Notes on *Hormiinae* with description of new genera and species (Hym., Ichneumonoidea, Braconidae)

By KARL-JOHAN HEDQVIST

Hormiinae conceived of as tribe *Hormiini* or sometimes as a subfamily of its own by some authors (Ashmead 1900, Fahringer 1930, Marshall 1888, Szépligeti 1904 and Telenga 1941) has been enlarged with several genera which do not fit into this group. Moreover, this subfamily or tribe has been established on the basis of such characteristics as to make it untenable. A revision of the genera belonging to this group shows how necessary it is to refrain from the establishment of taxonomic units larger than genera on the basis of material from minor areas. This statement has previously been made by i.a. Roman (1924) and Nixon (1943) but cannot be emphasized too frequently. Our knowledge of the tropical species is yet deficient, but a review of the known genera readily makes the boundaries diffuse and bridges the boundaries of several subfamilies among the *Braconidae* which appear quite tenable for instance in Europe.

A revision of some of the old subfamilies within *Braconidae* requires a review of the types of the genera which, however, often encounters almost unsurmountable obstacles. The types are often difficult to locate or they are entirely lost and in several cases they are not for loan.

When the author started the revision of *Hormiinae* he was confronted with these difficulties. It also appeared that a placing of the genera assigned to this subfamily into the system required a scrutiny of the closely related subfamilies here denoted by the author as *Doryctinae* sensu lato and *Rhogadinae* sensu lato. To be able to complete his work with *Hormiinae* within reasonable time, the author was forced for the present to submit a preliminary report. Only after a review of the subfamilies mentioned above, *Doryctinae* and *Rhogadinae*, a more correct placing of the genera put in *Hormiinae* could be done.

Originally, *Hormiinae* was characterized in the following way: "Kopf quer, gerandet, Flügel mit drei Cubitalzellen, Nervus parallelus interstitial oder fast interstitial; Hinterleib sitzend, zweite Sutur undeutlich" (Szépligeti 1904). These characteristics can be applied to genera within both *Doryctinae* and *Rhogadinae*. By and large, margined occiput seems to be common among *Braconidae* with infra-clypeal opening and seems to be useful only for taxa of generic character or lower order. Moreover, an interstitial nervus parallelus occurs within several genera among *Doryctinae* and *Spathiinae*. Sessil gaster also occurs among the subfamilies mentioned above. Thus, we must look

for quite other characteristics if we want to retain *Hormiinae* as a subfamily or as a tribe *Hormiini*.

The key to genera listed below should therefore be considered provisory. The following genera have been counted as belonging to *Hormiinae*, and in addition the genera here described as new have been included.

Acanthormius Ashm. 1906
Aulosaphes Mueseb. 1935
Avga Nix. 1940
Cantharoctonus Vier. 1912
Cedria Wilk. 1934
Chremylus Hal. 1833
Hydrangeocola Bréth. 1927
Hormius Nees. 1818
Hormisca Tel. 1941
Hormiellus End. 1912
Labania gen.n.
Lysitermus Först. 1862
Leurinion Mueseb. 1958
Mediella gen.n.
Noserus Först. 1862
Monitoriella gen.n.
Parachremylus Grang. 1949
Parapambolus Dahl 1912=*Pambolus* Hal.
Parahormius Nix. 1940
Pararhyssalus Cam. 1911
Pegarthrum Cam. 1910
Pentatermus gen.n.
Spathiohormius End. 1912
Rogadinaspis Bouč.=*Lysitermus* Först.
Paracedria Heqv.=*Lysitermus* Först.

At a close investigation it appeared that the genera listed above could be placed into groups of genera. The remainder is composed of rather isolated genera and for the time being they may be considered as "genus sola". Two genera viz. *Spathiohormius* End. and *Acanthormius* Ashm. appear to be rather more near related to *Rhaconotus* Ruthe 1854 and they are therefore not treated here. The following groups of genera may be listed, the remainder consisting of "genus sola" mentioned above.

The *Aulosaphes*-group	The *Hormius*-group	The *Pambolus*-group
Aulosaphes Mueseb.	*Hormius* Nees.	*Pambolus* Hal.
Pentatermus gen.n.	*Hormisca* Tel.	*Chremylus* Hal.
Lysitermus Först.	*Parahormius* Nix.	*Hormiellus* End.
Cedria Wilk.	*Mediella* gen.n.	
	Leurinion Mueseb.	

Genus sola

Avga Nix., not especially related to any genus.
Cantharoctonus Vier., is difficult to place, perhaps near *Hormius*.
Hydrangeocola Bréth., is also difficult to place; I think it is best to retain this genus as "genus sola".
Labania gen.n., is also an isolated genus; I retain it as "genus sola".
Monitoriella gen.n., related to some genera of *Doryctinae*, but I keep it as a "genus sola".
Noserus Först., not seen.
Parachremylus Grang., not seen. This genus belongs perhaps to *Pambolini*.
Pegarthrum Cam., not seen.

Below I have listed known hosts for above mentioned genera.

Acanthormius Ashm.	*Host.*
A. dentatus Grang.	*Odites* sp. (Lep. Tinaeoidea, Xyloryctidae)

Aulosaphes Mueseb.	
A. lampas Nix.	*Homona coffearia* (Nietn.) (Lep. Tortricoidea, Tortricidae)
A. psychidivorus Mueseb.	*Dappula tertia* (Templ.) (Lep., Psychoidea, Psychidae)
Avga Nix.	Host not known.
Cantharoctonus Vier.	Host not known.
Cedria Wilk.	
C. paradoxa Wilk.	*Hapalia machaeralis* Walk. (Lep., Pyralidoidea, Pyralididae)
C. anomala Wilk.	*Hapalia machaeralis* Walk. (Lep., Pyralidoidea, Pyralididae)
Chremylus Hal.	
C. elaphas Hal.	*Pyralis farinalis* (L.) (Lep., Pyralidoidea, Pyralididae)
	Cacoecia xylosteana (L.) (Lep., Tortricoidea, Tortricidae)
	Tinea pellionella Lin. (Lep., Tinaeoidea, Tinaeidae)
	— *biselliella* Hum. (Lep., Tinaeoidea, Tinaeidae)
	— *fuscipunctella* (Ha.) (Lep., Tinaeoidea, Tinaeidae)
	— *secalella* Zach. (Lep., Tinaeoidea, Tinaeidae)
	Stegobium paniceum L. (Col., Bostrychoidea, Anobiidae)
	Bruchus atomarius L. (Col., Chrysomeloidea, Bruchidae)
	— *rufimanus* Boh. (Col., Chrysomeloidea, Bruchidae)
	Calandra granaria L. (Col., Curculionoidea, Curculionidae)
	— *oryzae* L. (Col., Curculionoidea, Curculionidae)
Hydrangeocola Bréth.	Bred from galls on *Hydrangea integerrina*.
Hormius Nees.	
H. basalis (Prov.)	*Argyrotaenia citrana* (Fern.) (Lep., Tortricoidea, Epiblemidae)
H. vulgaris Ashm.	*Psorosina hammondi* (Ril.) (Lep., Pyralidoidea, Phycitidae)
	Tetralopha subcanalis (Wlkr.) (Lep., Pyralidoidea, Pyralididae)
H. moniliatus Nees.	*Pandemis corylana* (F.) (Lep., Tortricoidea, Tortricidae)
	Pyrausta aurata Sc. (Lep., Pyralidoidea, Pyraustidae)
	Scythris inspersella Hbn. (Lep., Tinaeoidea, Scythrididae)

Hormisca Tel.	
H. tatianae Tel.	*Heterographus* sp. (Lep., Pyralidoidea, Phycitinae)
Hormiellus End.	Host not known.
Labania gen.n.	Host not known.
Lysitermus Först.	Host not known.
Leurinion Mueseb.	Bred from cotton buds, the host not known.
Mediella gen.n.	Host not known.
Noserus Först.	
N. pomifoliellae (Ashm.)	*Bucculatrix pomifoliella* Clem. (Lep., Tinaeoidea, Lyonetiidae)
Monitoriella gen.n.	from *Philodendron* galls.
Parachremylus Grang.	Host not known.
Pambolus Hal.	
P. rosenhaueri Ratzb.	*Cryptocephalus fulvus* Gze. (Col., Chrysomeloidea, Chrysomelidae)
Parahormius Nix.	
P. pallidipes (Ashm.)	*Keiferia lycopersicella* (Busck.) (Lep., Tinaeoidea, Gelechiidae)
	Gnorimoschema operculella (Zell.) (Lep., Tinaeoidea, Gelechiidae)
P. trilineatus (Ashm.)	*Coleophora caryaefoliella* Clem. (Lep., Tinaeoidea, Coleophoridae)
P. leucopterae Nix.	*Leucoptera* sp. (Lep., Tinaeoidea, Lyonetiidae)
Pararhyssalus Cam.	Host not known.
Pegarthrum Cam.	Host not known.
Pentatermus gen.n.	
P. carinatus sp.n.	*Earias* sp. (Lep., Noctuoidea, Arctiidae)
Spathiohormius End.	Host not known.

All species of what we may call true *Hormiinae,* the *Aulosaphes*-group and *Hormius*-group, seem to be parasitic on *Lepidoptera,* especially superfamilies *Tinaeoidea, Tortricoidea* and *Pyralidoidea.* About so called "genus sola" we know not much, but *Noserus pomifolillae* (Ashm.) is a parasite on a mining moth (Bucculatrix pomifoliella Clem.) of the superfamily *Tinaeoidea.* The *Pambolus*-group (Pambolini) is parasitic on both *Lepidoptera* and *Coleoptera.*

About the larvae of *Hormiinae* we know nothing.

A preliminary key to the above mentioned genera

1 Wings macropterous or brachypterous (♀♀). 1st and 2nd segments of the gaster large, 2nd segment as long as or longer than the rest of gaster. Propodeum with two horns ..... *Pambolus* Hal.

— Wings macropterous (except 1 species in *Hormius*). 2nd segment of the gaster shorter than the rest of the gaster. Propodeum without horns 2

2 Fore wing with the first tranverse cubital vein (1st intercubitus) absent (very seldom with trace of this vein see note under *Lysitermus*) 3

— Fore wing with the first tranverse cubital vein (1st intercubitus) not absent. 2 or 3 cubital cells 4
3 Gaster with 3 longtudinally striated or carinated segments visible. Occiput with carina ..... *Lysitermus* Först.
— Gaster with 6 visible segments, only 1st and the base of the 2nd longitudinally striated, the latter finer ..... *Labania* gen.n.
4 Nervus recurrens received into the 1st cubital cell 5
— Nervus recurrens received into the 2nd cubital cell 11
5 Radial cell shorter than stigma (1/4 of stigma) ..... *Hormisca* Tel.
— Radial cell much longer than stigma 6
6 Nervus parallelus not interstitial 7
— Nervus parallelus interstitial 8
7 Notaulices absent ..... *Avga* Nix.
— Notaulices distinct ..... *Parachremylus* Grang.
8 2nd, 3rd and 4th segments of the 5 segmented maxillary palpi swollen. Occiput not carinated ..... *Pegarthrum* Cam.
— The segments of maxillary palpus not swollen. Occiput carinated 9
9 1st and 2nd segments of gaster dorsally strongly longitudinally striated, the striae clearly separated, 3rd segment is weakly, irregularly striated. *Pararhyssalus* Cam.
— Only 1st segment dorsally with sculpture 10
10 Radius emitting from the middle of stigma. Gaster being poorly sclerotized beyond the first segment ..... *Cantharoctonus* Vier.
— Radius leaves the stigma far distal from middle ..... *Noserus* Först.
11 Gaster longitudinally carinated 12
— Gaster with only 1st and 2nd segment rugose or striated 14
12 Gaster with 5 segments visible ..... *Pentatermus* gen.n.
— Gaster taken up by a carapace of segments 1—3 or 1—2 13
13 Fore wing with 2 cubital cells ..... *Cedria* Wilk.
— Fore wing with 3 cubital cells ..... *Aulosaphes* Mueseb.
14 Occiput not carinated ..... *Leurinion* Mueseb.
— Occiput carinated 15
15 Mouth in abnormal position and therefore anterior margin of clypeus above a level with the anterior margin of eyes ..... *Hydrangeocola* Bréth.
— Mouth in normal position and anterior margin of clypeus very much below a level with the anterior margin of eyes 16
16 Antennae short, 12-jointed ..... *Chremylus* Hal.
— Antennae with more than 12-joints 17
17 Terebra as long as or longer than gaster 18
— Terebra much shorter than gaster 19
18 Gaster flattened, wide and smooth ..... *Hormiellus* End.
— Gaster very elongate and rugose on 1st and 2nd segments .... *Monitoriella* gen.n.
19 Prepectal margin not present. Prescutellar groove narrow, feebly developed ..... *Parahormius* Nix.
— Prepectal margin present. Prescutellar groove wide, well developed 20
20 Mesonotum posteriorly with an area of rugose sculpture. Eyes not emarginated. Recurrens emitting from the 2nd discoidal cell ..... *Hormius* Nees.
— Mesonotum posteriorly smooth. Eyes emarginated. Recurrens emitting from nervus parallelus ..... *Mediella* gen.n.

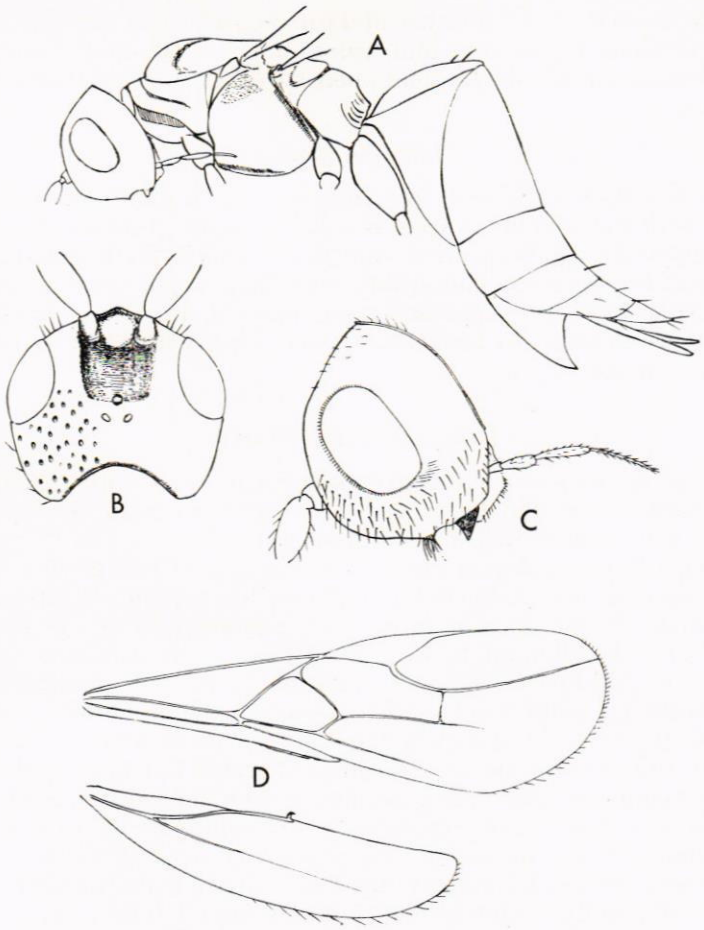

Fig. 1. *Labania* gen.n. *straminea* sp.n.: A. Female in lateral view, B. Head in dorsal view, C. Head in lateral view and D. Fore and hind wings.

Lysitermus Först.

Förster, Verh. Nat. Ver. Preuss. Rheinl., 19, p. 236, 1862.
Syn.: ? *Trissarthrum* Ashmead, Proc. U.S. Nat. Mus., 23, p. 148, 1900.
Rogadinaspis Bouček, Acta Ent. Mus. Nat. Pragae, 30, pp. 441—446, 1956.
Paracedria Heqvist, Ent. Tidskr., 77, pp. 219—220, 1957.

Type: *L. pallidus* Först., orig. design.
1 species.
L. pallidus Först., ibid. Czechoslovakia, Germany, Austria, Sweden
Syn.: *Rogadinaspis tritoma* Bčk., ibid. (see above) syn.n.
Paracedria suecica Heqv., ibid. (see above) syn.n.

I have seen a specimen (1 ♂) from Austria, Hackelsberg, 28.VIII,1960, which is very interesting. The specimen has wing veins (fig. 12 A) more distinct. Perhaps when we have more specimens of *L. pallidus* we must take

Aulosaphes Mueseb. as a synonym of *Lysitermus* Först. The only important difference between *Lysitermus* and *Aulosaphes* is that *Lysitermus* is lacking 1st intercubitus, but in above mentioned specimen one can see trace of 1st intercubitus.

Labania gen.n.

Head with occiput carinated, interrupted in the middle. Antennae inserted on a level with the middle of the eyes. Labial palpi 3-segmented, maxillary palpi 4-segmented. Prepectus not margined anteriorly. Notaulices distinct, converging before prescutellar groov. Scutellum small, oval, longitudinally striated. Gaster with 2nd segment longer than 1st. Fore wing with 2 cubital cells and nervus parallelus interstitial. Hind wing with faint veins.

Type: *L. straminea* sp.n.

Labania straminea sp.n.

♀. Stramineous with trochanter pale yellowish white. Antenna successively darker towards apex, the latter is brown. Terebra with the apex brown. Wing veins yellowish brown. Eyes and ocelli black.

Head (fig. 1 B, C.) in dorsal view nearly square, in lateral view triangular. Occiput carinated, the carina interrupted in the middle. Ocelli in an equilateral triangle. Malar space is more than half breadth of the eye. The eye elongate. Between antennal base and ocelli a groov. Antennae inserted on a level with the middle of the eyes. Antenna 22-jointed, joints elongate and slender. Maxillary palpi 4-segmented 1—3 somewhat swollen, labial palpi 3-segmented. Lower part of face hairy. Vertex with scattered pits. Pronotum with a very thin, membraneous margin. Prepectus not margined anteriorly. Notaulices crenulated, converging before prescutellar furrow. Scutellum oval and flattened. Axillae small, separated from scutellum by furrows as large as prescutellar furrow. Metanotum longitudinally striated. Propodeum gently sloping on posteriorly, irregularly areolated. Mesopleura smooth with crenulated posterior margin and gently rugulous above. Gaster (fig. 1 A) sessil, 1st segment longitudinally striated, with two stronger carinae gently converging backwards, which reach to the middle of the segment. 2nd segment longer than the first, on the anterior portion gently striated. Legs slender with the femora somewhat swollen. Hind coxa big, interior margin forming nearly right angles with the basal margin. Fore wing (fig. 1 D) with 1st and 2nd cubital cells confluent. Nervus parallelus interstitial. Hind wing with reduced veins.

♂. Unknown.

Length: 2.3 mm.

Holotype: in the coll. of U.S. Nat. Mus., Washington, Cat. Nr. 66279.

Locality: La Ceiba, Honduras, Aug. 25, 1916, coll. F. J. Dyer.

This is an isolated genus, difficult to place in relation to other genera. I think it is best to hold it as a "genus sola".

Hormisca Tel.

Telenga, Fauna SSSR., V, pp. 115—116, 1941.

Type: *H. tatianae* Tel., orig. design.

2 cubital cells, occiput carinated.

1 species.

H. tatianae Tel., ibid. Turkistan, Persia, Morocco

Telenga when describing this genus and species only knew the female. Owing to Dr. Muesebeck, Washington, I can now describe the male.

Hormisca tatianae Tel. ♂

Similar to female (see Telenga 1941) but thorax darker testaceus, especially on mesopleura.

Antennae 18-jointed (the female has antennae 20-jointed). Mesopleura large, convexe with a smooth furrow. Prepectus with crenulated transverse furrow. Fore wing see fig. 11 B.

Many specimens from Guercif, Morocco, IX.16,1960, Drea and Benharrosh coll., Host: *Heterographus* sp. on *Halogeton sativus*.

Avga Nix.

Nixon, Ann. & Mag. Nat. Hist., ser. 11, V, pp. 490—492, 1940.

Type: *A. choaspes* Nix. orig. design.

Only 1 species, the type. Locality: India.

Avga is characterized by: Notaulices absent. Anterior fovea of the scutellum fairly deep, foveate. No prepectal margin, margined occiput, short 2nd cubital cell of the fore wing and long 1st abscissa of the medius in the hind wing. Petiole short, more or less subquadrangular. Gaster with only partial sclerotisation.

Parachremylus Grang.

Granger, Mém. l'Institut sci. Madagascar., II (A), pp. 185—186, 1949.

Type: *P. seyrigi* Grang., orig. design.

Only 1 species, the type. Locality: Madagascar.

Parachremylus is characterized by: Notaulices distinct. Head transverse, occiput margin. Anterior fovea of the scutellum large, crenulated. Propodeum areolated. Nervulus strongly postfurcal. Nervus parallelus not interstitial. Gaster oval, flattened, 1st segment trapezium-shaped, petiole and tergites 2—3 finely carinated.

Pegarthrum Cam.

Cameron, Tijdschr. Ent., 53, p. 49, 1910.

Type: *P. rufescens* Cam.

Notaulices distinct. Mesopleura with a clearly defined furrow. Gaster elongate, oval with 8 visible segments. Antenna (at least) 26-jointed.

3 species hitherto described:

1. *P. rufescens* Cam., ibid., pp. 49—50. Ceylon
2. *P. carinatus* Cam., ibid., pp. 50—51. Batjian
3. *P. fuscipennis* Cam., P. Linn. Soc. N.S.W., 36, pp. 355—356, 1911. Solomon Isl.

Pararhyssalus Cam.

Cameron, J. R. Agric. Soc. Demerara, 1, p. 316, 1911.

Type: *P. longipalpis* Cam.

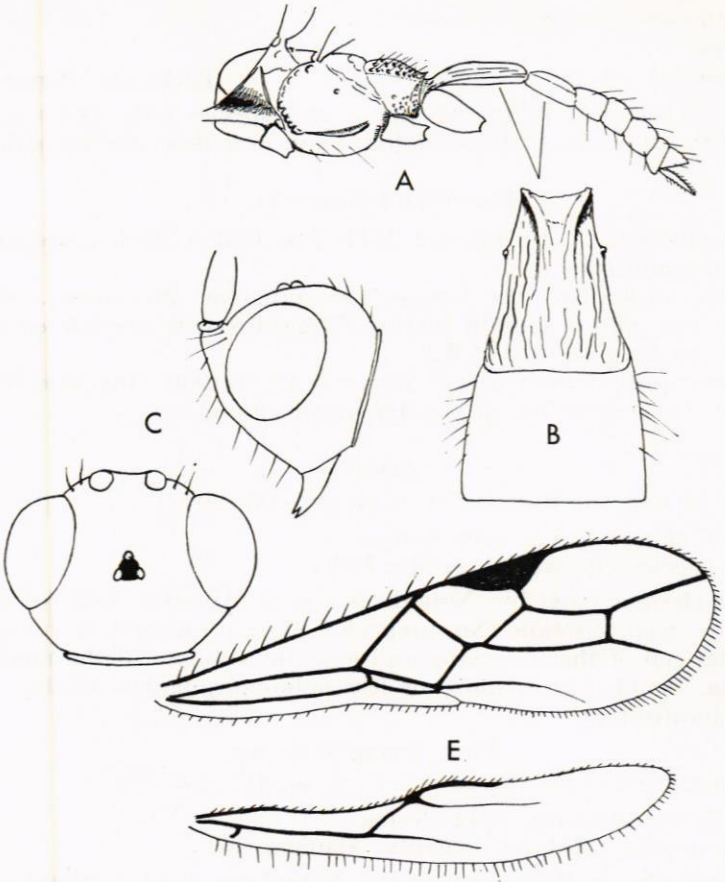

Fig. 2. *Cantharoctonus brunneus* sp.n.; A. Female in lateral view, B. 1st and 2nd segments of the gaster, C. Head in lateral and dorsal view, E. Fore and hind wings.

Only one species, the type. Locality: Guiana.

Occiput transverse, weakly margined. There is a wide shallow curved furrow on the lower basal half of the mesopleura. 3 cubital cells.

Cantharoctonus Vier.

Viereck, Proc. U.S. Nat. Mus., 42, p. 617, 1912.

Type: *C. stramineus* Vier.

One species, the type, and a new species described below belong to this genus.

Abdomen being poorly chitinized beyond the first segment.

Cantharoctonus brunneus sp.n.

♀. Yellowish brown, darker dorsally on thorax and gaster. Antenna except scape and pedicel brown. Eyes and an area around ocelli brown. Legs lemon. Wing veins pale brown.

Head (fig. 2 C) smooth, occiput carinated. Ocelli in an equilateral triangle. Clypeus very convex, bulging. Maxillary palpi 5-segmented, labial palpi 4-segmented. Antennae inserted on a level with the middle of the eyes. Antenna 24-jointed, joints 2—3 times as long as wide. Mesonotum smooth only where the converging notaulices meet, coriaceous. Prescutellar furrow wide and shallow. Scutellum conical. Metascutum long. Propodeum smooth with a median furcate carina and posterior areolated. Spiracles small, circular, callus with few scattered hairs. Mesopleura (fig. 2 A) smooth with a gently, crenulated furrow. 1st segment of gaster (fig. 2 B) sclerotized, longitudinally striated. The rest of gaster weakly sclerotized. Terebra short, as long as 2nd segment of hind tarsus. Wings, see fig. 2 E.

♂ Unknown.

Length: 2.0 mm.

Holotype: in the coll. of U.S. Nat. Mus., Washington, Cat. Nr. 66284.

Locality: Sebring, Fla., 20,III,1955, leg. H. V. Weems Jr.

C. brunneus sp.n. differs from *C. stramineus* Vier. in having 1st segment of gaster not parallel-sided and 2nd segment not sclerotized. The colour is also differing.

Noserus Först.

Förster, Verh. Nat. Ver. Preuss. Rheinl., 19, p. 241, 1862.

Type: *N. facialis* Först., orig. design.

2 species.

1. *N. facialis* Först., ibid. Germany
2. *N. pomifoliellae* (Ashmead), (Bracon p.) U.S. Natl. Mus. Proc., 11, p. 620, 1889 (1888). U.S.A.

Genus cfr. *Noserus*

Here a specimen which probably belongs to a new genus. Since the antennae are broken I prefer, however, not to erect a new genus.

Head yellowish brown with palpi pale yellowish white. Eyes and a spot around the ocelli black. Thorax yellow-testaceous, darker brown on scutellum, propodeum, mesopleura and metapleura. Legs pale testaceous. Gaster with 1st segment brown, 2nd and the middle of 3rd pale yellowish white, the rest of gaster dirty brown. Wing veins pale yellow.

Head (fig. 3 B) with occiput carinated, the carina interrupted in the middle. Malar space shorter than the half breadth of the eye. Maxillary palpi 4-segmented, labial palpi 3-segmented. Antennae inserted on a level with the middle of the eyes. Mesopleura smooth with a short furrow below and near posterior margin a crenulated furrow. Notaulices crenulated, converging and meeting in a longitudinally striated area before prescutellar furrow. The latter deep and supplied with many cross-carinae. Scutellum small, triangular. Propodeum smooth and areolated. Gaster similar to *Hormius moniliatus* Hal., 1st segment longitudinally striated, 2nd tergite with lateral weals, near the spiracles dark, strongly sclerotized spots. Metapleura in front of and above hind coxa with a tooth-shaped process. The coxa as in *Doryctes*. Wings see fig. 3 C.

1 ♂ in the coll. of U.S. Nat. Mus., Washington.

Locality: Oasis Feirari, Sinai, Egypt, 26—29.VII.,1950, leg. C. W. Sabrosky.

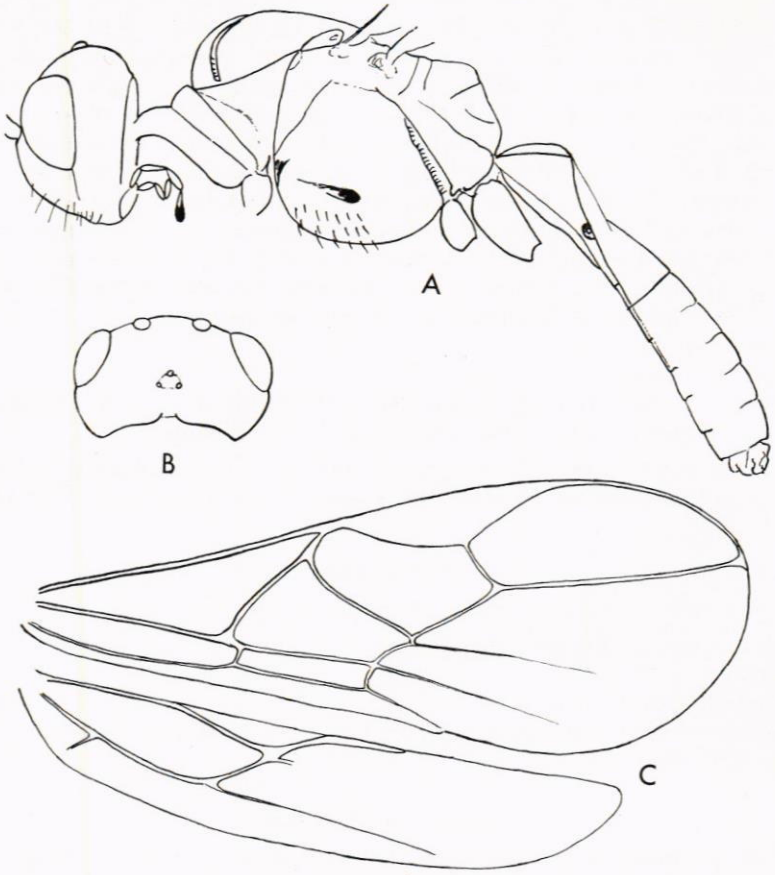

Fig. 3. Genus nov.? near *Noserus* Först.; A. Male in lateral view, B. Head in dorsal view, C. Fore and hind wings.

Pentatermus gen.n.

Head transverse, occiput carinated. Antennae inserted just above the middle of face. Ocelli in an equilateral triangle. Prepectus carinated and with longitudinal striation. Mesopleura with furrow. Notaulices converging in the middle of mesoscutum and at the converging point with a large, shallow and rugulous hollow. Propodeum sloping. Gaster with 5 dorsally visible segments, 4 of which longitudinally carinated. Terebra as long as the first joint of hind tarsus. Fore wing with nervulus postfurcal. Nervus parallelus interstitial, nervus recurrens entering second cubital cell. 2nd intercubitus very indistinct.

Type: *P. carinatus* sp.n.

Pentatermus carinatus sp.n.

♀. Stramineous with paler legs. Eyes and an ocellar spot black. Terebra dark brown. Antennae from 1st funicle joint to apex successively passing from yellowish brown to brown.

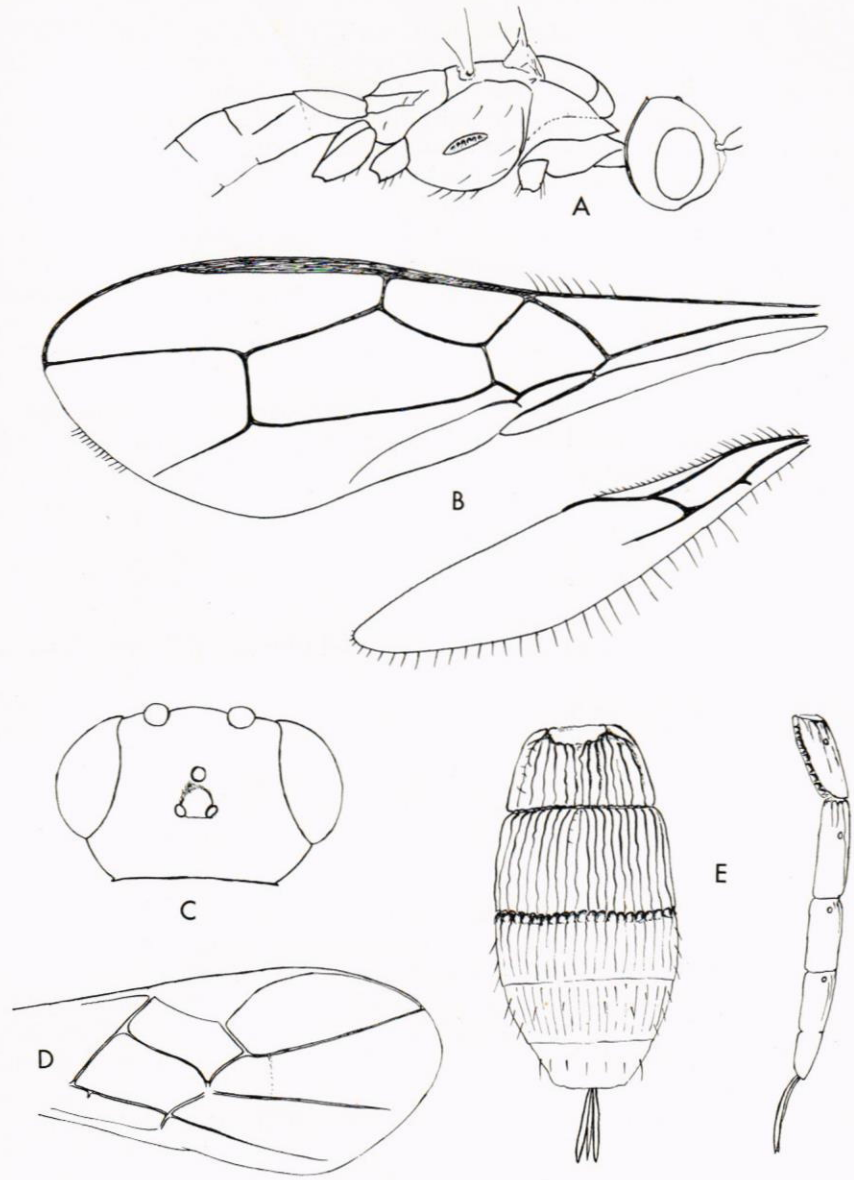

Fig. 4. *Hydrangeocola espinosai* Bréth.; A. Male in lateral view, B. Fore and hind wings *Pentatermus* gen.n. *carinatus* sp.n.; C. Head in dorsal view, D. Part of fore wing, E. The gaster in dorsal and lateral view.

Head (fig. 4 C) transverse with occiput carinated. Ocelli in an equilateral triangle. The space from ocelli to occipital carina as long as the space from ocelli to the eye. Eyes large, oval and bulging. Malar space as long as half breadth of eye. Maxillary palpi 5-segmented, labial palpi 3-segmented. Antennae inserted just above the middle of face, 14-jointed (at least, broken).

Prepectus carinated and sculptured with carinae. Notaulices crenulated, converging in a nearly square, shallow and rugose impression before prescutellar furrow. The latter divided in four pits by cross-carinae. Metanotum nearly as long as scutellum and with longitudinal carinae. Propodeum areolated. Gaster (fig. 4 E) with 5 visible segments (in dorsal view), the suture between first and second segments and third and fourth segments crenulated. First and second segments strongly longitudinally carinated, third and fourth segments finer carinated and 5th only chagreened. Ovipositor as long as first segment of hind tarsus. Legs slender, fore and mid coxae of the same size, hind coxa 2 times as long as mid coxa. Fore wing (fig. 4 D) with second intercubitus very obscure.

Male unknown.

Length: 3 mm.

Holotype: in the coll. of U.S. Nat. Mus., Washington, Cat. Nr. 66280.

Locality: S. Nigeria, Ilorin, 31.III,1921, leg. Thos. Thornton.

Host: ex pupa of *Earias* sp.

Cedria Wilk.

Wilkinson, Stylops, 3, p. 80, 1934.

Type: *C. paradoxa* Wilk.

2 species belong to this genus. I have figured the fore wing of *C. paradoxa* Wilk. (fig. 12 B).

1. *C. paradoxa* Wilk., ibid. India
2. *C. anomala* Wilk., Stylops, 4, pp. 71—72, 1935. Burma

Leurinion Mueseb.

Muesebeck, Proc. U.S. Nat. Mus., 107, p. 458, 1958.

Type: *L. primum* Mueseb.

1. *L. primum* Mueseb., ibid., pp. 458—459 Peru

I have seen a series of this species. *L. primum* Mueseb. has prepectus immarginated and subdiscoideus arising from about the middle of the outer end of the first brachial cell (fig. 5 D). Mesopleura (fig. 5 A) has a very weak furrow and the gaster as in *Hormius* but with weaker sclerotization; only first segment with sculpture (fig. 5 A). Head (fig. 5 B) with the occiput not carinated and large eyes.

Host: *L. primum* is reared from cotton buds but the host not known.

Aulosaphes Mueseb.

Muesebeck, Ann. ent. Soc. Amer., 28, pp. 248—249, 1935.

Type: *Rhyssalus unicolor* Ashm.

1. *A. unicolor* (Ashmead), Proc. U.S. Nat. Mus., 28, p. 970, 1905. (Rhyssalus u.) Philippine Isl.
2. *A. psychidivorus* Muesebeck, Ann. ent. Soc. Amer., 28, pp. 249—250, 1950. Java
3. *A. lampas* Nixon, Ann. & Mag. Nat. Hist., 3, pp. 470—474, 1950. Ceylon

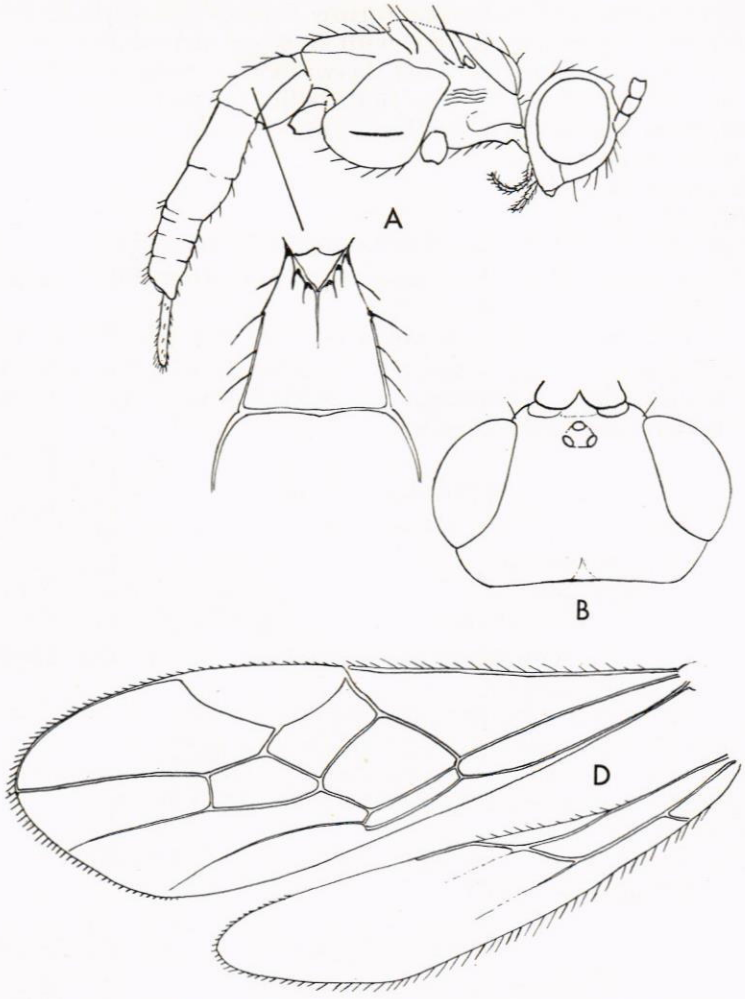

Fig. 5. *Leurinion primum* Museb.; A. Female in lateral view and the 1st segment of the gaster in dorsal view., B. Head in dorsal view, D. Fore and hind wings.

Aulosaphes capensis sp.n.

♂. Antennae with the joints 1—3, head, and thorax reddish brown. The rest of the antennae brown. Legs and gaster except 3rd segment yellowish brown, 3rd segment darker. Wing veins pale brown.

Head nearly transverse, smooth and somewhat gibbous below the base of the antennae. Antennae (broken, 9 joints) inserted above the middle of the face. Eye small, oval. Malar space as long as the length of the eye. The space between ocelli and the eye=the space between ocelli and occipital carina. Thorax except scutellum chagreened, scutellum smooth. Notaulices wide and crenulated, meeting in front of the prescutellar furrow. A short longitudinally, weak furrow between notaulices and frontad from the meeting

point of the notaulices. Prescutellar furrow with 4 cross-carinae. Propodeum areolated and chagreened. Gaster with 3 segments, which are regularly, coarsely and longitudinally striated, between the striae wrinkled. The 3rd segment apically and laterally (fig. 10 B) with a toothed fringe. Legs slender with hind tibiae gently curved. Mesopleura smooth with a nearly smooth furrow. Wing veins, see fig. 10 A.

Female unknown.

Length: 1.9 mm.

Holotype: in the coll. of the Entomological Museum of Lund University.

Locality: S. Africa, Cape Prov., Cape Peninsula, Hout Bay, Skoorsteenkop, 2.2.,1951, No. 166.
Leg. Prof. P. Brinck, collected in an insect trap, Alt. ft. 650.

This species undoubtedly belongs to the genus *Aulosaphes* Mueseb. Differs from the known species by having smooth head, malar space as long as the length of the eye and different colour.

Hydrangeocola Bréth.

Bréthes, Rev. chil. Hist. nat., 31, pp. 195—196, 1927.

Type: *H. espinosai* Bréth.

Only one species known.

H. espinosai Bréth., ibid., p. 196. Chile

♂. Reddish brown with head, apical part of antenna and apical part of gaster brown—dark brown.

1st segment of gaster parallel. Notaulices complete. Mouth located very high in the face and anterior margin of clypeus at the level of the anterior margin of the eyes. Interior orbits of the eyes nearly parallel. Ocelli in an acute angled triangle. Mesopleura and wings (fig. 4 A—B).

One specimen seen.

Locality: Marga Marga, Santiago, Chile, IX.13,1927, Jaffuel Pinion.
Det. by Muesebeck.

Hormiellus End.

Enderlein, Archiv f. Naturgeschichte (A), 78, p. 20, 1912.

Type: *H. solocipes* End.

One species.

H. solocipes End., ibid., pp. 20—21. Formosa (Takao)

This genus is characterized by: Antennae 19-segmented. 1st segment of gaster wider than long, 2nd, 3rd and 4th tergites are fused. Nervulus interstitial. Nervus parallelus emitting upwards from nervus recurrens.

Monitoriella gen.n.

Head transverse and occiput carinated. Maxillary palpi 5-segmented, labial palpi 4-segmented. Eyes large, bulging. Antennae inserted above the middle of the face. Antennae filiformous with many joints, long setae and rhinariae on the joints. Pronotum very short. Mesonotum with very deep and wide notaulices, which converge in a shallow impression in front of the prescutellar furrow. Scutellum small, flat. Metanotum of the same length

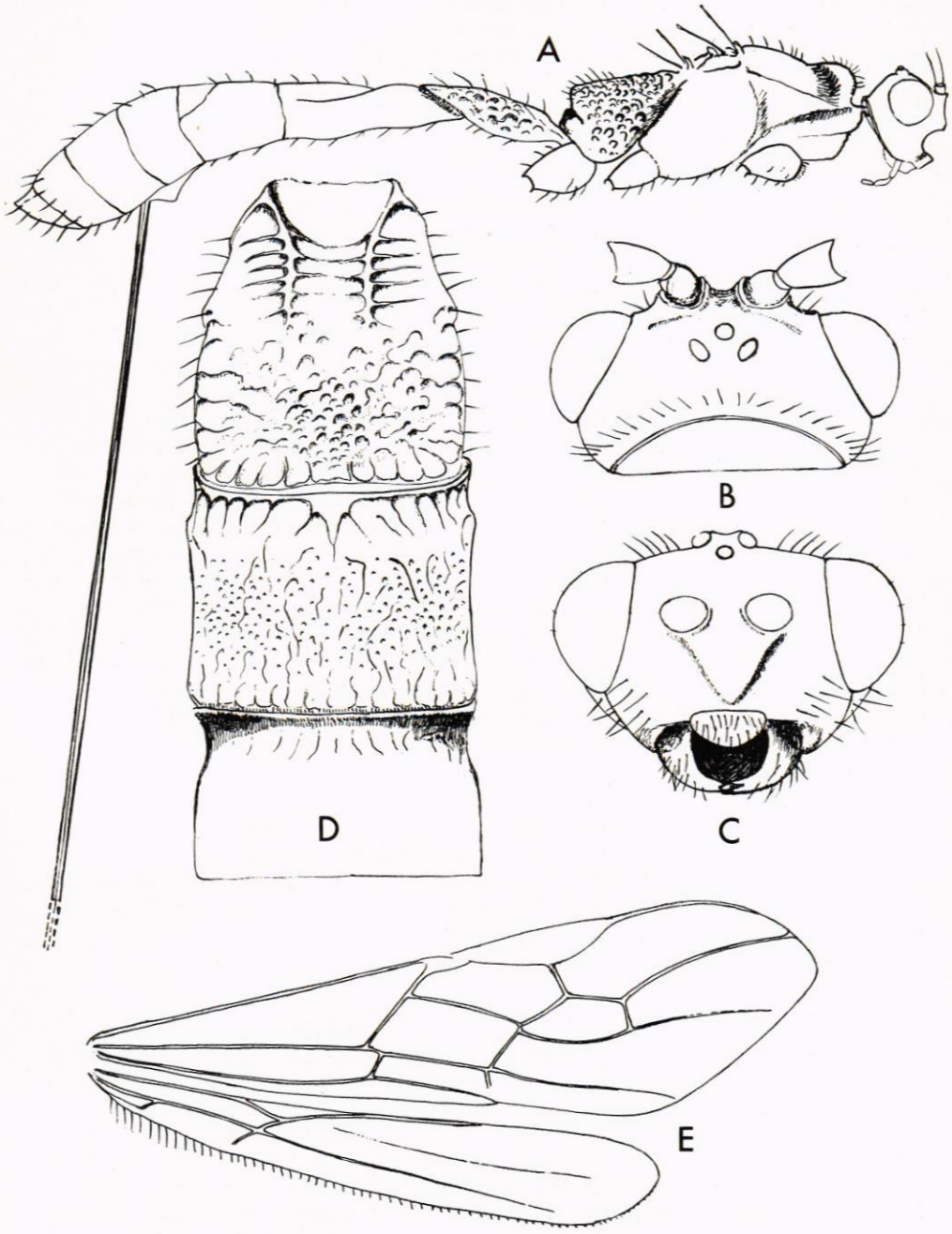

Fig. 6. *Monitoriella* gen.n. *elongata* sp.n.; A. Female in lateral view, ovipositor shortened, B. Head in dorsal view, C. Head in front view, D. The basal part of the gaster E. Fore and hind wings.

as scutellum. Gaster with 1st and 2nd segments rugosely sculptured. Ovipositor long. Fore wing with nervus parallelus interstitial, nervulus postfurcal and nervus recurrens received in the 2nd cubital cell. Legs long and stout.

Type: *M. elongata* sp.n.

Monitoriella elongata sp.n.

♀. Dark brown, ventrally somewhat pale. Legs and palpi stramineous. Toruli, scape and pedicel pale brown. Wing veins brown.

Head (fig. 6 B—C) transverse with somewhat gibbous frons. Vertex nearly smooth. Mandible with 2 teeth. Clypeus strongly convex, connected with the toruli by a protuberance. Malar space as long as the breadth of the eye. The eyes large, oval, bulging. Antennae 30-jointed as long as the body, inserted above the middle of the face. Scape stout, funicle joints with rhinariae as long as the joints, joints with spread out setae, the setae about $^1/_2$ times as long as the thickness of the joints. Ocelli in an equilateral triangle. Occiput carinated. The sculpture of head coriaceous to rugose. Pronotum short. Mesonotum with deep, converging notaulices, the notaulices meet in a shallow impression, which is divided by a longitudinal carina. Mesoscutum anterior bulging. Scutellum small, triangular, flat. Prescutellar furrow wide, rugose. Metanotum nearly as long as scutellum and coarsely rugose. Propodeum gently convex, posterior part with short carinae. Mesopleura (fig. 6 A) without furrow. Gaster with segments 1—2 (fig. 6 D) coarsely rugose. The rest of the segments (3—7) with their anterior part punctured, posterior part smooth. Ovipositor about twice as long as the body. The latter clothed with sparse hairs. Legs slender, tibiae longer than femora, 1st joint of hind tarsus as long as joints 2—4 combined. Fore wing (fig. 6 E) with nervulus postfurcal, nervus parallelus interstitial and nervus recurrens received in the 2nd cubital cell.

♂. Similar to the female.

Length: ♀. 5.0 mm., ♂. 4.0 mm.

Holotype: in the coll. of U.S. Nat. Mus., Washington, Cat. Nr. 66281.

Locality: Texas, Brownsville, May 9, 1952, ex gall on *Philodendron dubius*.

Paratypes: (3 ♀♀) in the same coll. 2 paratypes have the same data as holotype; another paratype: Fortin, V.C., Mexico, Jan. 19, 1954.

Allotype: has the same data as holotype.

Monitoriella rufithorax sp.n.

♀. Head, thorax, gaster ventrally and 4 last joints of antenna stramineous. Eyes, antenna (except 4 last joints+scape and pedicel), a spot around ocelli and gaster dorsally brown. Scape, pedicel and propodeum yellowish brown. Fore legs: coxa, trochanter and femora yellow, femora apically with tint of brown. Basal part of tibia and 1—4 tarsal segments yellowish white. Tibia apically and claw-joint yellowish brown. Mid legs of the same colour as fore legs but femora yellowish brown. Hind legs: coxa, trochanter, femora, apex of tibia and claw-joint yellowish brown, the rest of tibia and the joints 1—4 of tarsus yellowish white. Wing veins brown.

Similar to *M. elongata* sp.n. but differs with respect to the following features: The face (fig. 7 B) below toruli without protuberance. Antennae

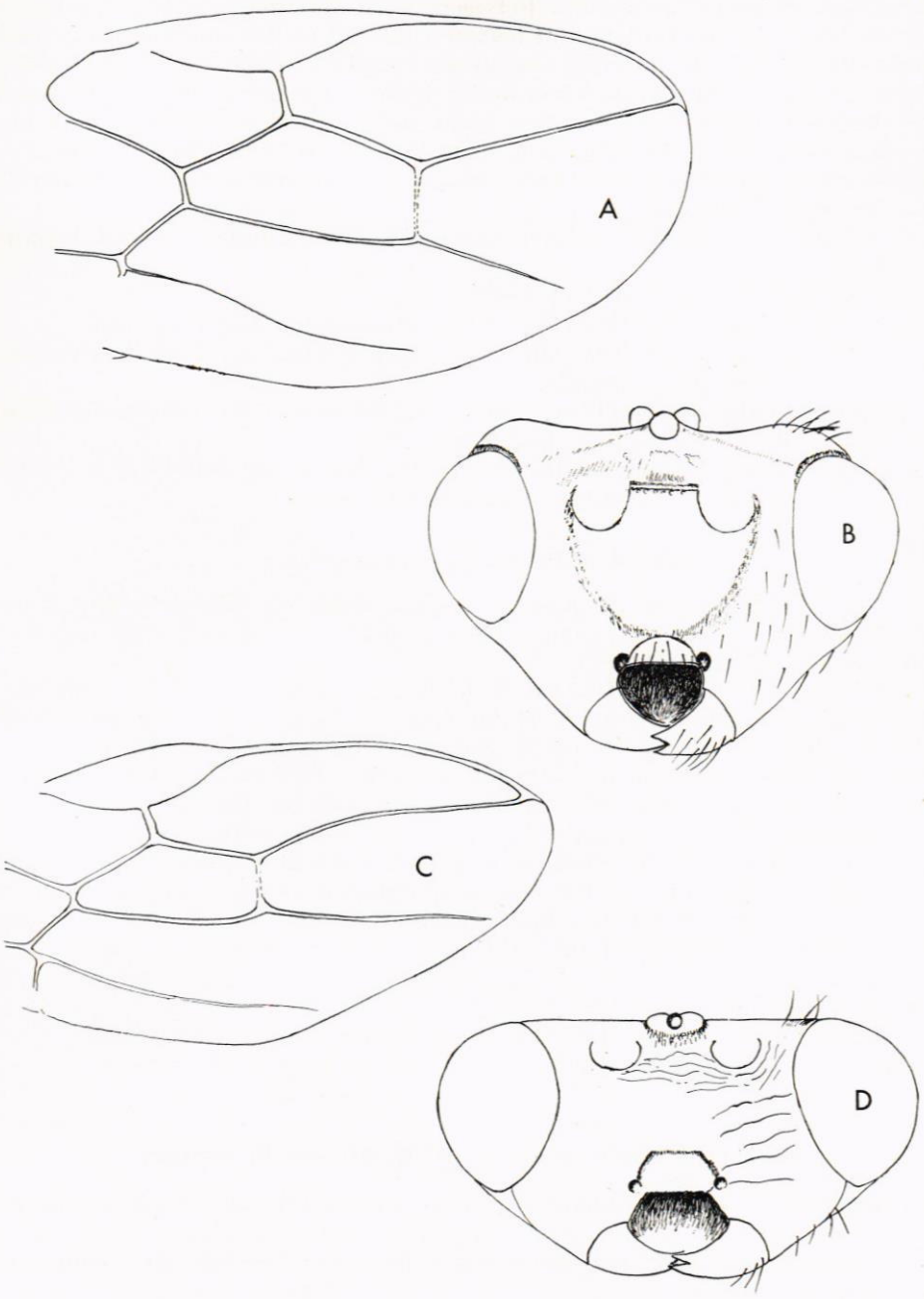

Fig. 7. *Monitoriella* gen.n. *rufithorax* sp.n.; A. Part of fore wing, B. Head in front view. *Monitoriella* gen.n. *compressithorax* sp.n.; C. Part of fore wing, D. Head in front view.

33-jointed, rhinariae numerous. Between ocelli and the base of antennae a transverse, carinated furrow and between lateral ocellus and the eye a half moon-shaped furrow. Occiput margined, in the middle interrupted. Propodeum with scalene areas. Prescutellar furrow divided in the middle, both pits deep and smooth. Mesoscutum lacks the longitudinal carina in the impression where the converging notaulices meet. Fore wing (fig. 7 A) the second abscissa of radius at least twice as long as the first one (by *M. elongata* sp.n. hardly 1 1/2 times).

♂. Similar to the female but antennae 28-jointed and only the last 3 joints yellow.

Length: ♀ 6.5—6.6 mm., ♂. 4.2—4.5 mm.

Holotype: in the coll. of U.S. Nat. Mus., Washington, Cat. nr. 66282.

Locality: Ex *Philodendron* gall, from Mexico, intercepted at Brownsville, Texas, Jan. 14, 1956.

Allotype: in the same coll. as above. "In *Philodendron* cutting, Cordova. V.C., Mexico, Aug. 15, 1952".

Paratype: One paratype has the same label data as the holotype; a second paratype: "Livingston, Guatemala, Apr. 5".

Monotoriella compressithorax sp.n.

♀. Vertex of head, thorax, gaster, antennae from 5th joint and wing veins brown. Head, except vertex, the joints (antenna) 1—5 and legs yellow—yellowish brown. Eyes black.

Head (fig. 7 D) nearly twice as wide as high. Eyes very large. Antennae at least 23-segmented (broken). Malar space as long as half the breadth of the eye. The space between ocelli and eyes=the space between ocelli and toruli. Head behind ocelli transversely wrinkled. Thorax flat as well propodeum, in lateral view nearly on a line. Propodeum posterior with steep decline and on this part punctured. Mesopleura below with a very gentle impression. Gaster with the first two segments longitudinally carinated, on the middle of the sides of the first segment two short, strong and gently converging carinae, lined by 2 longer carinae. Ovipositor 1 1/2 times as long as the body. Fore wings, see fig. 7 C.

♂. Unknown.

Length: 5.0 mm.

Holotype: in the coll. of U.S. Nat. Mus., Washington, Cat. Nr. 66283.

Locality: Peru, Yahuarmyo, 12.II,1910, coll. C. H. T. Townsend.

Key to known species of *Monitoriella* gen. n.

1 Occiput with the carina interrupted in the middle. Prescutellar furrow smooth without carinae 2

— Occiput with the carina not interrupted in the middle. Prescutellar furrow with longitudinal carinae.
Dark brown with legs yellow. Antennae with scape and pedicel yellow the rest of antennae dark brown ..... *Monitoriella elongata* sp.n.

2 Head in front view nearly as wide as high. Mesoscutum anterior very bulging. Head and thorax reddish brown. Gaster dark reddish brown—dark brown.

Antennae in apical part (♂ with 3 joints and ♀ with 4 joints) yellow, the rest dark brown. Wings faintly smoky ..... *Monitoriella rufithorax* sp.n.

— Head in front view nearly twice as high as wide. Mesoscutum+scutellum and propodeum in lateral view nearly on a line.
Dark brown with legs and the base of the antennae pale stramineous.
Wings hyaline ..... *Monitoriella compressithorax* sp.n.

Parathormius Nix.

Nixon, Ann. & Mag. Nat. Hist., Ser. 11, V, pp. 473—476, 1940.

Type: *P. jason* Nix.

Following species are known to belong to this genus:

1. *P. atriceps* (Ashmead), Amer. Ent. Soc. Trans., 20, p. 42, 1893. U.S.A.
2. *P. caicus* Nixon, Ann. & Mag. Nat. Hist., Ser. 11, V, pp. 487—488, 1940. Cape Prov.
3. *P. cephisus* Nixon, ibid., pp. 482—484. Cape Prov.
4. *P. cleomenes* Nixon, ibid., pp. 484—485. Cape Prov.
5. *P. deiphobus* Nixon, ibid., pp. 479—481. India
6. *P. epaphus* Nixon, ibid., pp. 489—490. Cape Prov.
7. *P. gylippus* Nixon, ibid., pp. 481—482. Cape Prov.
8. *P. iphitus* Nixon, ibid., pp. 486—487. Cape Prov.
9. *P. jason* Nixon, ibid., pp. 478—479. India
10. *P. laevis* Granger, Mém. l'Instit. Sci. Madagascar, 11(A) p. 190, 1949. Madagascar
11. *P. leucopterae* Nix., Ann. & Mag. Nat. Hist., Ser. 11, V, pp. 485—486, 1940. Tanganyika
12. *P. maculipennis* Granger, Mém. l'Instit. Sci. Madagascar, 11(A) pp. 189, 1949. Madagascar
13. *P. pallidipes* (Ashmead) Trans. Amer. Ent. Soc. XX, p. 42, 1893. Hawaii, U.S.A.
14. *P. pallidus* Granger, Mém. l'Instit. Sci. Madagascar, 11(A) pp. 189—190, 1949. Madagascar
15. *P. secundus* (Viereck), Kans. Acad. Sci. Trans., 19, p. 273, 1905. U.S.A.
16. *P. siculus* Nix., Ann. & Mag. Nat. Hist., Ser. 11, V, p. 488, 1940. Cape Prov. (Ceres)
17. *P. trilineatus* (Ashmead), U.S. Natl. Mus. Proc., 11, p. 629, 1889 (1888). U.S.A.

Hormius Nees

Nees, Nov. Act. Acad. Caes. Leop. Car., 9, p. 305, 1818.

Type: *H. moniliatus* Nees.

Following species belong to this genus:

1. *H. albipes* Ashmead, Calif. Acad. Sci. Proc., 5, p., 544, 1895. U.S.A.
2. *H. americanus* Ashmead, Colo. Biol. Assoc. Bul., 1, p. 16, 1890. U.S.A.

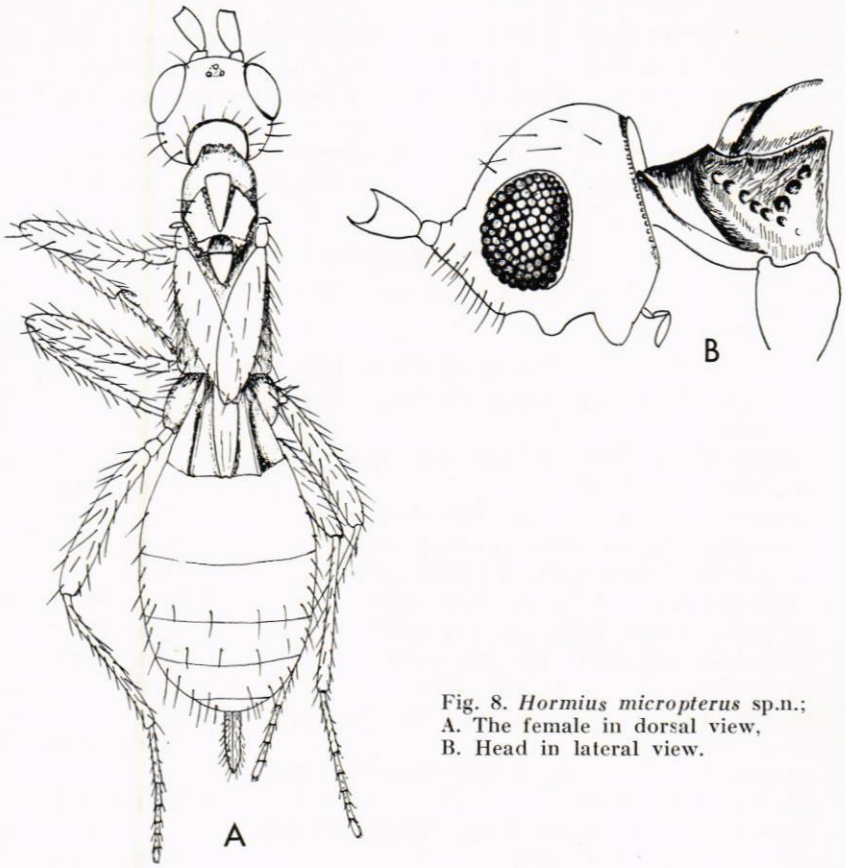

Fig. 8. *Hormius micropterus* sp.n.;
A. The female in dorsal view,
B. Head in lateral view.

3. *H. basalis* (Provancher), Addit. Corr. Fauna Ent. Canada Hym., p. 380, 1888. U.S.A.
4. *H. completus* (Provancher), ibid. U.S.A.
   Syn.: *Ephedrus completus=Hormius erythrogaster* Ashmead, Amer. Ent. Soc. Trans., 20, p. 41, 1893.
5. *H. dispar* (Brues), Wis. Nat. Hist. Soc. Bul., 5, p. 110, 1907. U.S.A.
6. *H. elegans* Szépligeti, Res. Sci. Voyage Alluaud, p. 177, 1914. Kenya Colo.
7. *H. flavicauda* Granger, Mém. l'Institut. Sci. Madagascar, 11(A) p. 188, 1949. Madagascar
8. *H. melleus* (Ashmead), U.S. Nat. Mus. Proc., 11, p. 630, 1889 (1888). U.S.A.
9. *H. moniliatus* Nees, ibid. (see above). Europa, U.S.A.
10. *H. radialis* Telenga, Fauna SSSR., V, nr. 3, pp. 113—114, 1941. Transcaucasia
11. *H. testaceus* Cameron, Ann. Transv. Mus., 2, p. 195, 1911. Transvaal
12. *H. vulgaris* Ashmead, Amer. Ent. Soc. Trans., 20, p. 43, 1893. U.S.A.

Following species belong to other genera:

H. chelonoides Fahringer, Ent. Tidskr., p. 86, 1929. This species belongs to *Bracon* F. Type in the Swedish Museum of Natural History.
Bracon chelonoides (Fahr.) comb.n.

H.(?) peregrinus Perk.=*Euscelinus peregrinus* (Perk.) (see Beardsley, Proc. Hawaiian Ent. Soc., XVII, No. 3, p. 362, 1961).

H. similis Szépligeti = *Oncophanus similis* (Szépl.) (see Fahringer, 1930, p. 49).

Hormius micropterus sp.n.

♀. Yellowish brown, legs somewhat pale and gaster apically with brownish tint. Eyes black.

Head (fig. 8 B) as long as wide, gibbous and smooth. Antennae 16-segmented, inserted in the middle of the face. Eyes oval, malar space as long as the breadth of the eye. Mesonotum anterior not bulging, gently sloping. Notaulices distinct, crenulated, converging and meeting in front of the prescutellar furrow. Scutellum small and smooth. Thorax (fig. 8 A) in dorsal view parallel-sided. Mesopleura smooth with one furrow below and another posterior. Propodeum areolated. Gaster as in *Hormius moniliatus* Nees., 1st segment smooth with a rugose area in the middle limited by two carinae gently converging backwards. Ovipositor nearly as long as 1st segment of the hind tarsus. Legs slender. Wings stunted, reaching to the base of the gaster and without veins. All over with long hairs especially on legs and wings.

♂. Unknown.

Length: 2.1 mm.

Holotype: in the coll. of the Swedish Museum of Natural History.

Locality: U.S.A., Illinois, leg. Belfrage.

This species differs from all species of the genus *Hormius* regarding shape of head and thorax, but I prefer to place it in this genus.

Hormius moniliatus Nees.

This species is quite variable. I have tried in vain to divide it in different species.

Hormius capensis sp.n.

♀. Head, thorax except metathorax, basal part of antennae reddish brown. Metathorax and propodeum dark brown. 1st segment of gaster and terebra brown, the rest of the gaster and legs yellowish brown. Wing veins yellowish brown, stigma paler in the middle. Eyes and a spot around ocelli black.

Head transverse, vertex with transverse striation, below the base of the antennae somewhat gibbous. Eyes oval and bulging. Malar space as long as half the breadth of the eye. Antennae 19-jointed. Mesonotum smooth except the area where the notaulices meet, which is rugose. Lengthwise the notaulices are small scattered setae. Prescutellar groove wide and rugose. Propodeum and the first segment of the gaster coarsely rugose. Mesopleura smooth with furrow. Ovipositor very stout, longer than half hind tarsus. Fore wing (fig. 10 G) with 1st abscissa of radius as long as 2nd abscissa.

♂. Unknown.
Length: 2.8—3.0 mm.
Holotype: in the coll. of the Entomological Museum of Lund University.
Locality: S. Africa, Cape Prov., Tweede Rivieren, Kalahari Gemsbok Park 16—18.XI,1950, No 53, Leg. P. Brinck.
At light in the evening.
Paratype: (2 ♀♀) 1 ♀ in the coll. of the Entomological Museum of Lund University, 1 ♀ in my collection.
Locality: Both females (paratypes) from the same place as holotype.

Mediella gen.n.

Head with occiput carinated. The eyes large, oval, very gently emarginated at the same level as the base of the antennae. Malar space shorter than half breadth of the eye. Notaulices meet in front of the prescutellar furrow, the latter very shallow, wide and with cross-carinae. Propodeum areolated. Mesopleura smooth with furrow. Prepectus margined. Gaster as in the genus *Hormius* Nees. Wings with recurrens emitting from nervus parallelus.

This is an intermediate genus between *Hormius* Nees. and *Parathormius* Nix. Differs from *Hormius* Nees. by having smooth mesonotum without any rugosity in front of the prescutellar furrow. Recurrens emitting from nervus parallelus and eyes emarginated. *Mediella* gen.n. differs from *Parahormius* Nix. by having a large prescutellar furrow, emarginated eyes and prepectus margined. Recurrens emitting from nervus parallelus and malar space very short.

Type: *M. romani* sp.n.

Mediella romani sp.n.

♀. Stramineous, eyes and a spot around ocelli black. Antennae brownish toward apex. Gaster dorsally and ovipositor with tint of brown. Legs yellowish white. Wing veins very pale brown.

Head (fig. 10 C) wider than long. Eyes large, oval and very gently emarginated. Malar space very short, as long as 1/3 of the breadth of the eye. Antennae 22-segmented, inserted above the middle of the face. Labial palpi 4-segmented and maxillary palpi 5-segmented. Mesonotum (fig. 10 D) falling perpendicularly to the pronotum, smooth. Notaulices converging and meet in front of the prescutellar furrow, not rugose at the point of meeting. Median lobe of mesonotum (mesoprescutum) with a gently median furrow. Prescutellar furrow wide, shallow and with cross-carinae. Scutellum (fig. 10 D) smooth. Propodeum with a median carina, forked in front of the middle of propodeum and forming an areola. Gaster with only 1st segment sclerotized (fig. 10 F), 2nd segment is the largest and as long as the rest of the gaster. Ovipositor as long as hind tarsus and with long, dense hairs. Legs slender with spread out, long hairs, about twice the thickness of the tibia. Fore wing (fig. 10 E) with recurrens emitting from nervus parallelus.

♂. Unknown.
Length: 2.0—2.5 mm.
Holotype: in the coll. of the Swedish Museum of Natural History, Stockholm.
Paratype: 1 female in the same coll. as above.
Locality: Bahia, Iguassú, Aug. 4, 1923, leg. A. Roman.

Mediella ferruginea sp.n.

♀. Head, thorax and 1st segment of gaster dark brown. Legs and the rest of the gaster yellowish brown. Antennae basally yellowish brown, toward the apex darker.

Head nearly as wide as long, smooth, somewhat gibbous below the base of the antennae. Mesonotum smooth, notaulices crenulated. Propodeum irregularly areolated, wrinkled in the areolas and median carina lacking. First segment of the gaster as in *Mediella romani* sp.n. Ovipositor as long as half hind tarsus. Legs without outstanding hairs.

♂. Unknown.

Length: 2.4 mm.

Holotype: in the coll. of the Swedish Museum of Natural History, Stockholm.

Paratype: 3 females in the same coll. as above.

Locality: Brazil, Nova Teutonia (27° 11′ S. 52° 23′ W.), 15.IX,1945, leg. Fritz Plaumann.

Similar to *Mediella romani* sp.n. but differs from *M. romani* sp.n. chiefly as follows: Ovipositor is shorter, head small and gibbous. Propodeum irregularly areolated and with no median sulcus on mesoscutum. Legs without outstanding hairs and different colour. (See the key p. 57.)

Mediella intermedia sp.n.

♀. Head, thorax and propodeum dark brown. Antennae, legs and gaster yellowish brown. Femora distally, spots on gaster and the first segment of the gaster brown. Wing light brown with veins pale brown.

Head large, wider than long, smooth and gibbous. Antennae 16-jointed. A sulcus around the ocelli. Mesoscutum smooth and shiny, anterior with two protuberances, posterior between notaulices with a short crenulated sulcus. Notaulices crenulated. Propodeum coarsely rugose with two carinae emitting and diverging from the base of the propodeum. Mesopleura smooth and shiny with a short, wide furrow below. Ovipositor as long as the first segment of the hind tarsus. The second abscissa of radius somewhat longer than the first.

♂. Similar to the female.

Length: ♀ 2.2—2.3 mm., ♂. 2.2 mm.

Holotype: in the coll. of the Swedish Museum of Natural History, Stockholm.

Allotype: in the same coll. as above.

Paratype: 1 female, in the same coll. as above.

Locality: Brazil, Nova Teutonia (27° 11′ S. 52° 23′ W.), 2.VII,1945, leg. Fritz Plaumann.

Similar to *Mediella ferruginea* sp.n. but differs by having wider head, a medium sulcus on posterior part of mesoscutum and the first abscissa of radius shorter than the second. See the key p. 57.

Mediella rugosa sp.n.

♀. Head, thorax except prothorax, propodeum and the first segment of the gaster brown. Prothorax yellowish brown. Antennae basally yellow, to-

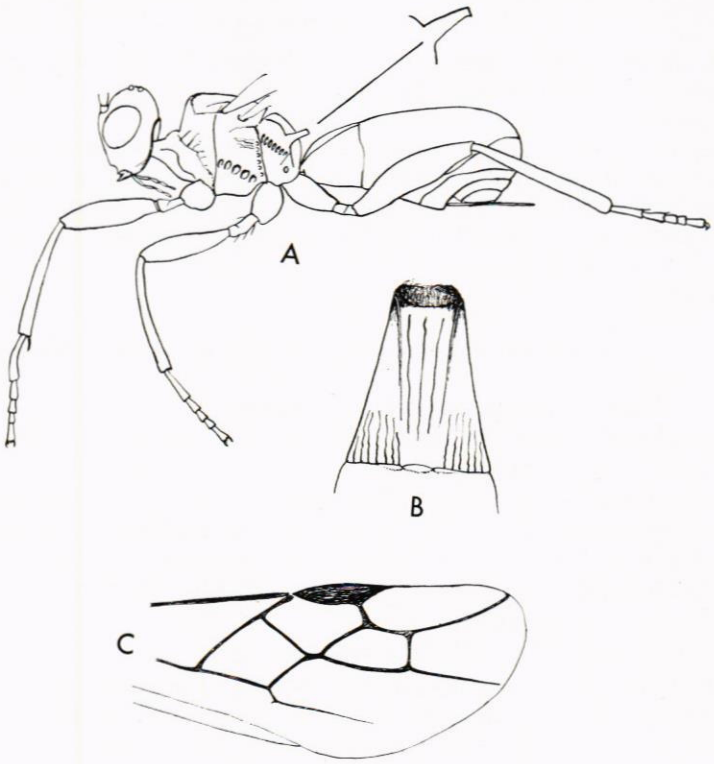

Fig. 9. *Pambolus rufigaster* (Dahl) ♀, A. Female in lateral view, B. The first segment of gaster, C. Part of fore wing.

wards apex yellowish brown. Legs yellow, hind femora with distal part reddish brown. Gaster except petiole yellow, towards apex dark yellowish brown and ovipositor brown. Wings very pale, yellowish brown, veins pale brown and stigma terminally pale yellow.

Head nearly as long as wide, wrinkly rugose on face and vertex. Antennae 17—18 jointed with first flagellum joint nearly twice as long as the scape. Mesoscutum smooth and shiny, between notaulices posterior with a short, crenulated sulcus. Mesopleura smooth, shiny and with a very short furrow. Propodeum with clearly raised carinae, areolated and wrinkled. The petiole with the same sculpture as propodeum. Ovipositor as long as half the hind tarsus. Fore wing with recurrens nearly interstitial in the second discoidal cell.

♂. Unknown.

Length: 2.5—2.8 mm.

Holotype: in the coll. of the Swedish Museum of Natural History, Stockholm.

Paratype: 1 female, in the same coll. as above.

Locality: Brazil, Nova Teutonia (27° 11′ S. 52° 23′ W.), 2.VII,1945, leg. Fritz Plaumann.

Similar to *Mediella ferruginea* sp.n. but differs by having rugose puncturation on the face and vertex (see key p. 57).

Mediella affinis sp.n.

♀. Head, thorax, propodeum and petiole brown. Thorax dark brown with prothorax reddish brown. Antennae yellowish brown towards apex darker. Legs yellowish brown, femora distally darker and trochanteres yellow. The gaster except petiole yellowish brown towards apex darker. Ovipositor brown. Wings very pale brown with veins pale brown and basal part of stigma pale yellow.

Head rugose, nearly as long as wide. A sulcus around ocelli. Antennae 18-jointed, the first joint of flagellum as long as the scapus. Mesoscutum smooth and shiny, anterior with two protuberances, posterior between the crenulated notaulices a short crenulated sulcus. Prescutellar fovea with 4 strong cross-carinae. Mesopleura smooth with a short shallow furrow below. Propodeum coarse rugose. Petiole rugose as propodeum. Ovipositor as long as the first joint of the hind tarsus. In the fore wing is the second abscissa of radius nearly twice as long as the first abscissa.

♂. Unknown.

Length: 2.5—3.0 mm.

Holotype: in the coll. of the Swedish Museum of Natural History, Stockholm.

Paratypes: 2 females, in the same coll. as above.

Locality: Brazil, Nova Teutonia (27° 11′ S. 52° 23′ W.), 2.VII,1945, leg. Fritz Plaumann.

Similar to *Mediella rugosa* sp.n.; differs from this species by having (see key p. 57) shorter first flagellar joint and longer second abscissa of radius.

Mediella elongata sp.n.

♀. Head yellowish. Thorax except mesopleura and metapleura reddish brown. Mesopleura and metapleura, propodeum and petiole dark brown. The gaster, except petiole, yellowish brown. Legs and antennae yellow. Eyes and a spot around ocelli black. Wing veins pale brown, lengthwise the veins with brown shading.

Head gibbous, as long as wide. Antennae 18-jointed. Mesoscutum smooth, anterior with two protuberances, notaulices strongly reticulated and a long median crenulated sulcus. Mesopleura smooth and shiny, below with a weak, shallow short furrow. Propodeum coarsely rugose. Petiole 2 1/2 times as long as wide. Ovipositor shorter than the first segment of the hind tarsus. The hind tarsus with two kinds of hairs (fig. 12 M). Fore wing with the first abscissa nearly of the same length as the second abscissa of radius. Recurrens nearly emitting from the second discoidal cell.

♂. Unknown.

Length: 2.5 mm.

Holotype: in the coll. of the Swedish Museum of Natural History, Stockholm.

Locality: Brazil, Nova Teutonia (27° 11′ B. 52° 23′ L.), 2.VII,1945, leg. Fritz Plaumann.

Similar to *Mediella romani* sp.n., but differs from this species by having a long and narrow petiole and different colour. See the key p. 57.

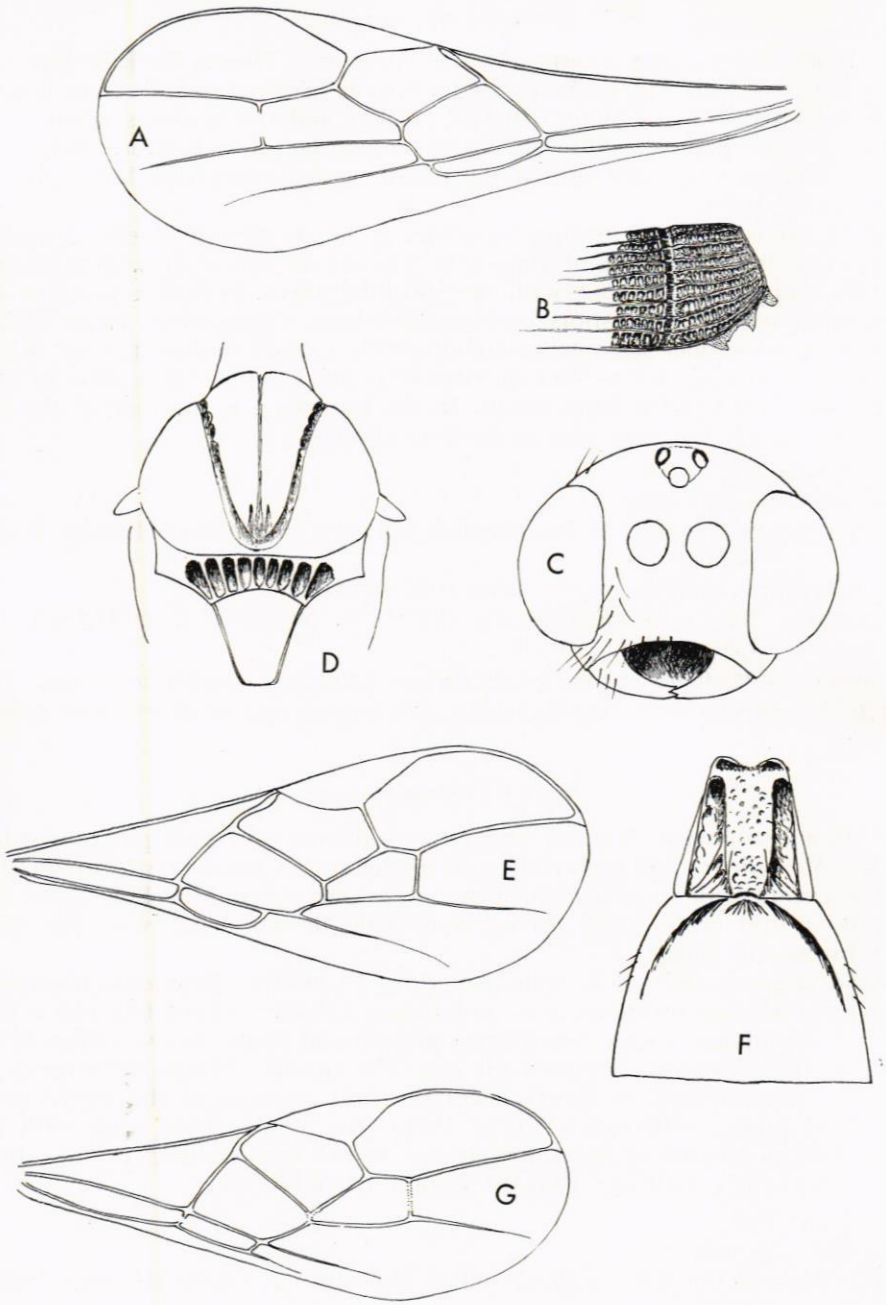

Fig. 10. *Aulosaphes capensis* sp.n. male; A. Fore wing, B. Apical part of gaster in lateral view. *Mediella* gen.n. *romani* sp.n. ♀; D. The mesonotum and the scutellum, C. Head in front view. E. Fore wing. F. The basal segment of the gaster. *Hormius capensis* sp.n. ♀; G. Fore wing.

Mediella teutoniae sp.n.

♀. Head, thorax, propodeum and petiole dark reddish brown. Ovipositor, legs yellowish brown. The rest of the gaster dirty yellowish brown. Antennae reddish brown, apically yellowish brown. Wing veins brown, at the base pale yellowish brown.

Head large, wider than long and smooth. Antennae 17-jointed. Malar space shorter than half the breadth of the eye. Mesoscutum smooth without median sulcus but with two protuberances. Notaulices crenulated. Prescutellar fovea with only one cross-carina. Mesopleura smooth and shiny with a large shallow pit below instead of a furrow. Petiole with a longitudinally raised area with lateral carinae. Propodeum with a large areola, the rest of propodeum coarsely rugose. Ovipositor stout, as long as the first segment of the hind tarsus. The second segment of the gaster not much longer than the third. The hind tarsus with two kinds of hairs.

♂. Unknown.

Length: 2.5 mm.

Holotype: in the coll. of the Swedish Museum of Natural History, Stockholm.

Locality: Brazil, Nova Teutonia (27° 11′ S. 52° 23′ W.), 2.VII,1945, leg. Fritz Plaumann.

Similar to *Mediella romani* sp.n. but differs by having no median sulcus on mesoscutum and different colour. See the key p. 57.

Key to the species of *Mediella* gen. n.

1 Legs with outstanding hairs (fig. 12 E, G, M) 2
— Legs without outstanding hairs (fig. 12 K) 4
2 Mesoscutum with a median, crenulated sulcus 3
— Mesoscutum with no median, crenulated sulcus ..... *M. teutoniae* sp.n.
3 Stouter species, with petiole at apex nearly as wide as long. Predominantly stramineous ..... *M. romani* sp.n.
— Slender species, with petiole at apex 2 1/2 times as long as wide. Thorax brown ..... *M. elongata* sp.n.
4 Head smooth 5
— Head wrinkled or rugosely sculptured 6
5 Head as wide as long. Mesoscutum smooth without any median sulcus. Fore wing with the first abscissa longer than the second abscissa ..... *M. ferruginea* sp.n.
— Head wider than long. Mesoscutum posterior between notaulices with a short, crenulated sulcus. The 1st abscissa of radius shorter than the second abscissa *M. intermedia* sp.n.
6 The first flagellum joint (fig. 12 C) long, nearly twice as long as scape. The second abscissa of radius as long as the first abscissa ..... *M. rugosa* sp.n.
— The first flagellum joint (fig. 12 D) as long as or very slightly longer than the scape. The second abscissa of radius twice as long as the first abscissa *M. affinis* sp.n.

Chremylus Hal.

Haliday, Ent. Mag., I, p. 266, 1833.
Syn.: *Penecerus* Wesmael, Nouv. Mem. Acad. Sci. Bruxelles, 11, p. 70, 1838.
Paramesocrina Nagamori, Annot. Zool. Jap., 10, p. 349, 1925.

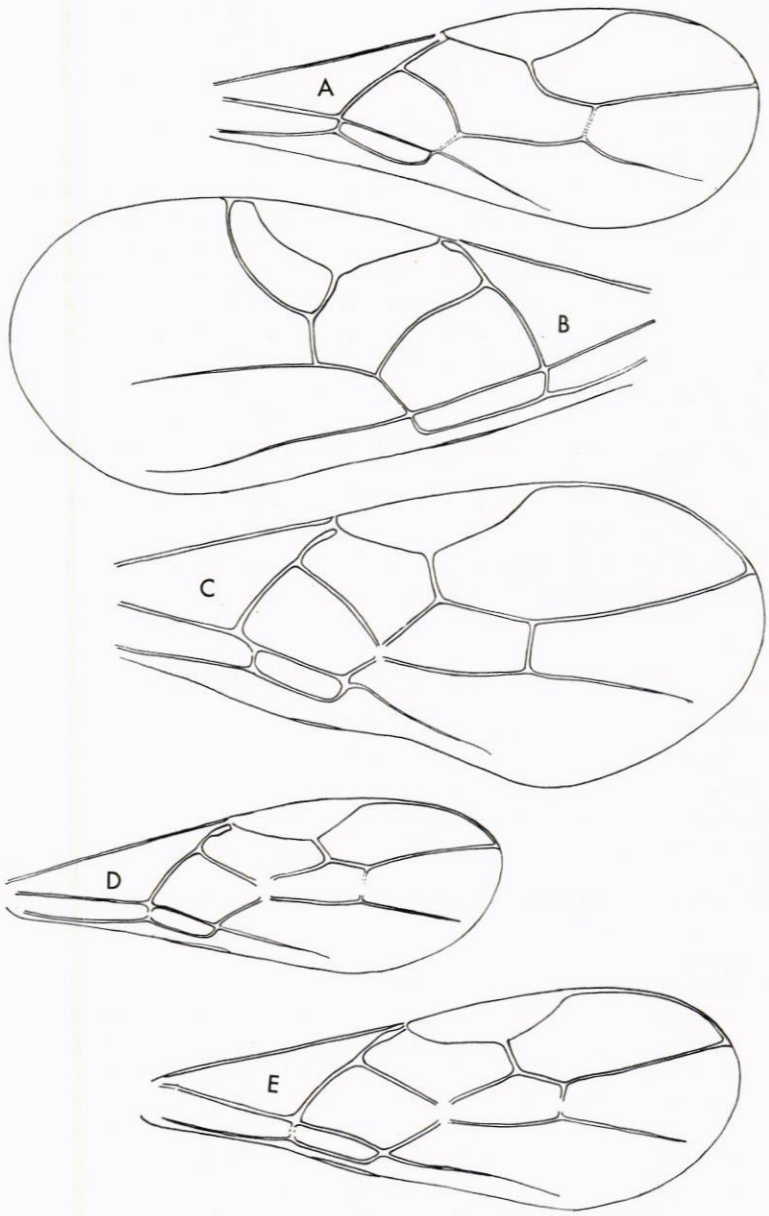

Fig. 11. A. *Lysitermus pallidus* Först., fore wing., B. *Hormisca tatianae* Tel., fore wing., C. *Chremylus elaphus* Hal., fore wing. D. and E. *Hormius moniliatus* Nees., fore wing.

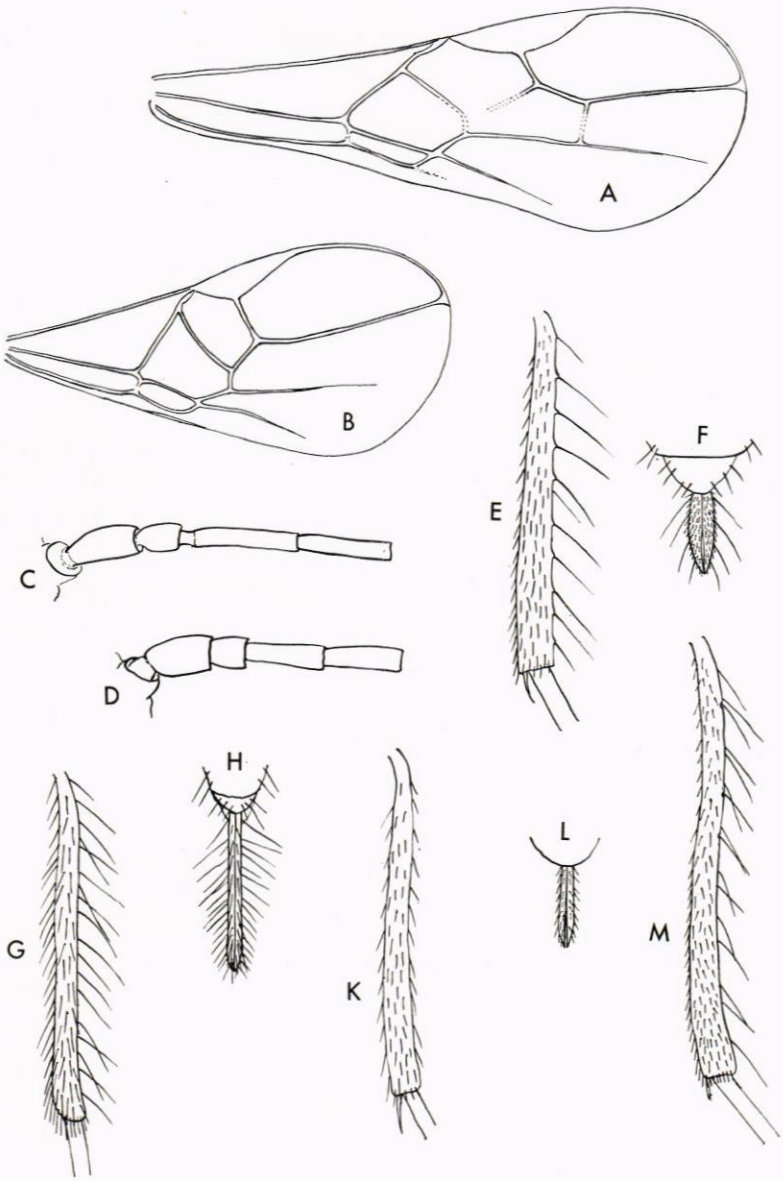

Fig. 12. A. *Lysitermus pallidus* Först. ♂, Fore wing., B. *Cedria paradoxa* Wilk. ♀, Fore wing., C. *Mediella rugosa* sp.n. ♀, the basal part of the antenna., D. *Mediella affinis* sp.n. ♀, the basal part of the antenna., E. *Mediella teutoniae* sp.n. ♀, hind tibia., F. *M. teutoniae* sp.n. ♀, ovipositor, G. *Mediella romani* sp.n. ♀, hind tibia., H. *M. romani* sp.n. ♀, ovipositor., K. *Mediella intermedia* sp.n. ♀, hind tibia., L. *Mediella elongata* sp.n. ♀, ovipositor., M. *M. elongata* sp.n. ♀, hind tibia.

Type: *C. elaphus* Hal.

3 species known.

1. *C. elaphus* Hal., ibid. Europe, Japan, U.S.A., South Africa
   Syn.: See Muesebeck and Krombein et al. (1951).
2. *C. concinnus* Enderlein, Arch. f. Naturgesch, (A) 78, p. 23, 1912. Formosa
3. *C. striatus* Szépligeti, Leiden Notes Mus., 29, p. 224, 1908. Java

Pambolus Hal.

Haliday, Ent. Mag., 4, p. 40 and p. 49, 1836.

Syn.: *Arhapis* Ruthe, Stett. Ent. Ztg., 15, p. 344, 1854.
Dimeris Ruthe, ibid., p. 344.
Parapteris Magretti, Bull. Soc. Ent. Ital., 16, p. 100, 1884.
Phaenodus Förster, Verh. Nat. Ver. Preuss. Rheinl., 19, p. 241, 1862.
Parapambolus Dahl, Beitr. Naturdenkmalpfl., 3, p. 555, 1912.

Type: *P. biglumis* Hal.

The following species belong to *Pambolus,* but the genus is in great need of revision. I have seen the type of *Parapambolus rufigaster* Dahl (fig 9 A—C).

1. *P. biglumis* Haliday, Ent. Mag., IV, p. 50, 1836. France, Sweden
2. *P. dubius* (Ruthe), Marshall, Trans. Ent. Soc. London. p. 65, 1885. Germany
3. *P. imminens* (Ruthe), Marshall, ibid. p. 65. Germany
4. *P. mirus* (Ruthe), Stett. Ent. Ztg., XV, p. 345, 1854 (Dimerus mirus Ruthe). Europe, West Asia, North Mongolia, Africa
   Syn.: *Pambolus melanocephalus* Marshall, Ent. M. Magaz., VI, p. 228, 1970.
   Parapteris flavipes Magretti, Bull. Soc. Ent. Ital. XVI, p. 101, 1884.
   Dimeris aptera (Ruthe), Marshall, Trans. Ent. Soc. London. p. 65, 1885.
   Dimeris inermis (Ruthe), Marshall, ibid. p. 65.
5. *P. pallidipes* (Marshall), Spec. Hymén, Europa., V[bis], p. 96, 1892. Germany Sweden
6. *P. pillichi* Kiss., Rovart. Lap., 22, p. 77, 1915. Hungary
7. *P. rosenhaueri* (Ratzeburg), Ichneum. d. Forstins., III, p. 247, 1852 (Pezomachus rosenhaueri Ratzb.) Host: *Cryptocephalus fulvus* Goeze. Germany
8. *P. rufigaster* (Dahl), Beitr. Naturdenkmalpfl., 3, p. 555, 1912. Germany
9. *P. rugulosus* (Hellén), Acta Soc. Fauna Flora fenn., 56, p. 12, 1927. Finland
10. *P. tricolor* (Ruthe), Stett. Ent. Ztg., XV, p. 347, 1854 (Arhapis tricolor Ruthe). Germany

Ethiopian regions

11. *P. aciculatus* Brues, Ann. South African Mus., 19, p. 17, 1924. Cape Province
12. *P. africanus* Brues, Proc. Amer. Acad. Arts. Sci., 61, p. 248, 1926. Rhodesia

13. *P. flavicornis* Szépligeti, Ann. Mus. Nat. Hungarici., 11, p. 600, 1913. Kilimanjaro
14. *P. pulchricornis* Szépligeti, ibid., p. 600. Tanganyika Territory
15. *P. seyrigi* Granger, Mém. l'Inst. Sci. Madagascar, (A), II, pp. 155—156, 1949. Madagascar

Nearctic region

16. *P. americana* Ashmead, Psyche, 6, p. 289, 1892. U.S.A.

Neotropical region

17. *P. longicornis* Enderlein, Arch. Naturg., 84 (A), 11, p. 146, 1920. S. Brazil

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