata luteogaster (p. 102).

Figured by me under the name *Schizaspidia flaviventris,* on Tab. V. figg. 16, 16 *a.*

KAPALA (p. 103).

Kapala furcata (p. 103).

Figured by me under the name *Schizaspidia furcata,* on Tab. V. figg. 17, 17 *a–d.*

Subfam. *PERILAMPINÆ* (to precede the subfamily Eupelminæ, p. 114).

PERILAMPUS.

Perilampus, Latreille, Gen. Crust. et Ins. iv. p. 30 (1809).

1. **Perilampus mexicanus.**

Perilampus mexicanus, Camer. Ann. & Mag. Nat. Hist. (6) xix. p. 265 (1897)[1].

Hab. MEXICO, Vera Cruz (*H. H. Smith*[1]).

2. **Perilampus antennatus.**

Perilampus antennatus, Camer. Ann. & Mag. Nat. Hist. (6) xix. p. 266 (1897)[1].

Hab. MEXICO, Vera Cruz (*H. H. Smith*[1]).

ICHNEUMON (p. 137).

Ichneumon mexicanus (p. 144). (Tab. VIII. fig. 1.)

The reference to the figure was omitted on p. 144.

Ichneumon suffultus (p. 144). (Tab. VIII. fig. 2.)

The reference to the figure was omitted on p. 144.

MESOSTENUS (p. 214).

Mesostenus brachygaster (p. 219).

Hab. GUATEMALA, Las Mercedes (*Champion*).

The locality was omitted on p. 219.

LABENA (p. 277).

Labena grallator (p. 277). (Tab. XII. fig. 7.)
The reference to the figure was omitted on p. 277.

BRACON (p. 312).

Bracon albipalpis (p. 315). (Tab. XVII. fig. 6, ♀.)
The reference to the figure of the female of this species was omitted on p. 315.

RHOGAS (p. 389).

Rhogas bugabensis (p. 391). (Tab. XVII. figg. 1 *a–c*.)
The reference to the figures of the mouth-parts of this insect was omitted on p. 391.

TRIGONALYS (p. 434).

4. **Trigonalys scutellaris.**
Trigonalys scutellaris, Camer. Ann. & Mag. Nat. Hist. (6) ix. p. 267 (1897) [1].
Hab. MEXICO, Omilteme in Guerrero 8000 feet (*H. H. Smith* [1]).

5. **Trigonalys maculifrons.**
Trigonalys maculifrons, Camer. Ann. & Mag. Nat. Hist. (6) ix. p. 268 (1897) [1].
Hab. MEXICO, Teapa in Tabasco (*H. H. Smith* [1]).

6. **Trigonalys apicipennis.**
Trigonalys apicipennis, Camer. Ann. & Mag. Nat. Hist. (6) ix. p. 269 (1897) [1].
Hab. MEXICO, Atoyac in Vera Cruz (*H. H. Smith* [1]).

7. **Trigonalys flavonotata.**
Trigonalys flavonotata, Camer. Ann. & Mag. Nat. Hist. (6) xix. p. 270 (1897) [1].
Hab. MEXICO, Xucumanatlan in Guerrero 7000 feet (*H. H. Smith* [1]).

8. **Trigonalys fasciatipennis.**
Trigonalys fasciatipennis, Camer. Ann. & Mag. Nat. Hist. (6) xix. p. 271 (1897) [1].
Hab. MEXICO, Atoyac in Vera Cruz [♀], Venta de Zopilote in Guerrero [♂] (*H. H. Smith* [1]).

9. **Trigonalys championi.** (Tab. XX. fig. 24.)
Trigonalys championi, Camer. Ann. & Mag. Nat. Hist. (6) xix. p. 273 (1897) [1].
Hab. GUATEMALA, Panima in Vera Paz (*Champion* [1]).

DRYINUS (p. 444).

Dryinus maculicornis (p. 444).

To the localities given, add:—GUATEMALA, Mirandilla (*Champion*).

The Guatemalan habitat was omitted on p. 444.

EPYRIS (p. 449).

10. **Epyris rufipes.**

Epyris rufipes, Camer. Mem. & Proc. Manch. Lit. and Phil. Soc. i. p. 173 (1888) [1].

Hab. MEXICO, Orizaba (*F. D. G. and H. H. Smith* [1]).

11. **Epyris punctatus.**

Epyris punctatus, Camer. Mem. & Proc. Manch. Lit. and Phil. Soc. i. p. 174 (1888) [1].

Hab. MEXICO, Orizaba (*F. D. G. and H. H. Smith* [1]).

12. **Epyris orizabæ.**

Epyris orizabæ, Camer. Ann. & Mag. Nat. Hist. (6) xix. p. 273 (1897) [1].

Hab. MEXICO, Orizaba (*F. D. G. and H. H. Smith* [1]).

13. **Epyris palliditarsis.**

Epyris palliditarsis, Camer. Ann. & Mag. Nat. Hist. (6) xix. p. 274 (1897) [1].

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith* [1]).

14. **Epyris scutellaris.**

Epyris scutellaris, Camer. Ann. & Mag. Nat. Hist. (6) xix. p. 275 (1897) [1].

Hab. MEXICO, Tierra Colorada in Guerrero 2000 feet (*H. H. Smith* [1]).

15. **Epyris montezuma.**

Epyris montezuma, Camer. Ann. & Mag. Nat. Hist. (6) xix. p. 276 (1897) [1].

Hab. MEXICO, Orizaba (*F. D. G. and H. H. Smith* [1]).

MESITIUS (p. 455).

Mesitius longicollis (p. 455).

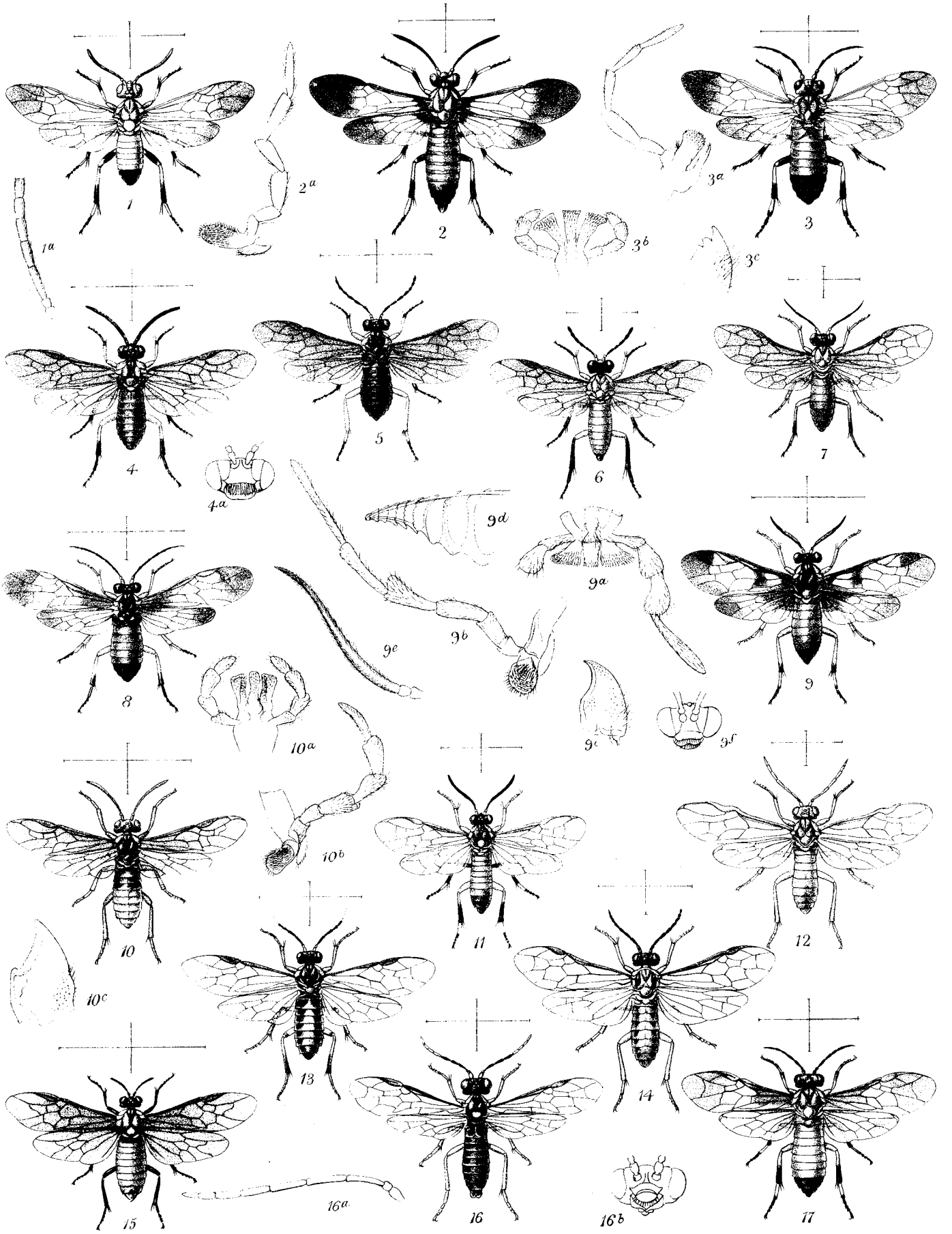
The locality in Mexico, Cordova, was omitted on p. 455.

CORRIGENDUM.

On Tab. XVII. fig. 15 a species of Ichneumonidæ, subfam. Ophioninæ, is figured under the name *Pharsalia albofacialis*: this insect is not mentioned in the text, and as the locality-label has been lost, it is not advisable to describe it now.

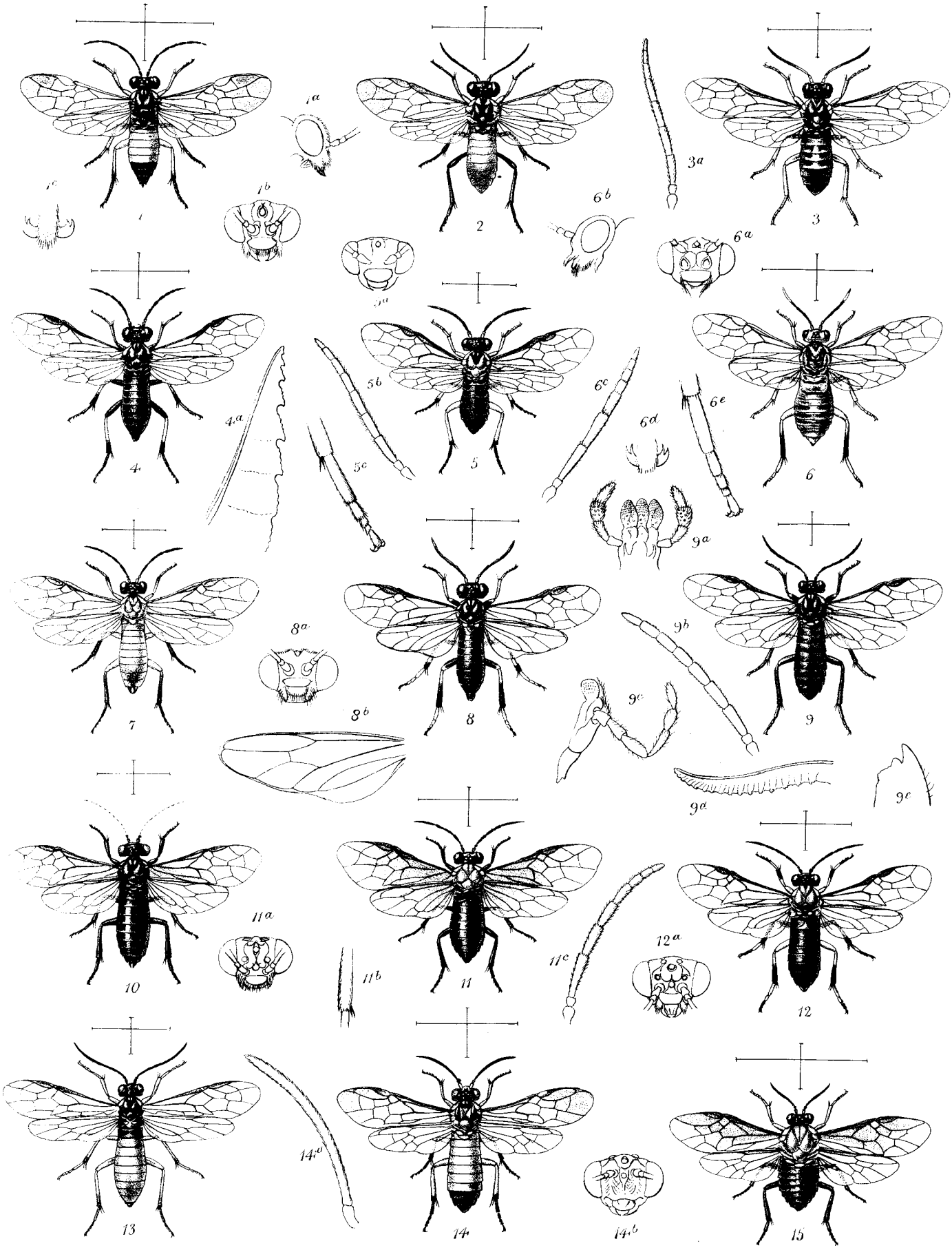
INDEX.

[Names in small capitals refer to Families, &c.; those in roman type to the chief reference to each species included in the work; those in italics to species incidentally mentioned, synonyms, &c.]



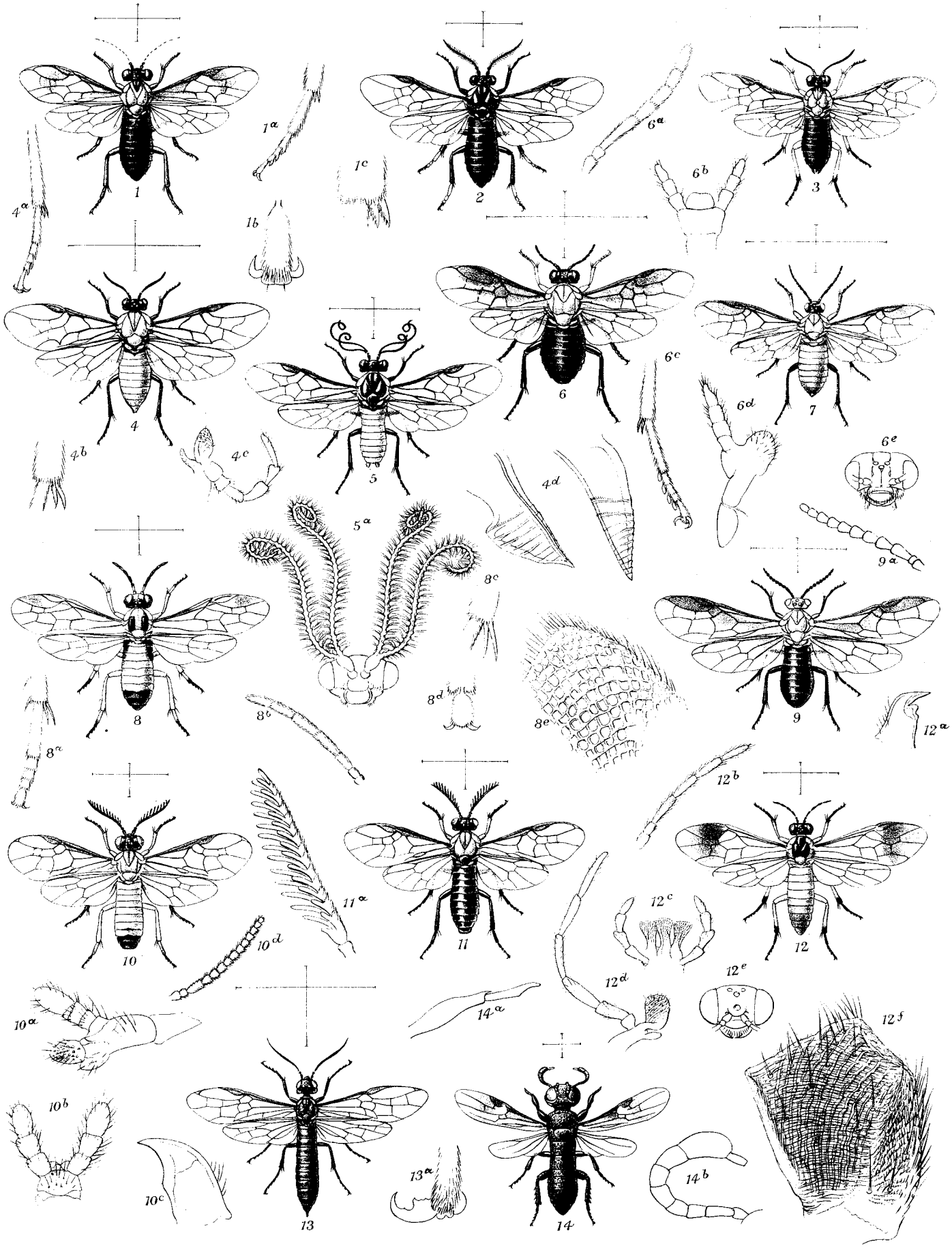
1a LOBOCERAS KEUGI.
2, 2a HYLOTOMA ANNULIPES.
3, 3a–3c MONOPHADNUS ANNULIPES.
4, 4a PTILIA IMITATRIX.
STRONGYLOGASTER DIVERSIPES.
LOBOCERAS FUSCIPENNE.
7 STRONGYLOGASTER LEUCOSOMA.
8 „ MACULIPENNIS.
9, 9a–9f DIDYMIA VERSICOLOR.
10, 10a–10c „ BIRAMOSA.
11 HYLOTOMA SEMIFUSCA.
12 LOBOCERAS CALCAR.
13 STRONGYLOGASTER FULVIVENTRIS.
14 „ NIGRITORIUS.
15 SERICOCERA QUERCUS.
16, 16a, 16b SIOBLA ORNATICORNIS.
17 STRONGYLOGASTER FUSCIPENNIS.

Punkies lith. Hanhart imp.



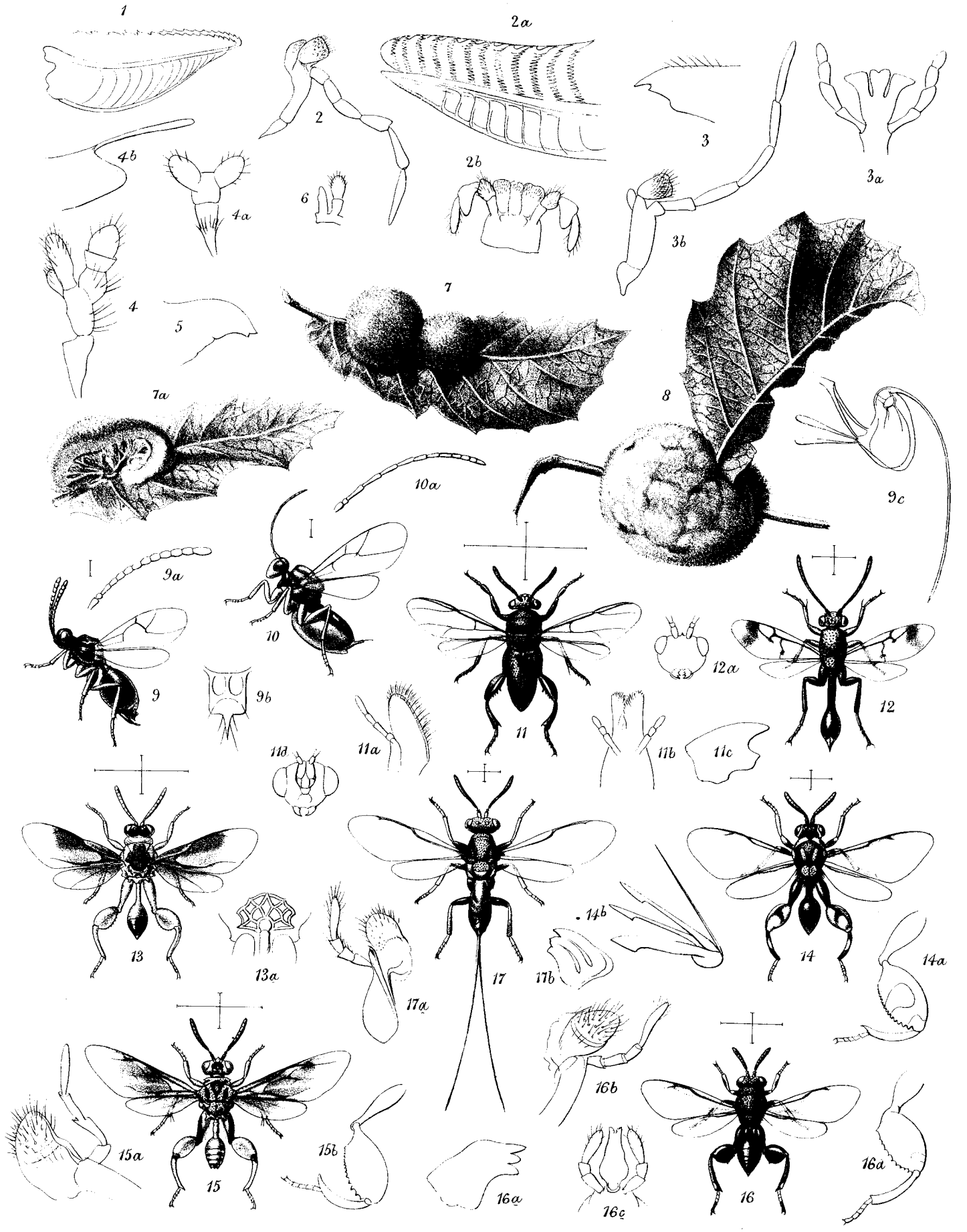
1a-1c STRONGYLOGASTER PILICORNIS.
" MELANOCEPHALUS.
3a " LÆTUS.
4a " BICOLOR.
5a-5c SELANDRIA CRASSA.
6, 6a-6e MONOPHADNUS TRIMACULATUS.
7 " OCHRA.
8, 8a, 8b " VIOLACEIPENNIS.
9, 9a-9e PŒCILOSOMA MEXICANUM.
10. BLENNOCAMPA CÆRULEA.
11, 11a-11c BLENNOCAMPA INTERMEDIA.
12, 12a " ALBIFEMORALIS.
13 EMPHYTUS CHAMPIONI.
14, 14a, 14b HYLOTOMA BIVITTATA.
15 . SERICOCERA VILLOSA.

Punkins lith. Hanhart imp.



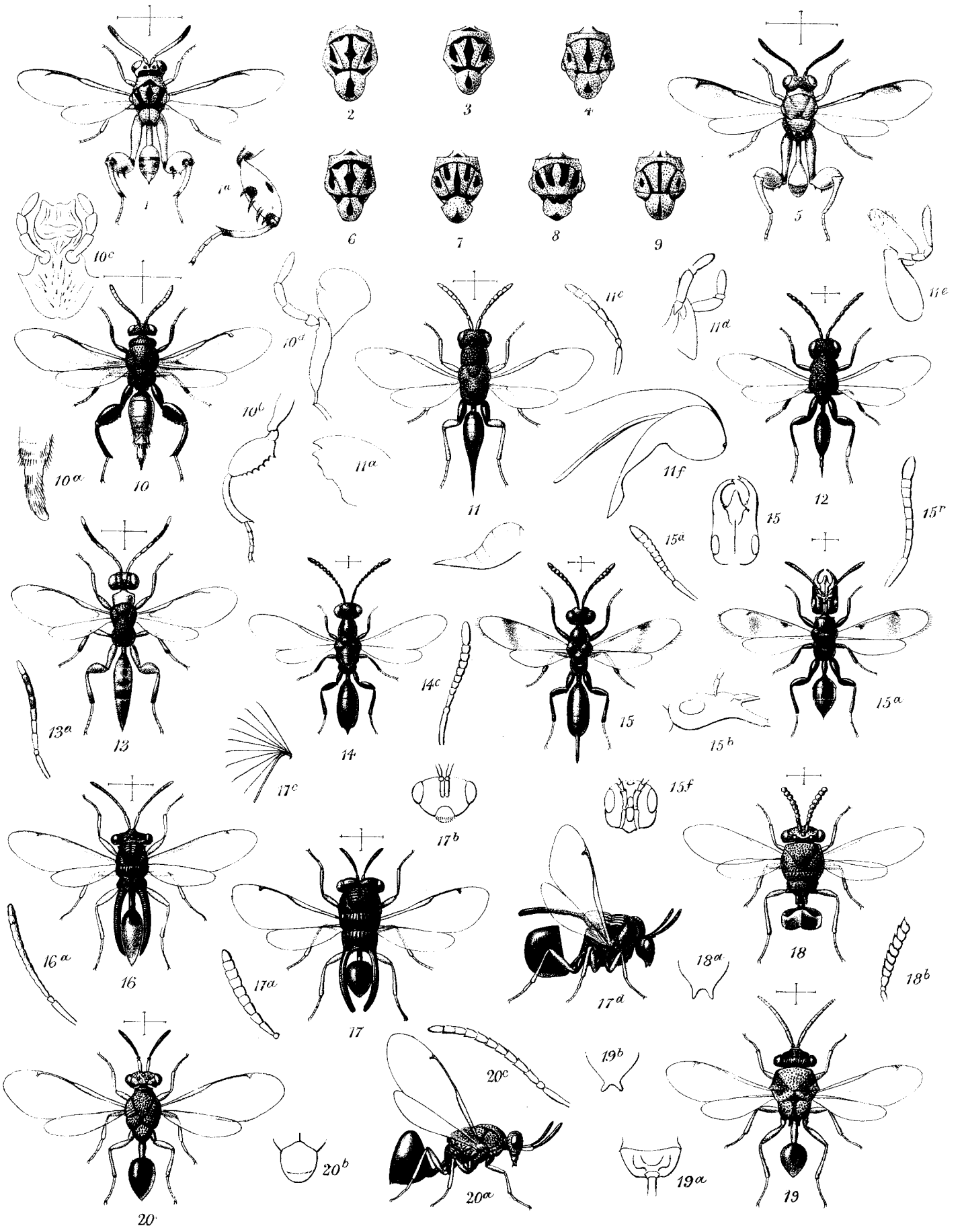
1a-1c PTILIA NASUTA.
SERICOCERA LEUCOTARSIS.
" LEUCOPODA.
4a-4d ♀, 5, 5a ♂ " ALTERNATOR.
6, 6a-6e INCALIA HIRTICORNIS.
7 PERREYIA CAPITULA.
8, 8a-8e PERANTHRIX BIMACULATA.
9, 9a DECAMERIA NIGRIVENTRIS.
10, 10a-10d LOPHYROIDES TROPICUS.
11, 11a LOPHYROIDES RUFICOLLIS.
12, 12a-12f PERANTHRIX WESTWOODII.
13, 13a DERECYRTA RUGIFRONS.
14, 14a, 14b ORYSSUS NIGRICANS.

Burkiss lith.



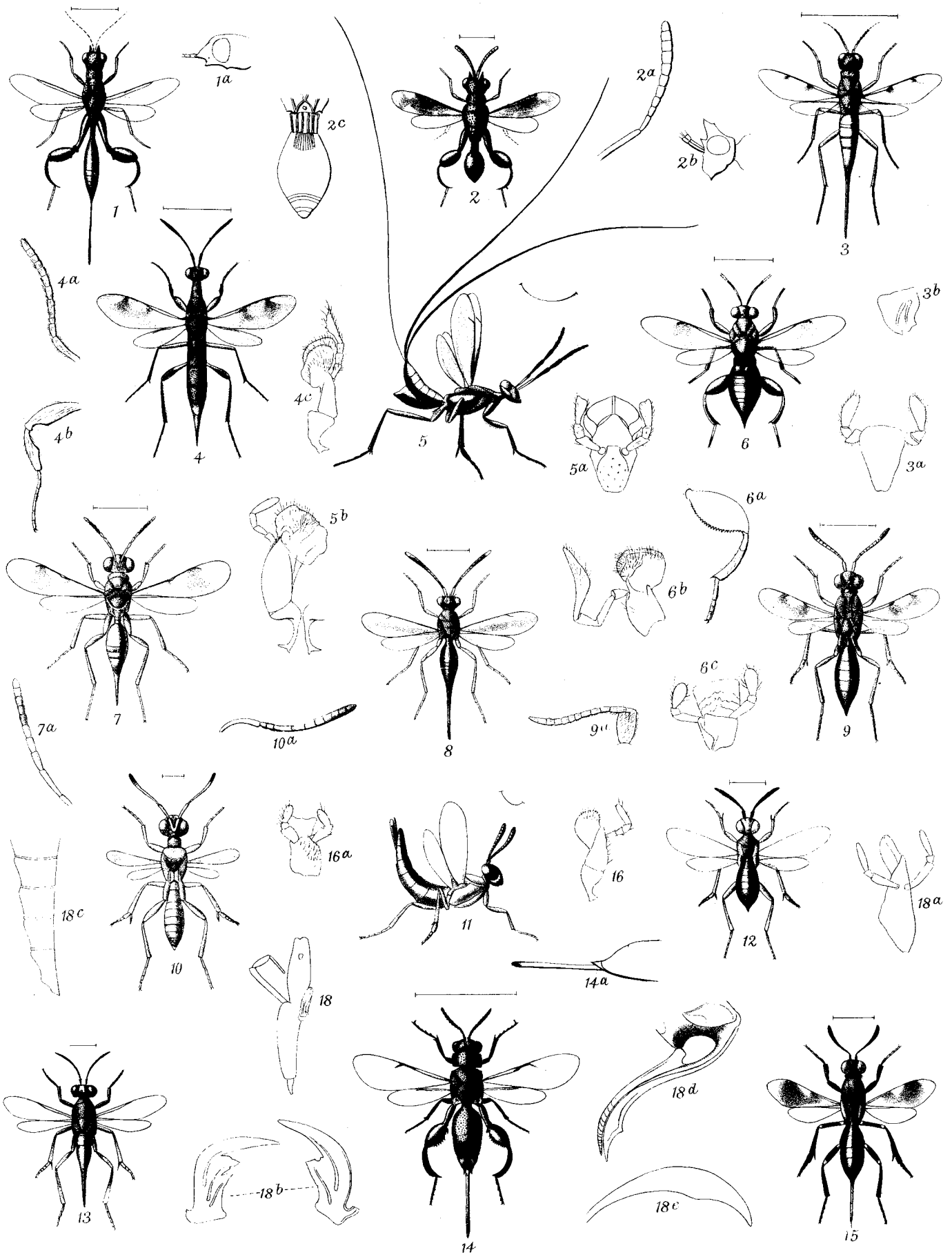
1 HYLOTOMA NIGRICEPS.
2a, 2b PTILIA NASUTA.
3a, 3b LALOCERAS KLUGII.
4a 4b DECAMERIA RUFIVENTRIS.
5 DECAMERIA FACILIS.
6 PERREYIA CHAMPIONI.
7, 7a CYNIPS GUATEMALENSIS.
8 CYNIPS IMITATOR.
9, 9a, 9b 9c NERALSIA RUFIPES.
10 10a SYNERGUS FILICORNIS.
11, 11a 11d LEUCASPIS MEXICANA.
12, 12a, LEIOPTERON WESTWOODII.
13, 13a, SMICRA MIRANDA.
14, 14a, 14b „ NIGRIVENTRIS.
15, 15a, 15b „ NIGROMACULATA.
16, 16a 16b CHALCIS OVATA.
17, 17a, 17b DIOMORUS MAYRI.

Purkiss lith.

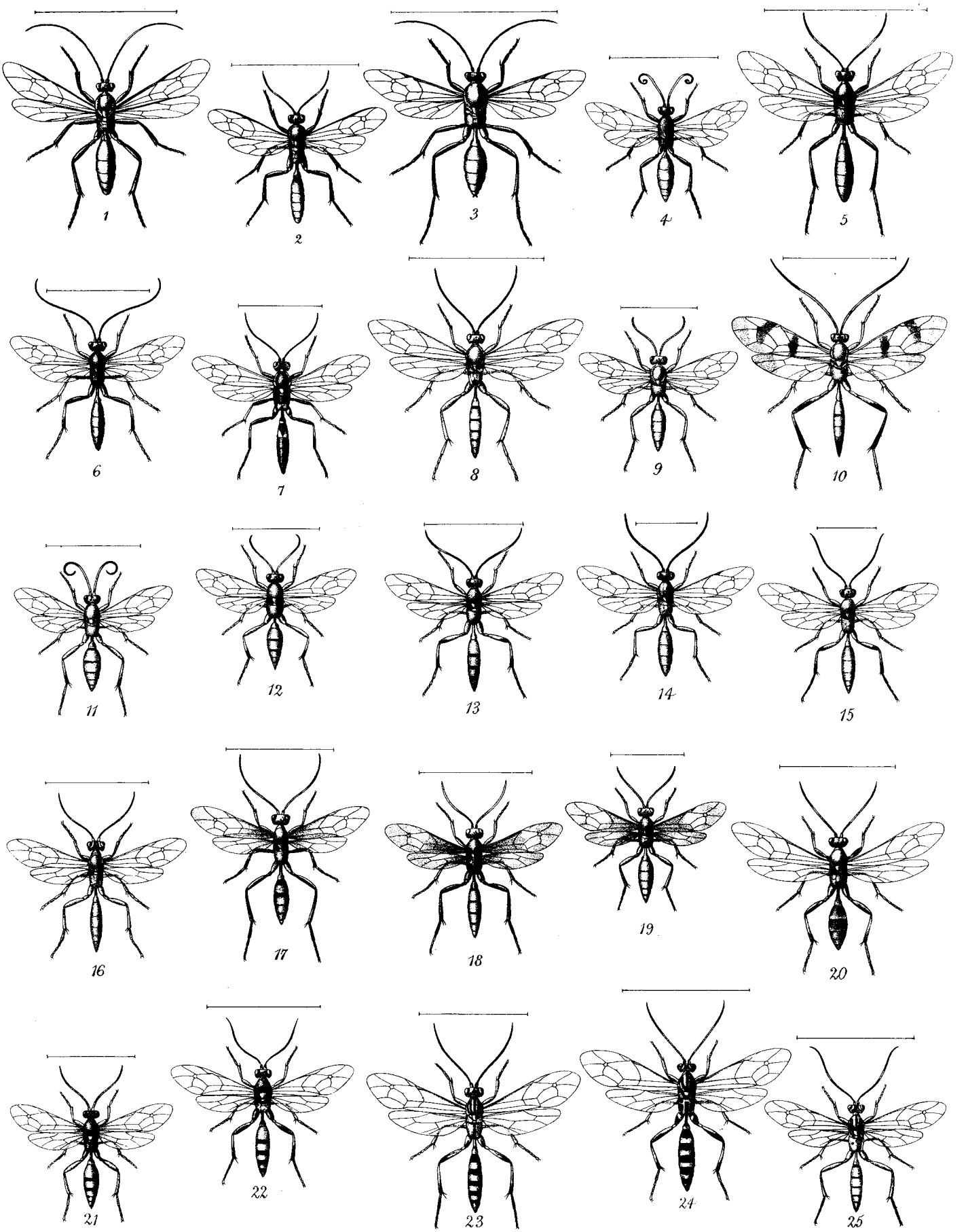


1a.	SMICRA CHAMPIONI.	8	SMICRA OCTOMACULATA.	14,14a	SPALANGIA CHONTALENSIS.
„	DORSIVITTATA.	9	„ NIGRIFRONS.	15,15a-f	PARALÆSTETHIA MANDIBULARIS.
„	PANAMENSIS.	10,10a-d	PHASGONOPHORA RUFITARSIS.	16,16a	SCHIZASPIDIA FLAVIVENTRIS.
„	GENICULATA.	11,11a-f	EURYTOMA AURIFRONS.	17,17a-d	„ FURCATA.
„	CARDINALIS.	12	„ PETIOLIVENTRIS.	18,18a,b	LOPHYROCERA STRAMINEIPES.
„	CENTRALIS.	13,13a	BEPHRATA RUFICOLLIS.	19,19a,b	„ NIGROMACULATA.
„	MACULICOLLIS.			20,20a-c	ORASEMA FLAVIPES.

Parkiss lith. Hanhart imp. 347.

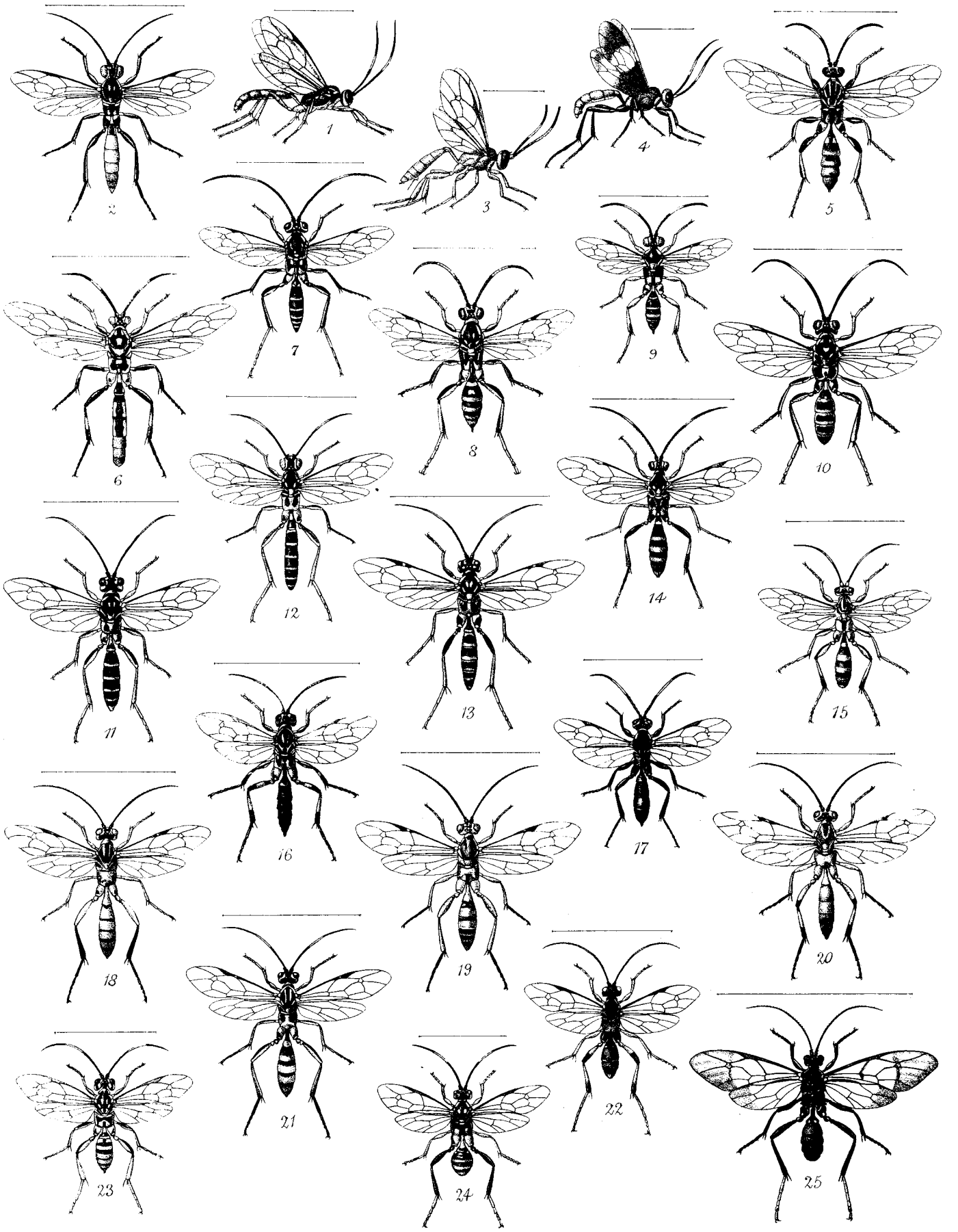


1,1a HONTALIA CÆRULEA
2,2a-c " RUFICORNIS.
3,3a,b EPISTENIA BALTEATA.
4,4a-c " MACULIPES.
5,5a,b PRIONOPELMA PILIPES.
6,6a-c AMOTURA ANNULICORNIS.
7,7a LELAPS FERRUGINEA.
8 " ALBIPES.
9,9a EUPELMUS GIGAS.
10,10a " TESTACEUS
11 " ERYTHROTHORAX.
12 EUPELMUS COMPRESSICORNIS.
13 ASEIRBA CAUDATA
14,14a ACANTHOCHALCIS NIGRICANS
15 LUTNES CRASSICORNIS.
16,16a " ORNATICORNIS.
18,18a-e ORASEMA STRAMINEIPES.



1 PATROCLUS NIGROCÆRULEUS.
2 ICHNEUMON MERIDIONALIS.
3 „ COSTARICENSIS.
4 „ PTERELAS.
5 „ ASTARTE.
6 „ BILIMEKI.
7 „ BELLATULUS.
8 „ SYCOPHANTUS.
9 ICHNEUMON LARICEUS.
10 „ MUNEROSUS
11 „ CURTITUBERCULATUS.
12 „ TUMIDULUS.
13 „ CELATUS.
14 „ EROS.
15 „ FORRERI.
16 „ SALVINI.
17 „ CHAMPIONI.
18 ICHNEUMON GODMANI.
19 „ LYMPHATUS.
20 „ GUATEMALENSIS.
21 „ ILLACESSITUS.
22 „ TURPICULUS.
23 „ PARSIMONICUS.
24 „ ALVARADO.
25 „ EXQUISITUS.

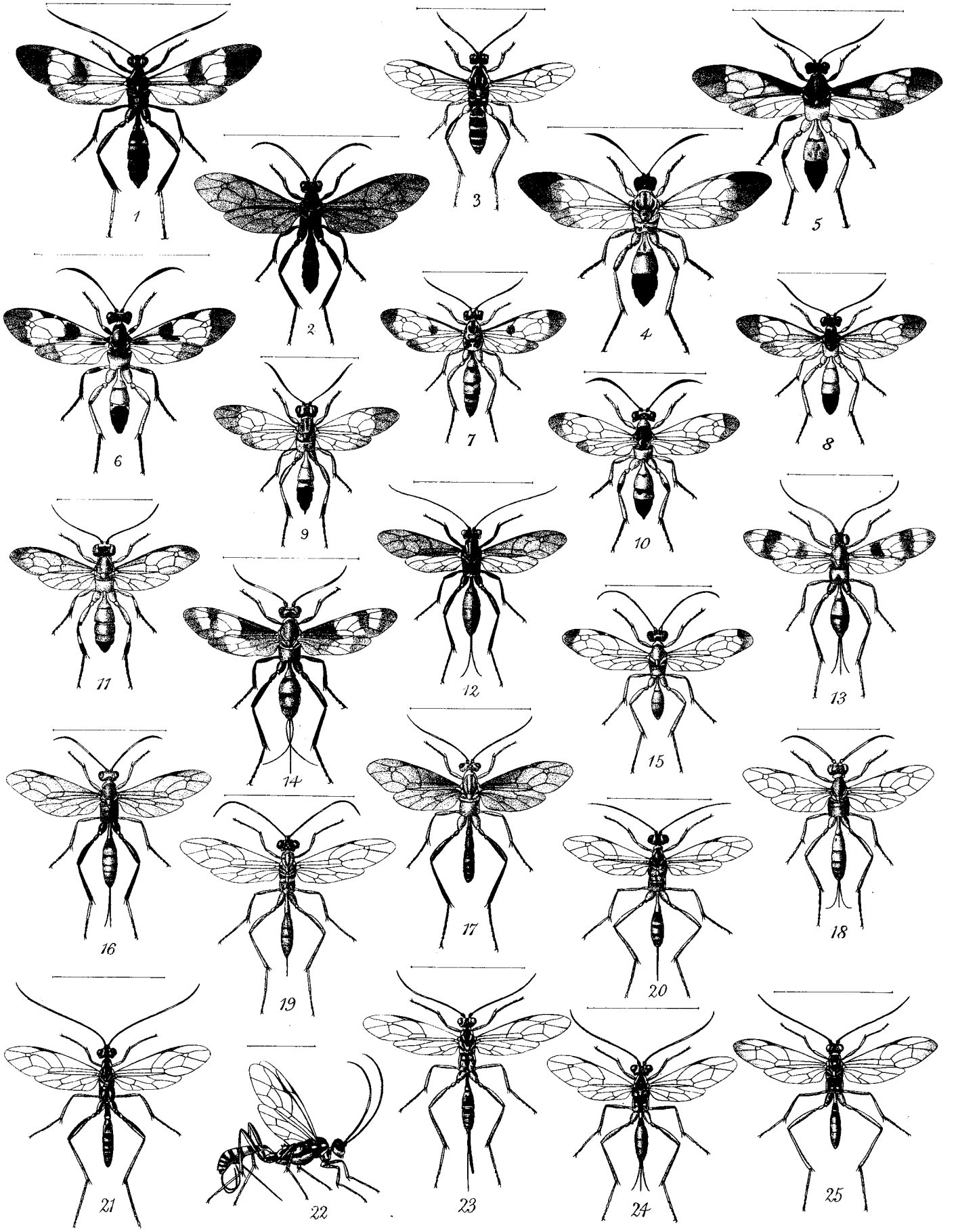
W. Purkiss lith. Hanhart imp. 380.



ICHNEUMON	MEXICANUS.	9	ICHNEUMON VALLADOLIDENSIS.	18	ICHNEUMON AZTECUS.
"	SUFFULTUS.	10	" DEMOCRATICUS.	19	" PILIVENTRIS.
"	CAUSTICUS.	11	" OPINIOSUS.	20	" NOTABILIS.
"	PANAMENSIS.	12	" TRUNCULENTUS.	21	" ORIZABENSIS.
"	MULTIPLAGIATUS.	13	" SUFFRAGENEUS.	22	" CONICUS.
"	MACULOSUS.	14	" ARIEL.	23	ŒDICEPHALUS GLUCIDATUS.
"	SUBSECIVUS.	15	" CENTRALIS.	24	ICHNEUMON FORTISPINA.
"	YUCATANENSIS.	16	" MOTIVUS.	25	TROGUS PULCHRIPENNIS.
		17	" BEATUS.		

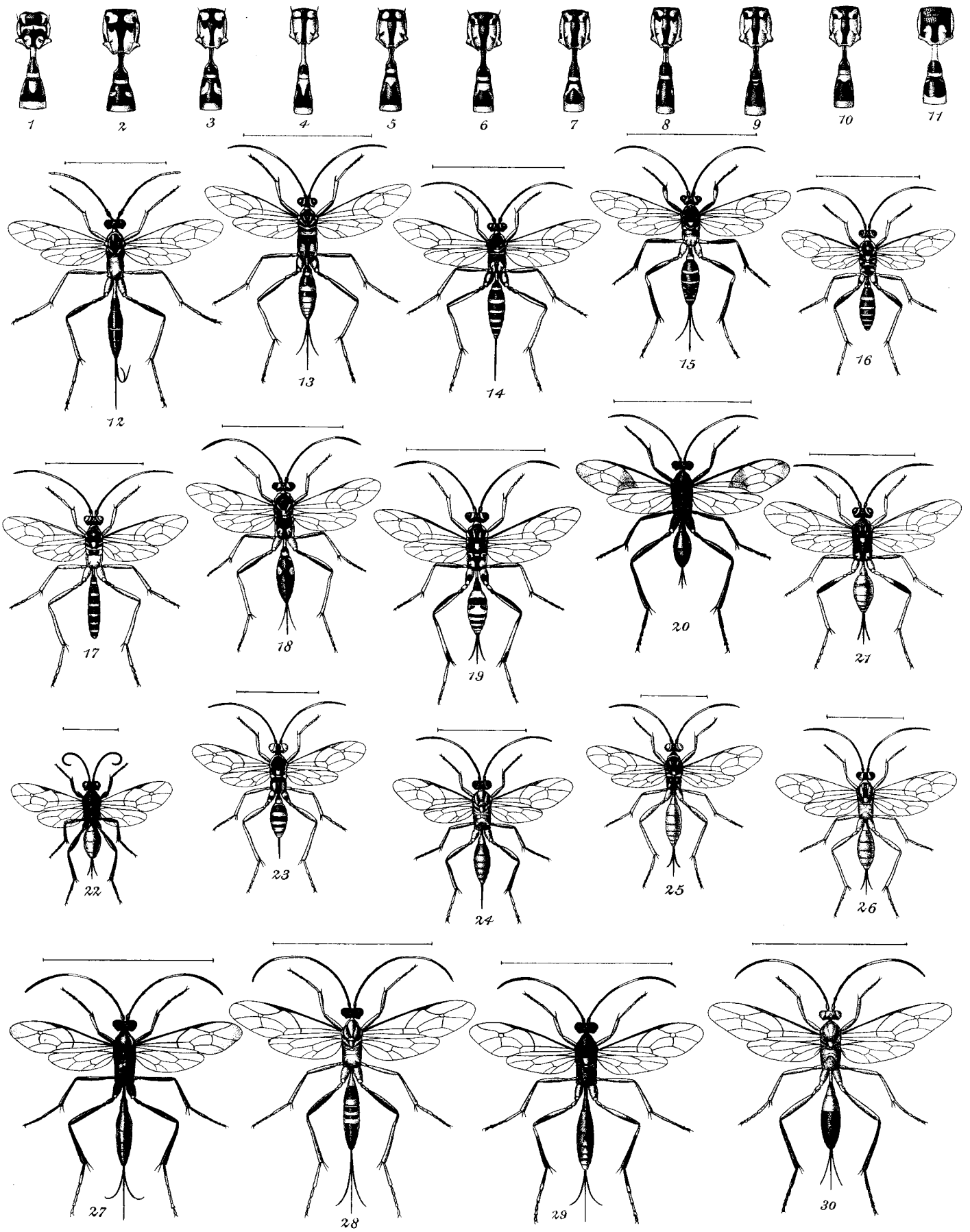
Perkins lith.

Hanhart imp.
392



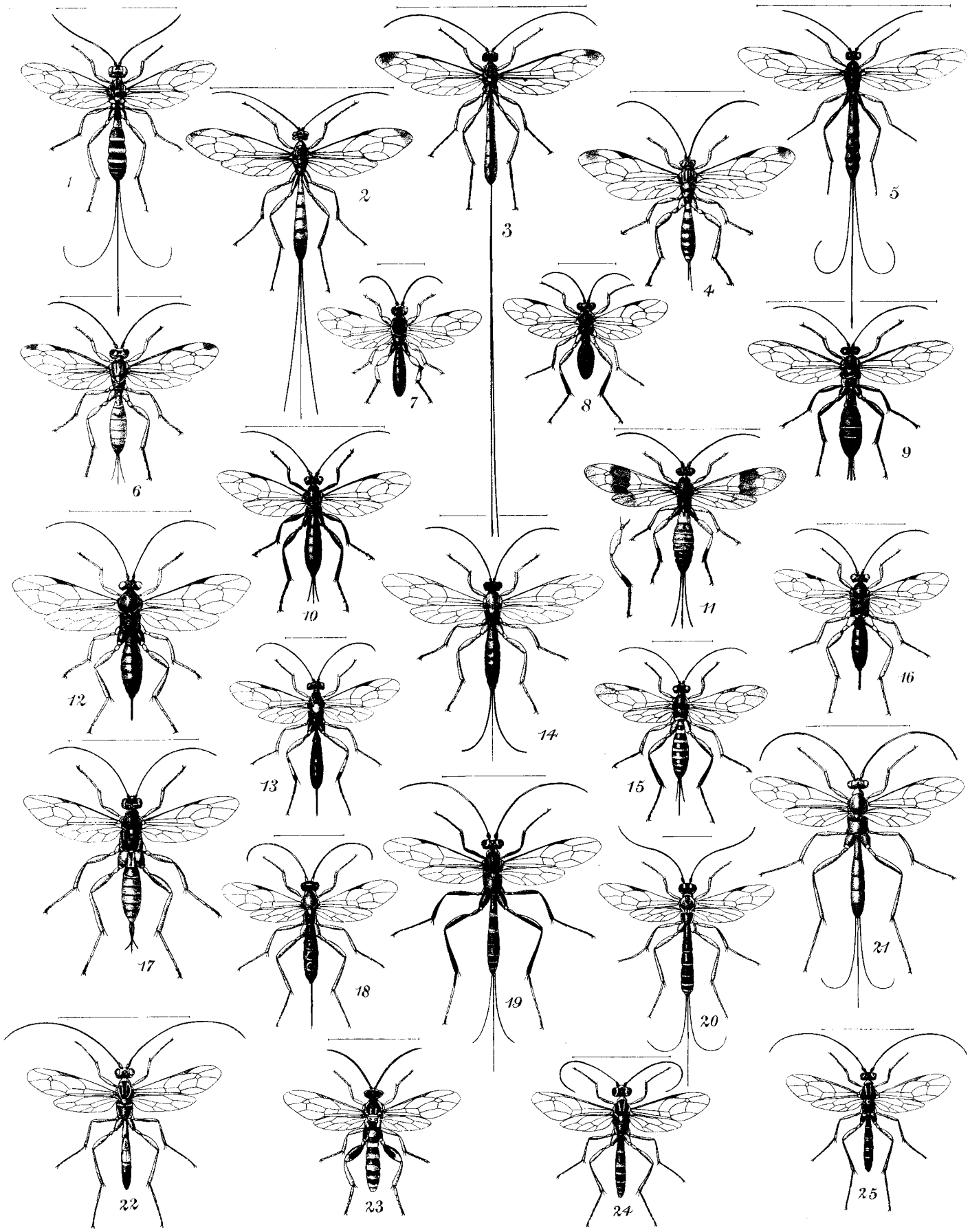
1 TROGUS BLANDITA.
2 „ ORNATICORNIS.
3 ABZARIA LATIPETIOLARIS.
4 JOPPA MELANOCEPHALA.
5 „ NIGRICEPS.
6 „ XANTHOSTOMA.
7 „ SUMICHRASTI.
8 „ MODESTA.
9 JOPPA VARIPES.
10 „ MELANOSTIGMA.
11 „ FUMIPENNIS.
12 CRYPTUS BICOLOR.
13 „ HEBETIS.
14 „ XANTHOSTIGMA.
15 „ SOLABILIS.
16 JOPPIDIUM RUFICOLLIS.
17 JOPPIDIUM CÆRULEIPENNIS.
18 „ YUCATANENSIS.
19 POLYCYRTUS TINCTIPENNIS.
20 „ ERYTHROSTERNUS
21 „ BLANDITUS.
22 „ FULVOFEMORATUS
23 POLYÆNUS CHAMPIONI.
24♀, 25♂ „ BASIMACULA.

W. Purkiss lith. Hanhart, imp.

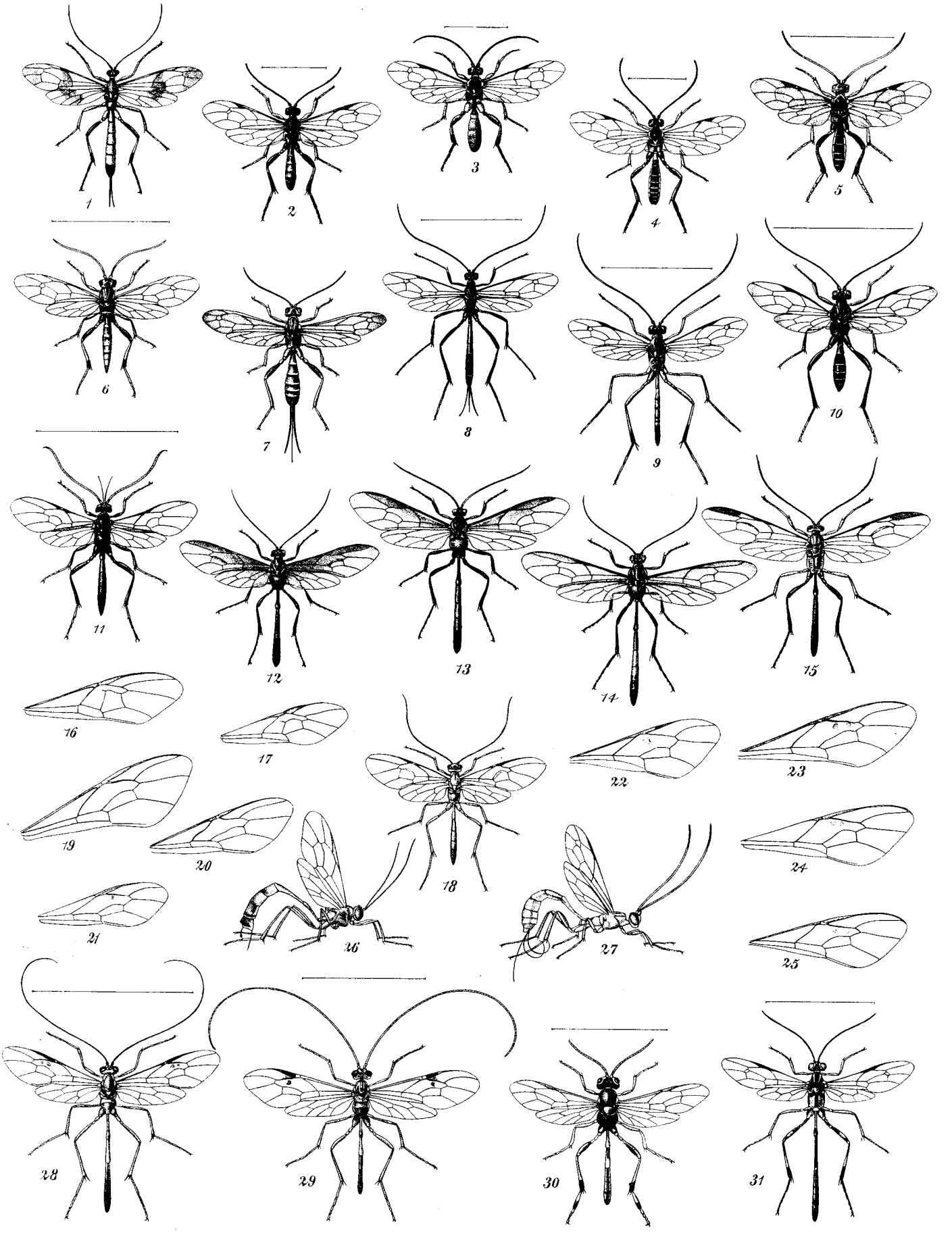


POLYCYRTUS	OBTUSISPINA.	11	POLYCYRTUS	FULVIPES.	21	MESOSTENUS	PARVITUBERCULATIS.
,,	COLLINUS.	12	,,	XANTHOTHORAX.	22	PHYGADEUON	MELANOPODA.
,,	CONFIRMATUS.	13	MESOSTENUS	NICARAGUENSIS.	23	HEMITELES	FLAVOVARIEGATUS.
,,	CRUCIATUS.	14	,,	LAMENTARIUS.	24	,,	ORNATICEPS.
,,	FULVOFEMORATUS.	15	,,	ANNULITARSIS.	25	,,	ALBITUBERCULATIS.
,,	MONTEZUMA.	16	,,	INTRUDENS.	26	,,	MONTEZUMA.
,,	CANALICULATUS.	17	,,	ORNATIFRONS.	27	CHRISTOLIA	PANAMENSIS.
,,	CHONTALENSIS.	18	,,	VIVIDUS.	28	POLYCYRTUS	CURVIVENTRIS.
,,	GUATEMALENSIS.	19	,,	MEGAPODA.	29	CHRISTOLIA	MENTICULA.
,,	NIGRITIBIALIS.	20	,,	NIGERRIMUS.	30	CRYPTANURA	INCAUTA.

Purkiss lith. Hanhart imp.



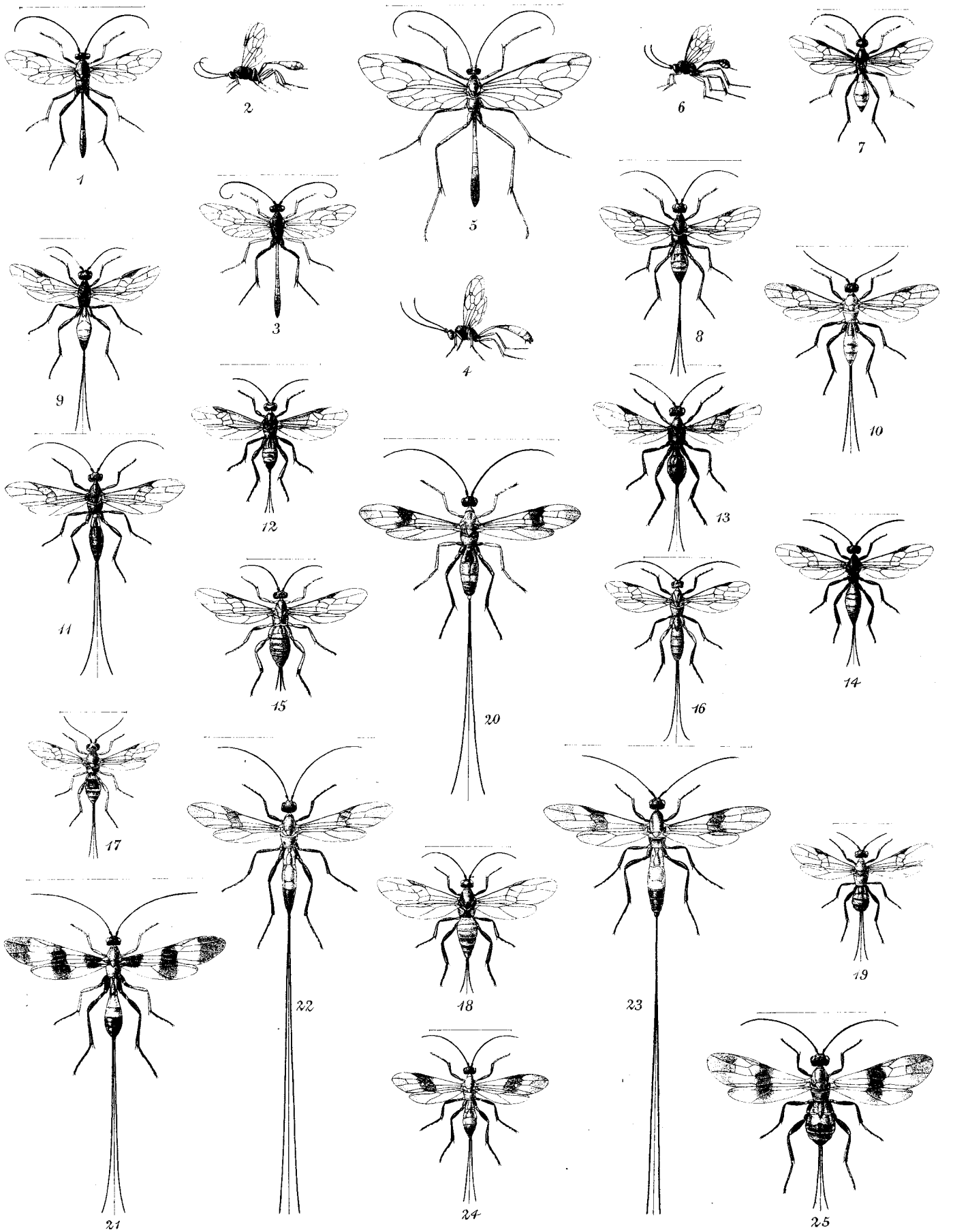
1 EPHIALTES ANNULICORNIS.
2 EPIRHYSSA MEXICANA.
3 RHYSSA NIGRITARSIS.
4 THERONIA LINEATA.
5 EPHIALTES NIGRICANS.
6 THERONIA CHIRIQUENSIS.
7 EXOCHUS STRAMINEIPES.
8 BASSUS FRONTALIS.
9 PIMPLA XANTHOSTIGMA.
10 „ SEDULA.
11 ODONTOPIMPLA PULCHERRIMA.
12 PIMPLA CROCEIPES.
13 LIMNERIA ALBISPINA.
14 PIMPLA COXATOR.
15 „ ALBOMARGINATA.
16 „ PUNICIPES.
17 „ ARGENTIFRONS.
18 GLYPTA RUFOMARGINATA.
19 LISSONOTA ALBISPINA.
20 „ LEUCOPODA.
21 PHYTODIETUS GUATEMALENSIS.
22 MESOLEPTUS MEXICANUS.
23 METOPIUS FEMORATUS.
24 MESOLEPTUS ALPESTRIS.
25 „ PERSIMILIS.



1 EPIMECIS TIBIALIS.
2 TRYPHON MONTEZUMA.
3 POLYBLASTUS (?) AZTECUS.
4 MESOLEIUS MONTEZUMA.
5 SCOLOBATES (?) VARICORNIS.
6 BANCHUS MEXICANUS.
7 LABENA GRALLATOR.
8 NONUS NIGER.
9 „ ANTENNATUS.
10 RETANISIA FACIALIS.
11 AGATHOPHIONA FULVICORNIS.
12 THYREDON NIGER.
13 „ ERYTHROCERA.
14 „ LATICINCTUS.
15 „ RUFOTHORAX.
16 OPHION FLAVO-ORBITALIS.
17 „ ANCYLONEURA.
18 „ MELANOSTIGMA.
19 „ CURVINERVIS.
20 „ CHIRIQUENSIS.
21 „ FLAVUS.
22 OPHION GUATEMALENSIS.
23 „ MEXICANUS.
24 „ CONCOLOR.
25 „ THORACICUS.
26 ANOMALON GUATEMALENUM.
27 GROTEA FULVA.
28 OPHION MONTICOLA.
29 „ MACULIPENNIS.
30 HETEROPELMA SONORENSIS.
31 EPHIOSOMA MEXICANUM.

W. Parkins lith.

Hanhart imp.
416.



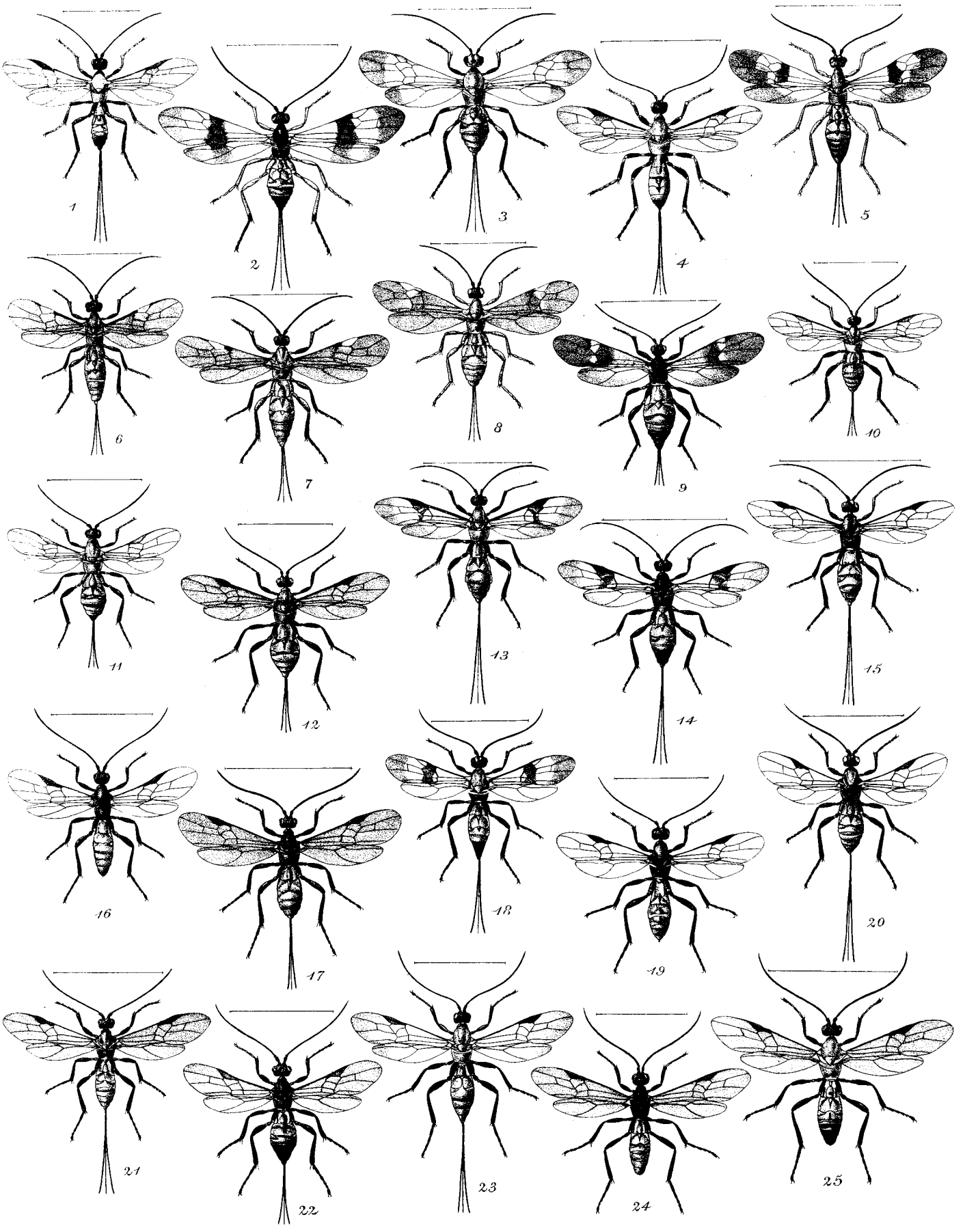
1 CAMPOPLEX TEPANECUS.
2 „ DIVISUS.
3 „ VERÆPACIS
4 „ MEXICANUS.
5 PANISCUS GEMINATUS.
6 LIMNERIA SONORENSIS.
7 BRACON ALBIPALPIS.
8 „ FRUSTRATUS.

9 BRACON GRACILESCENS.
10 „ BUGABENSIS.
11 „ COMPUNCTOR.
12 „ DISTINGUENDUS.
13 „ APICIPENNIS.
14 „ SEDULUS.
15 „ ALBISPINA.
16 „ MONTIVAGUS.
17 „ BLANDICUS.

18 BRACON MORRISONI.
19 „ DEMOCRATICUS.
20 IPHIAULAX NIGRICEPS
21 „ EXALTATUS.
22 „ ROGERSI.
23 „ PULCHRIPENNIS.
24 „ LACHRYMOSUS.
25 „ EROS.

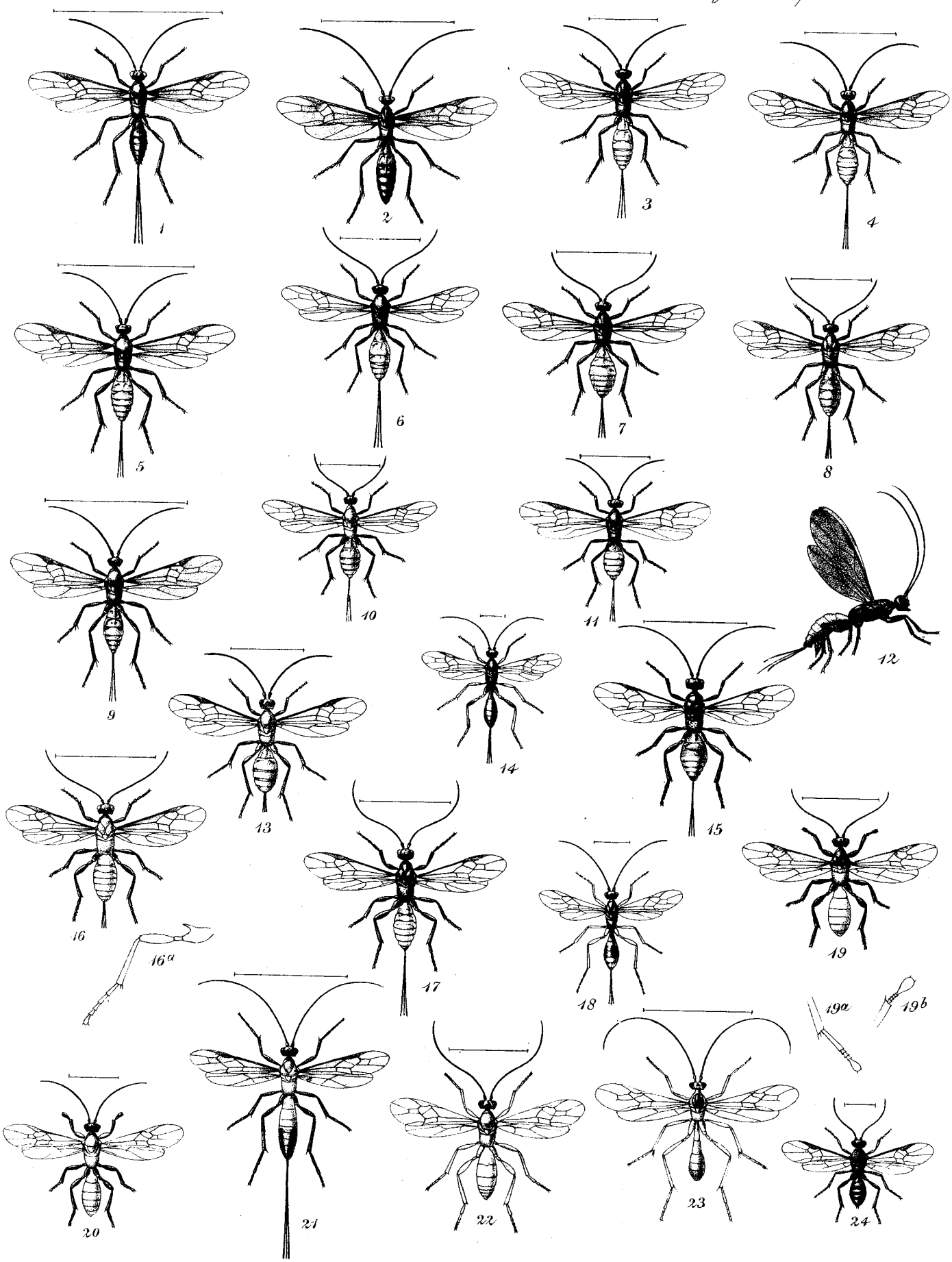
W. Purkiss lith.

Hanhart imp.



1♀ IPHIAULAX GLORIATORIUS.
2♀ " ZAPOTENSIS.
3♀ " PULCHRIPES.
4♀ " CHAMPIONI.
5♀ " HECTOR.
6♀ " CALDERENSIS.
7♀ " GODMANI.
8♀ " GUATEMALENSIS.
9♀ IPHIAULAX PILIVENTRIS.
10♀ " AZTECUS.
11♀ " ARGENTIFRONS.
12♀ " MONTEZUMA.
13♀ " IMITATRIX.
14♀ " HUMEROSUS.
15♀ " VERÆPACIS.
16♂ " TINCTIPENNIS.
17♀ " LÆVIS.
18♀ IPHIAULAX BEATUS.
19♂ " FUSCIDENS.
20♀ " VAGABUNDUS.
21♀ " SALVINI.
22♀ " MOLESTUS.
23♀ " ABACULUS.
24♂ " CAPETILLENSIS.
25♂ " QUADRIPUNCTATUS.

W. Purkiss lith. Hanhart imp.

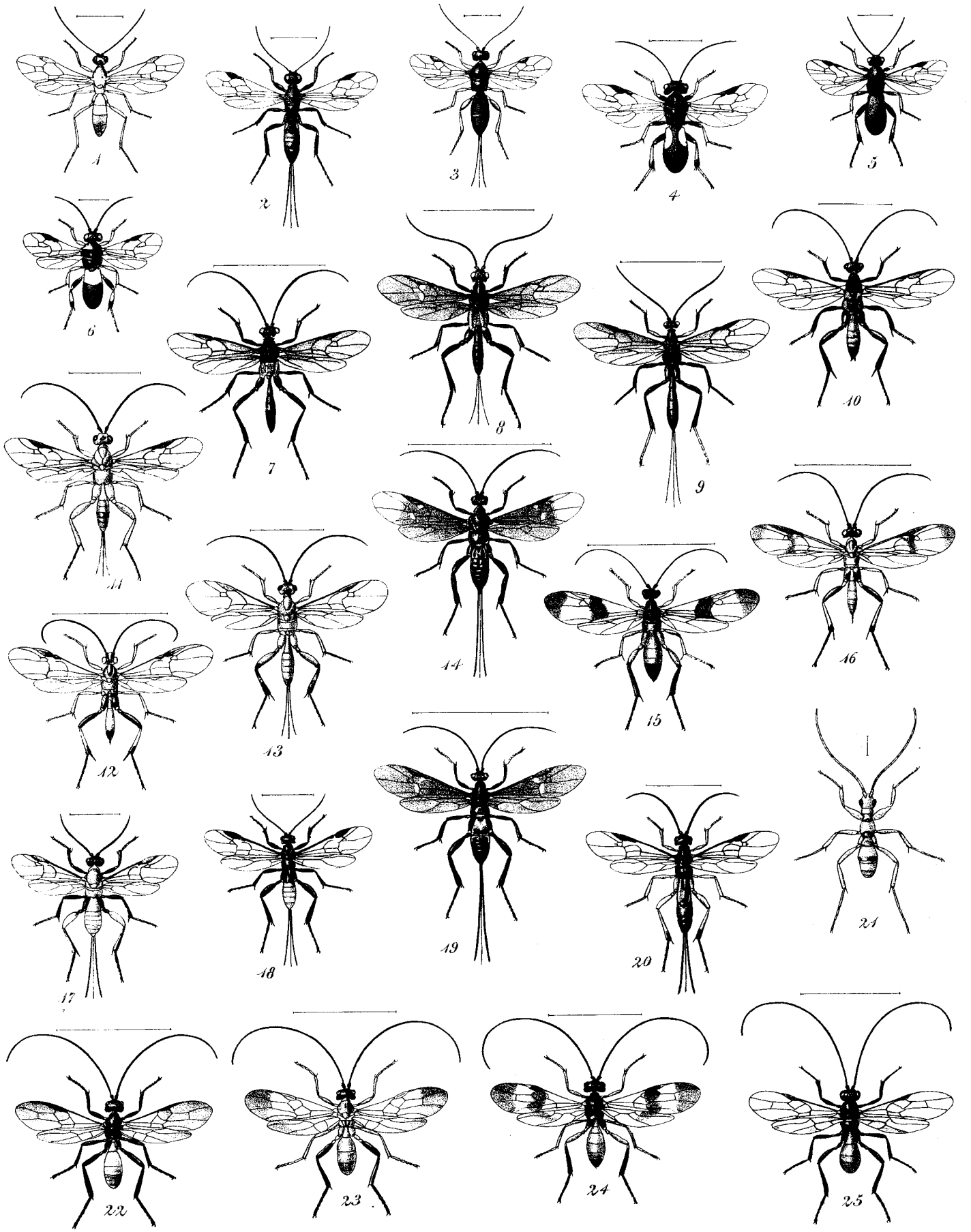


1♀,2♂ IPHIAULAX BASIMACULA.
3♀ " CRUENTATUS.
4♀ " SONORENSIS.
5♀ " MEGAPTERA.
6♀ " EXCURATUS.
7♀ " PILOSELLUS.
8♀ " MENDICUS.
9♀ " BIFOVEATUS.

10♀ IPHIAULAX JUCUNDUS.
11♀ " AVARUS.
12♀ " (?) MULTICARINATUS.
13♀ " BELLICOSUS.
14♀ SPATHIUS TINCTIPENNIS.
15♀ ODONTOBRACON CRASSIVENTRIS.
16♀ " NIGRICEPS.

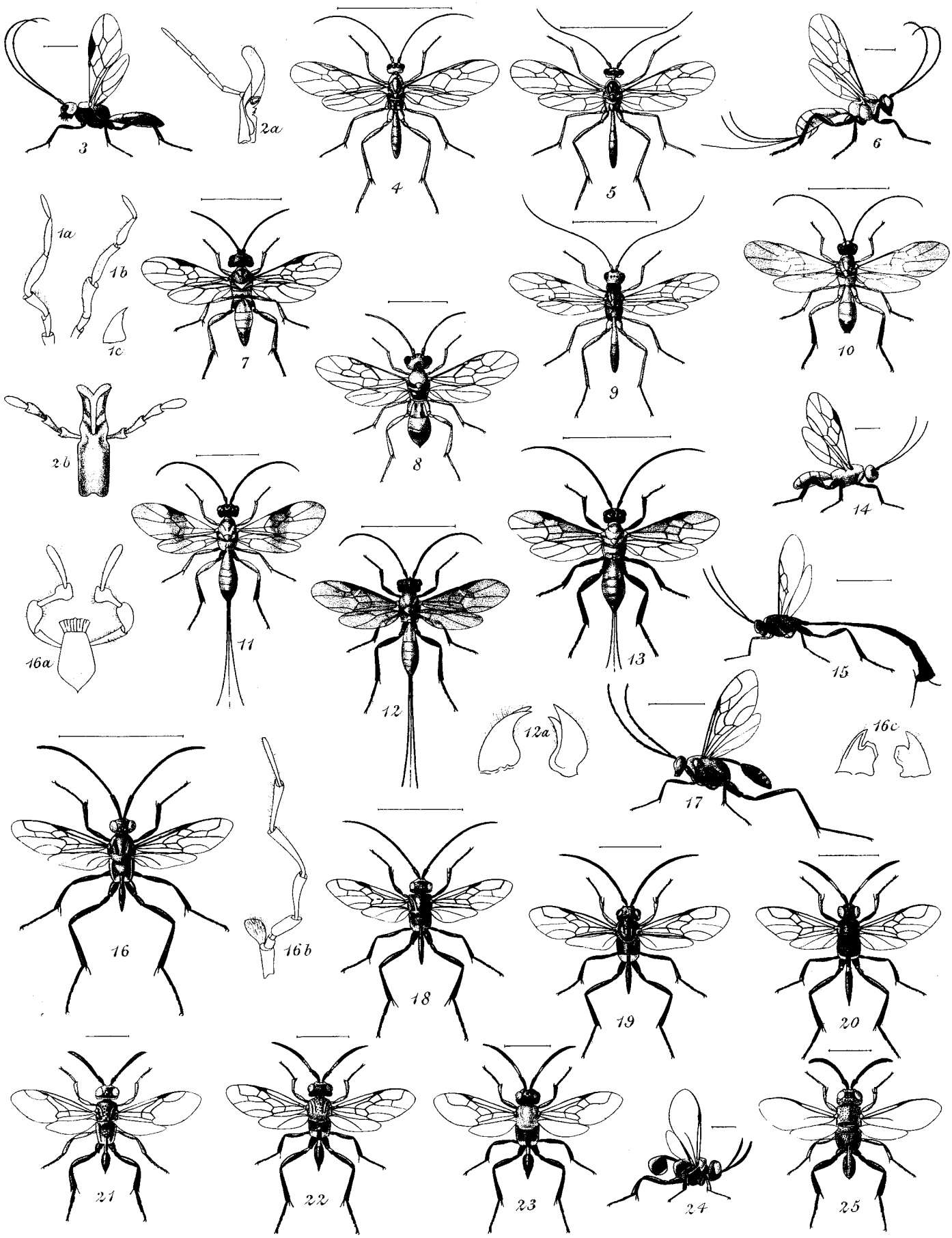
17♀ ODONTOBRACON MONTANUS.
18♀ SPATHIUS ORNATICORNIS.
19♀ YELICONES VIOLACEIPENNIS.
20♀ " MELANOCEPHALUS.
21♀ DORYCTES STRONGYLOGASTER.
22♂ RHOGAS MEXICANUS.
23♂ " BUGABENSIS.
24♀ MICROGASTER MEXICANUS.

Durkiss lith. Hanhart imp.



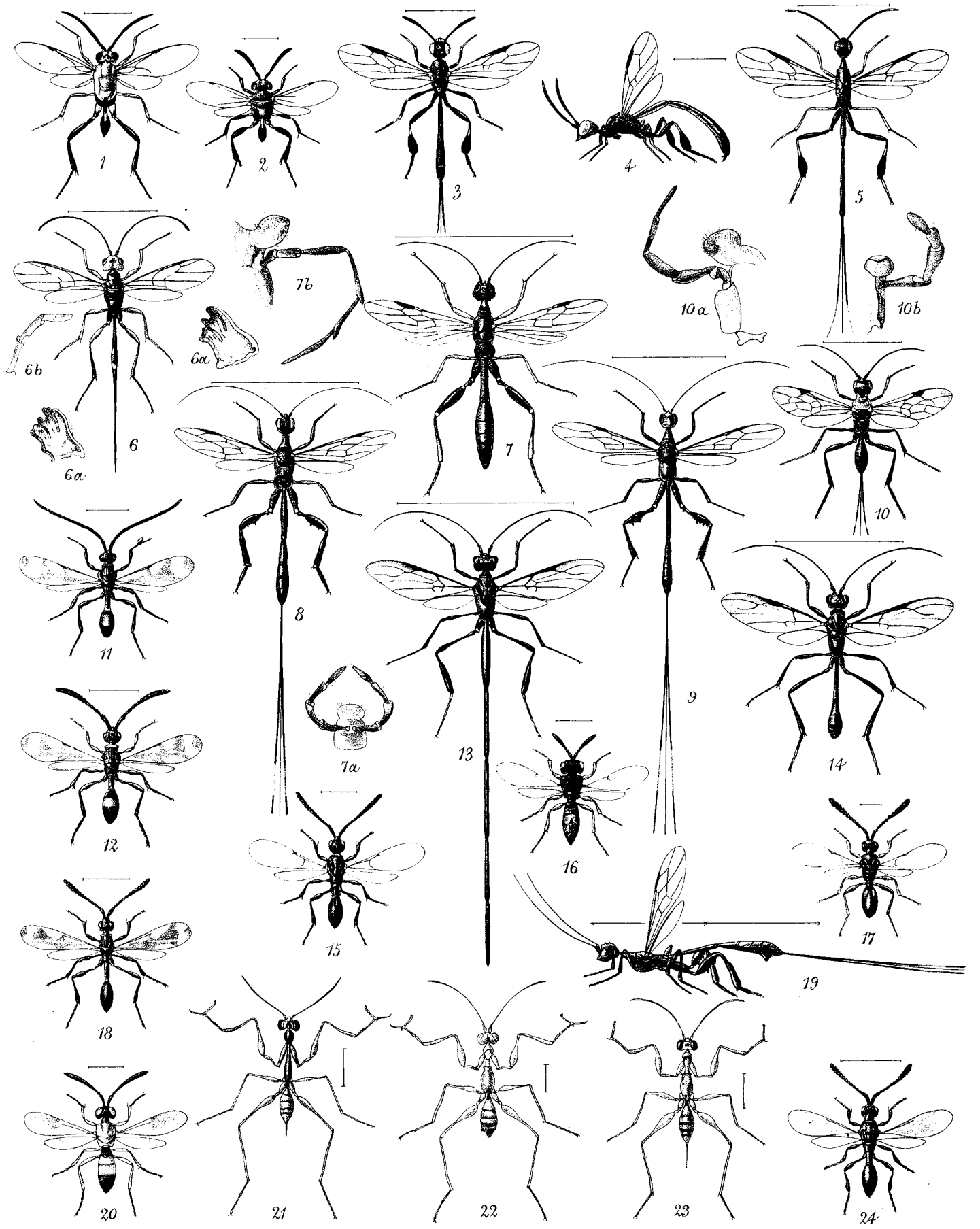
1♂ RHOGAS SONORENSIS.
2♀ LELUTHIA MEXICANA.
3♀ " FUSCINERVIS.
4♀ CHELONUS SONORENSIS.
5♀ " QUADRIMACULATUS.
6♀ " BASIMACULA.
7♂ AGATHIS CHIRIQUENSIS.
8♀ " VIOLACEIPENNIS.
9♀ AGATHIS CRESSONI.
10♂ " ALBISPINA.
11♀ " FERRUGINEUS.
12♂ MICRODUS CHAMPIONI.
13♀ AGATHIS TIBIALIS.
14♀ MICRODUS SIMULATRIX.
15♂ " MELANOSTOMA.
16♂ " PERONATUS.
17♀ " FEMORATUS.
18♀ MICRODUS MONTIVAGUS.
19♀ " BASIMACULA.
20♀ EARINUS ERYTHROPODA.
21♂ OLIXON TESTACEUM.
22♂ ALYSIA LONGICORNIS.
23♂ " XANTHOPTERA.
24♂ " PULCHRIPENNIS.
25♂ " ERYTHROGASTER.

Perkins lith. Hanhart imp.



1 *a-c* RHOGAS BUGABENSIS.
2 *a,b* MICRODUS SIMULATRIX.
3 ♂ ALYSIA CHAMPIONI.
4 ZELE FUSCICORNIS.
5 ♂ MACROCENTRUS DELICATUS?
6 ♀ BRACON (?) ALBIPALPIS.
7 TOXONEURON SEMINIGRUM.
8 " CROCEUM.
9 ♀ CENOCŒLIUS FILICORNIS.
10 " PULCHER.
11 ♀ " ORNATIPENNIS.
12,12*a* ♀ " CHONTALENSIS.
13 ♀ " NIGRICEPS.
14 ♀ OPIUS MEXICANUS.
15 ♀ PHARSALIA ALBOFACIALIS.
16,16*a-c* EVANIA TINCTIPENNIS.
17 " ALBOFACIALIS.
18 EVANIA ALBISPINA
19 " RUGIFRONS.
20 " ORNATICORNIS.
21 " MARGINATA.
22 " VARICORNIS.
23 " TROCHANTERATA.
24 " DORSALIS.
25 " RUGOSA.

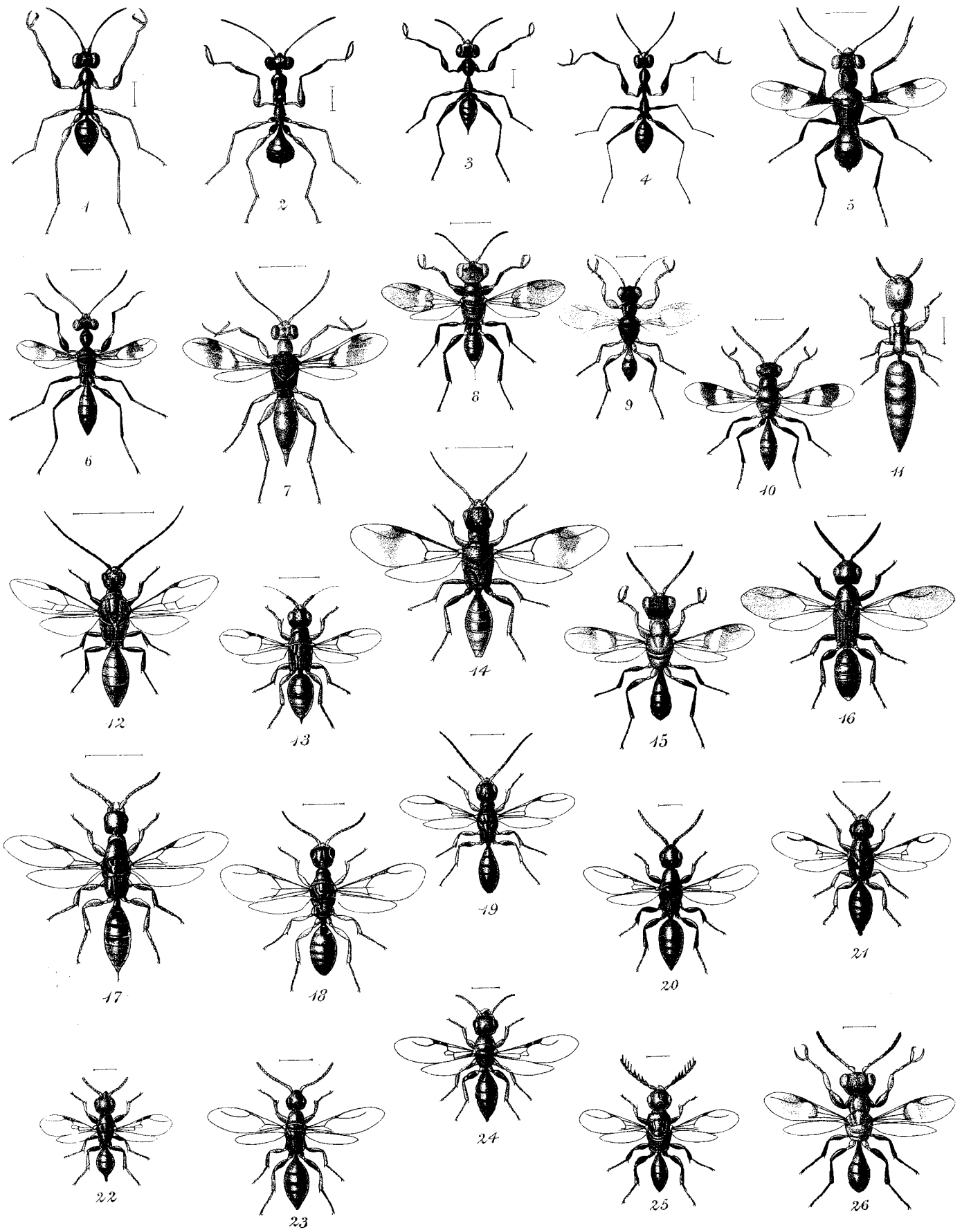
W. Purkiss lith. Hanhart imp.



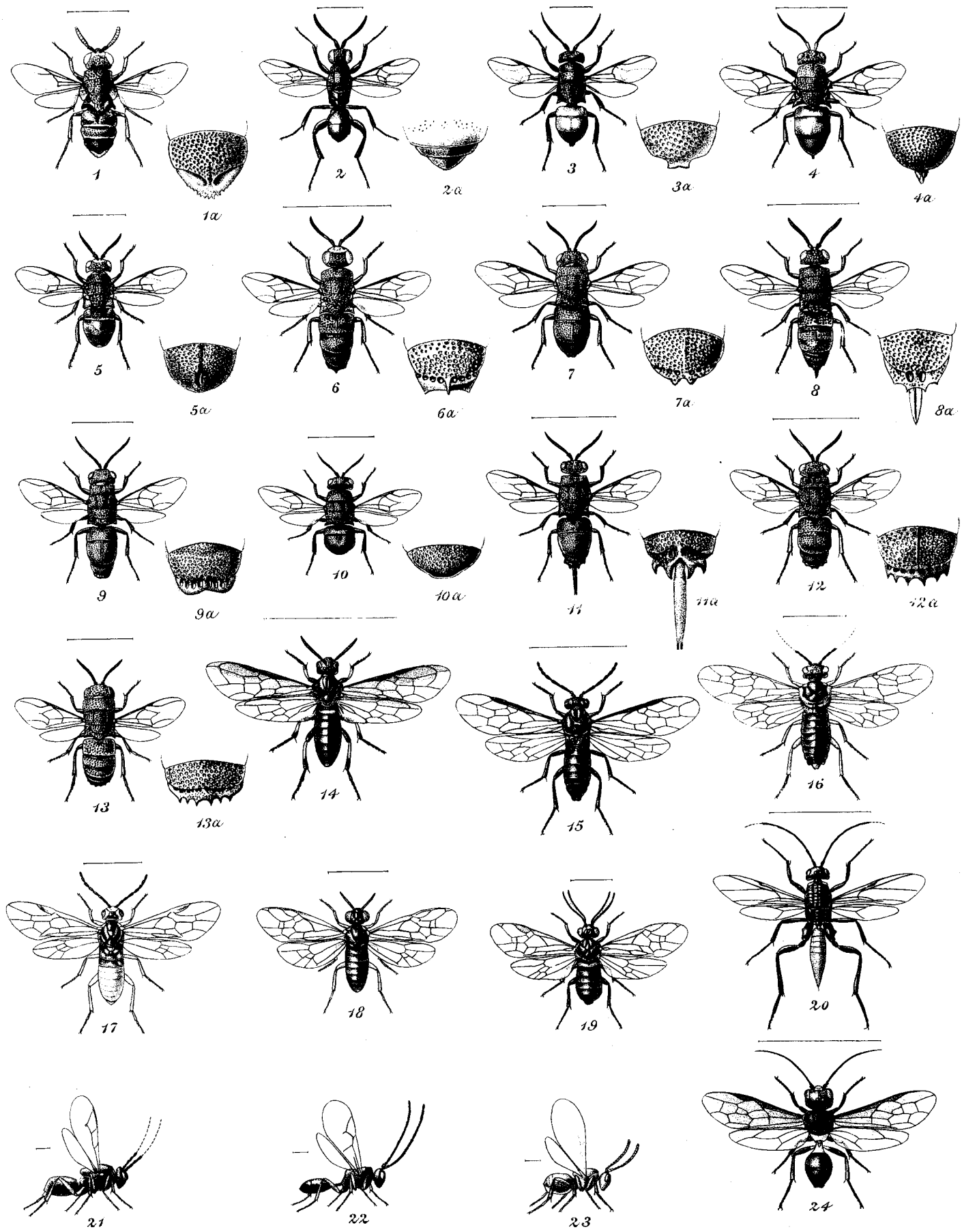
1♂ EVANIA NITIDA.
2♂ " CRASSA.
3♀,4♂ GASTERUPTION SERICEUM.
5♀ " MACULICORNE.
6♀ MONOMACHUS RUFICEPS.
7♂,8♀ MEGISCHUS ANNULATOR.
9♀ MEGISCHUS RUFICEPS.
10♀ AULACUS RUFICOLLIS.
11♂,12♀ PARAMESIUS MACULIPENNIS.
13♀,14♂ PELECINUS POLYTURATOR.
15♀ PARAMESIUS CHIRIQUENSIS.
16♀ SCELIO ERYTHROPODA.
17♀ SPILOMICRUS TINCTIPENNIS.
18♀ PARAMESIUS FASCIATIPENNIS.
19♀ MEGISCHUS NIGER.
20 TRIMORUS LUTEUS.
21♀ GONATOPUS PALLIDITARSIS.
22♂,23♀ " TESTACEUS.
24♀ PARAMESIUS CANALICULATUS.

W. Purkiss lith.

Hanhart imp.
4-74.



GONATOPUS ALBOMARGINATUS.
" DROMEDARIUS.
" ORBITALIS.
" APICALIS.
DRYINUS MACULICORNIS.
" ALTICOLA.
" RUFICEPS.
" NIGRICANS.
" CHIRIQUENSIS.
10 DRYINUS ALBITARSIS.
11 APENESIA FLAVIPES.
12 EPYRIS RUGIFRONS.
13 " MULTICARINATUS.
14 " ERYTHROPODA.
15 DRYINUS MELANOCEPHALUS.
16 EPYRIS VIRIDIS.
17 " NITIDICEPS.
18 EPYRIS TESTACEIPES.
19 " BUGABENSIS.
20 " GUATEMALENSIS.
21 PARASIEROLA LATA.
22 " PALLIDITARSIS.
23 " OPACA.
24 MESITIUS LONGICOLLIS.
25 CALYOZA WESTWOODI.
26 DRYINUS MELANOCEPHALUS, var.



1,1a PARNOPES FULVICORNIS.
2,2a AMISEGA CUPRIFRONS.
3,3a NOTOZUS NITIDUS.
4,4a HEDYCHRIDIUM GUATEMALENSE.
5,5a " MILIARE.
6,6a CHRYSIS PARVULA.
7,7a " QUADRITUBERCULATA.
8,8a " PANAMENSIS.
9,9a CHRYSIS SONORENSIS.
10,10a " MEXICANA.
11,11a " CŒRULANS.
12,12a " PROXIMA.
13,13a " PILIFRONS.
14 HYLOTOMA BASIMACULA
15 STRONGYLOGASTER FUMIPENNIS.
16 HEMICHROA NIGRICANS.
17 EUURA MEXICANA.
18 PTILIA CRASSULA.
19 " NIGERRIMA.
20 IBALIA RUFICOLLIS.
21 AULAX RUFIPES.
22 ANACHARIS MEXICANUS.
23 APHILOTHRIX(?) AZTECUS.
24 TRIGONALYS CHAMPIONI.

N. Purkiss lith. Hanhart imp.