

ON THE CLASSIFICATION OF SPONGIPHORIDAE (=LABIIDAE)
WITH A LIST OF SPECIES

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INTRODUCTION

The family Spongiphoridae is mainly characterised by the presence of simple 2nd tarsal segment (not lobed) and single proparamere. On the basis of 2nd tarsal segment it could be easily separated from Chelisochidae and Forficulidae.

Burr's (1911) key to the subfamilies was mainly based upon the characters of elytra, antennal segments and the length of eye in relation to post-ocular area. His key was in use with slight modification by Popham and Brindle (1967, 1967a) and Steinmann (1976). Generally various families were divided into two major groups on the basis elytra being carinate or ecarinate. But the subfamily Pericominae did not fit in any of the above groups since the elytra lack a well defined keel on the costal margin and in its place a row of small tubercles is present and from each arises a thick seta.

After a careful study it was found that the shape of hind tarsi especially the 2nd tarsal segment and the relative length of all the three segments in combination with other characters could be utilised for formulating a key for the satisfactory discrimination of various subfamilies.

Hitherto Spongiphorinae and Labiinae were considered as close. But it may be mentioned here that members of the subfamily Spongiphorinae belonging to the genera *Spongevostox* Burr and *Marava* Burr, possess hind 2nd tarsal segment slightly longer than broad, strongly narrowed posteriorly and is about half as long as the third. Besides, first segment is slightly shorter than the combined length of second and third. According to the information available through literature same condition is found amongst the members of the genus *Spongiphora* Serville—the type of Spongiphorinae.

In the light of the above, Spongiphorinae comes close to Homotaginae and can be discriminated from each other by the relative length of hind tarsal segments. In

Homotaginae hind second tarsal segment, in profile, is of uniform width and only scarcely narrowed basally and first segment is slightly longer than the combined length of last two segments.

A new subfamily Rudraxinae is erected for the reception of a new genus and species, viz., *Rudrax brindlei*, from China. It is mainly characterised by the elytra having a sharp keel along the costal margin. It comes close to Ramamurthiinae, but differs by the pilose body and tibiae compressed, at extreme apex slightly grooved.

Srivastava (1985) has described two subfamilies viz., Homotaginae and Irdexinae besides construction of a key for the discrimination of various subfamilies utilising for the first time the shape of the hind tarsi, especially the second tarsal segment and the relative length of all the three segments in combination with other characters.

It may be mentioned here that the genus *Labia* Leach, 1853 as defined by Steinmann (1990) contains now those species which possess parameres with a median incision thus dividing it into two, external and internal lobes. And the remaining species with parameres entire, i. e., not divided vertically were included under *Paralabella* Steinmann, 1990, *Circolabia* Steinmann, 1987, *Spirolabia* Steinmann, 1987 and *Paraspania* Steinmann, 1985. Last three were, however, mainly characterised by the shape and arrangement of virga.

Srivastava (1992) has already pointed out, while discussing the validity of various genera of Pygidicranidae, that genera based upon such characters will not stand. Accordingly, *Paraspania* is placed as synonym of *Chaetospania*. Besides, *Circolabia* is treated as valid with *Paralabella* and *Spirolabia* as its synonym since it has priority. It will now be characterised as "externally similar to *Labia* with parameres entire and virga of various types".

Steinmann (1990) has placed *Chaetospania* under Sparattinae on the grounds of ecological similarity. But this reason does not seem plausible since members of Spongiphorinae, Labiinae and of above subfamily occur in the same habitat, i. e., under loose bark of logs and stems. For this reason it is proposed to transfer *Chaetospania* under Labiinae. Members of this genus although possess depressed head, abdominal tergites are weakly convex unlike those of Sparattinae which are strongly depressed including head.

The size of eye in relation to post-ocular area of head, as a valid character, seems to be doubtful. It is found to be variable intra specifically in several species. At present it is being used to separate various genera pending availability of some other more constant characters. However, in the present arrangement it has been possible to avoid this character in discriminating various subfamilies.

It may be mentioned here that Srivastava (in press) has already transferred Isolaboidinae under Anisolabididae since proparameres are paired. In extreme cases it may apparently look unpaired due to great enlargement of distal lobe of one side covering almost both the halves of proparameres. Generally virga of only one side is well developed and on the other side it may be absent or greatly reduced. Besides, all other external morphological characteristics suggest its inclusion in this family.

Various superspecific taxa included under the family are summarised below :

Subfamily : RAMAMURTHIINAE

Genus : **Ramamurthia** Steinmann

Subfamily : RUDRAXINAE Subfam. n.

Genus : **Rudrax** gen. n. (*R. brindleyi* sp. n.)

Subfamily : PERICOMINAE

Genera : **Pericomus** Burr, **Parapericomus** Ramamurthi

Subfamily : HOMOTAGINAE

Genera : **Homotages** Burr, **Paratages** Srivastava

Subfamily : SPONGIPHORINAE

Genera : **Spongiphora** Serville, **Filolabia** Steinmann, **Formicilabia** Rehn and Hebard, **Marava** Burr, **Pseudomarava** Steinmann, **Purex** Burr, **Spongovostox** Burr, **Vostox** Burr

Subfamily : IRDEXINAE

Genus : **Irdex** Burr

Subfamily : NESOGASTRINAE

Genus : **Nesogaster** Verhoeff

Subfamily : VANDICINAE

Genera : **Strogyloopsis** Burr, **Strongylolabis** Steinmann

Subfamily : SPARATTINAE

Genera : **Sparatta** Serville, **Auchenomus** Karsch, **Mecomera** Serville

Subfamily : GERACINAE

Genera : **Gerax** Hebard, **Barygerax** Hebard, **Eugerax** Hebard, **Nesolabia** Hincks, **Pseudovostox** Borelli, **Yepezia** Brindle

Subfamily : COSMOGERACINAE

Genus : **Cosmogerax** Hebard

Subfamily : CAECOLABIINAE

Genus : **Caecolabia** Brindle

Subfamily : ISOPYGINAE

Genus : **Isopyge** Borelli

Subfamily : LABIINAE

Genera : **Labia** Leach, **Apovostox** Hebard, **Chaetolabia** Brindle, **Chaetospania** Kasch (= **Paraspania** Steinmann—Syn. n.), **Circolabia** Steinmann (= **Spirolabia** Steinmann and **Paralabella** Steinmann—Syn. n.), **Sphingolabis** Bormans

KEY TO THE SUBFAMILIES OF SPONGIPHORIDAE

(Partly modified after Srivastava, 1985)

- 1(10). Second tarsal segment longer than broad
- 2 (5). Elytra with a sharp ridge along the costal margin
- 3 (4). Whole body covered with long and stiff hairs ; femora incrassate, tibiae deplanate and sulcate above in apical half only ... **Ramamurthiinae** Steinmann
(= **Physogastrinae** Ramamurthi)
- 4 (3). Body pilose ; tibia compressed, at extreme apex slightly grooved
... **Rudraxinae** Subfam. n.
- 5 (2). Elytra without a sharp ridge along the costal margin
- 6 (7). Elytra granular, along the costal margin with a row of small tubercles, each bearing a short or long thick setae ; tarsi long and slender ; 1st segment five times or more longer than its width ... **Pericominae** Burr
- 7 (6). Elytra smooth or punctulate, ecarinate along the costal margin and without tubercles or setae ; tarsi shorter, 1st segment three to four times longer than its width
- 8 (9). Hind second tarsal segment, in profile, almost of uniform width, only scarcely narrowed basally and slightly shorter than third, first segment slightly longer than the combined length of last two segments ... **Homotaginae** Srivastava

- 9 (8). Hind second tarsal segment, in profile. narrowed basally, about half as long as the third, first segment slightly shorter than the combined length of second and third segments ... Spongiphorinae Burr
- 10 (1). Second tarsal segment broader than long or about as broad as long
- 11(12). Hind tarsi comparatively longer and slender, first segment five times longer than its width ; elytra smooth, occasionally costal margin with a row of small tubercles, each with a thick setae ... Irdexinae Srivastava
- 12(11). Hind tarsi comparatively shorter and thick, first segment three to four times longer than its width
- 13(18). Elytra with a sharp ridge along the costal margin
- 14(15). Antennal segments conical, each gently expanded apically and narrow basally ... Nesogastrinae Verhoeff
- 15(14). Antennal segments cylindrical
- 16(17). Antennae 16—20 segmented (African species) ... Vandicinae Burr
- 17(16). Antennae 12—15 segmented (American species)... Strongylopsalinae Burr
- 18(13). Elytra without a ridge along the costal margin
- 19(20). Body strongly depressed or flattened, head flat, dorsal surface not convex ... Sparattinae Burr
- 20(19). Body not strongly depressed or flattened, head convex dorsally (except *Chaetospania*)
- 21(22). Tarsal claw with an arolium ... Geracinae Brindle
- 22(21). Tarsal claw without an arolium
- 23(24). Last abdominal tergite semicircular and sloping down to pygidium, tergites 5—9 hidden beneath the preceding tergites ... Cosmogerae Brindle
- 24(23). Last tergite rectangular, not sloping down to pygidium and tergites 5—9 not so hidden
- 25(26). Head without eyes (blind species) ... Caecolabiinae Steinmann
- 26(25). Head with eyes

- 27(28). Eyes longer than post-ocular length ; hind margin of ultimate tergite strongly emarginate ; forceps almost as long as the width of ultimate tergite
... Isopyginae Hincks
- 28(27). Eyes shorter than the post-ocular length ; hind margin of ultimate tergite sinuate ; forceps distinctly longer than the width of ultimate tergite ... Labiinae Burr

RAMAMURTHIINAE Steinmann

Ramamurthinae Steinmann, 1975. *Acta zool. Hung.*, 21 : 210 (new name for Physogastrinae Ramamurthi, 1967) (Type genus—*Ramamurthia* Steinmann, 1975—new name for *Physogaster* Ramamurthi, 1967—name preoccupied by Lacordaire, 1839, *Ann. Sci. Nat.*, 20 : 276, in Coleoptera).

Physogastrinae Ramamurthi, 1967, *Ent. Meddel.*, 35 : 237.

Diagnostic characters : Build stout, whole body covered with long and stiff hairs. Head sutures, obsolete, eyes about as long as the postocular area or only slightly shorter. Legs with femora incrassate, tibia flattened and sulcate above in apical half, 2nd tarsal segment large, slightly longer than broad.

Disiribution : Australian Region (Bismarck Island).

LIST OF GENERA AND SPECIES

Ramamurthia Steinmann, 1975

(= *Physogaster* Ramamurthi, 1967)

R. scabinata Ramamurthi, 1967 ... Bismarck Island

RUDRAXINAE Subfam. n.

Diagnostic characters : Build normal ; body pilose. Elytra with a sharp ridge along the costal margin. Legs typical for the family, fore-femora swollen, middle and hind ones compressed, at extreme apex above slightly grooved ; hind tarsi with 1st segment a little over 5 times longer than its width ; 2nd segment 3 times longer than broad ; 3rd segment 4 times longer than broad and a little over half the length of 1st segment ; claw without arolium. Pygidium distinct. Forceps long and slender.

Distribution ; Oriental Region.

Type genus : *Rudrax* gen. n.

Remarks : In having elytra keeled along the costal margin and 2nd tarsal segment longer than broad, the described subfamily comes close to Ramamurthiinae but differs by the pilose body and compressed tibiae with a slight depression at extreme apex. In Ramamurthiinae the tibiae are deplanate and grooved in apical half, somewhat similar to some forms of the family Chelisochidae.

***Rudrax* gen. n.**

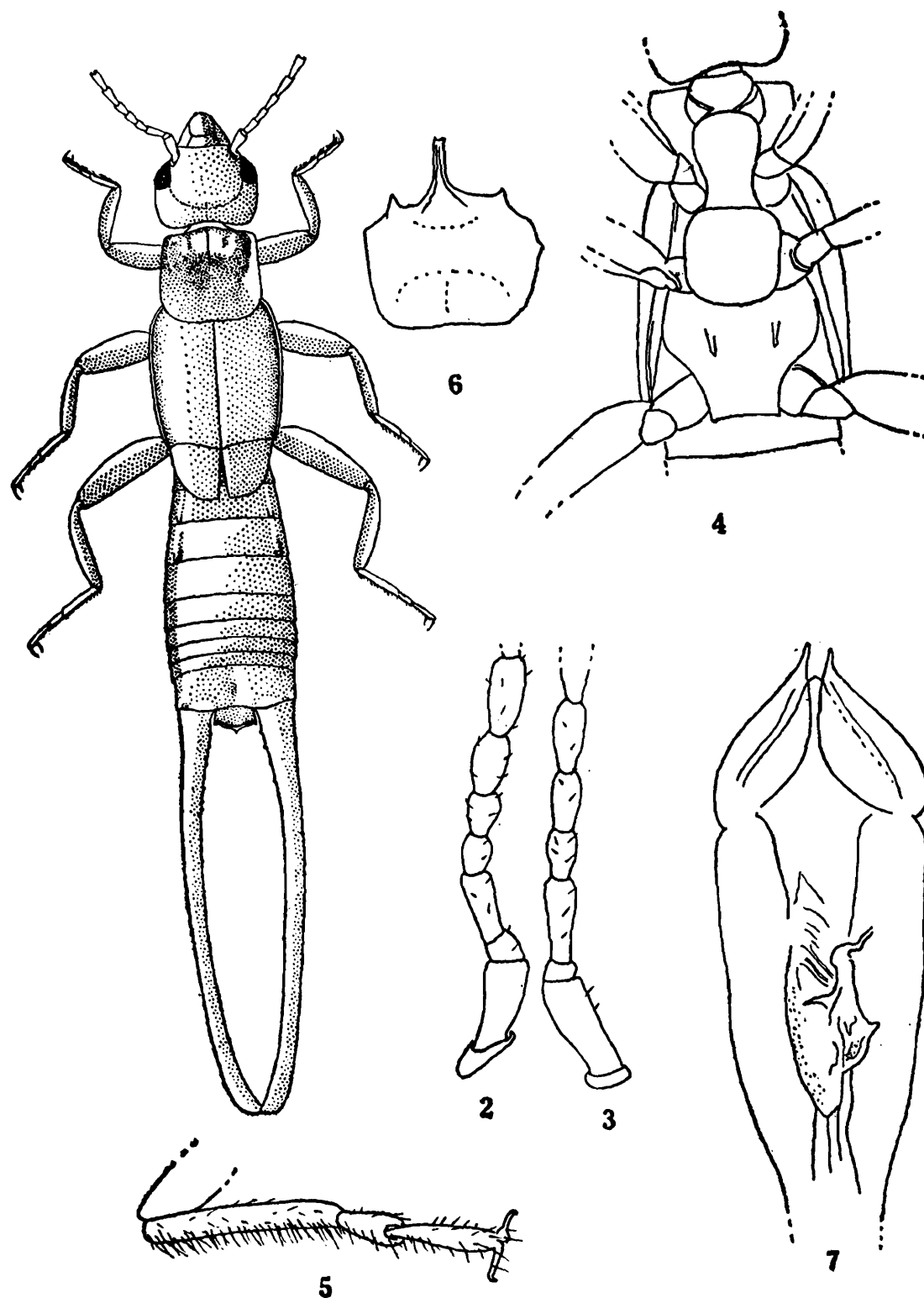
Body pilose ; general colour dull brownish black. Head longer than broad. Eyes shorter than post-ocular area. Antennae 16-segmented or more ; 1st stout, shorter than the distance between antennal bases ; 3rd long and slender, longer than 4th and 5th. Elytra and wings well developed, former with a sharp ridge laterally. Abdomen striolate with punctulations, lateral tubercles on 3rd and 4th tergites distinct, along the hind margin of each tergites a row of compressed tubercles present. Pygidium distinct. Forceps long and slender.

***Rudrax brindlei* sp. n.**

(Figs. 1-6)

♂ : General colour dull brownish black, antennae, legs and forceps lighter in colour.

Head longer than broad, pilose, smooth, moderately convex, postero-lateral angles rounded and hind margin emarginate, sutures fine but clearly distinct. Eyes distinctly shorter than the post-ocular area. Antennae (partly broken) with 16 segments on the left and 8 on the right sides (segments 4 to 6 on the left are comparatively shorter and stouter than those on the right), 1st stout, narrowed at base, shorter than the distance between antennal bases, about as long as the eyes ; 2nd small, transverse ; 3rd long and cylindrical, yellowish brown with apex brownish black, longer than 4th and 5th, remaining segments gradually increasing in length distally and thinning. Pronotum rectangular, with micro-reticulations, about as long as broad or a trifle broader, anteriorly as wide as head with margin slightly convex in middle, sides feebly reflexed, straight, scarcely diverging posteriorly, hind angles rounded and margin straight, median sulcus finely marked but distinct, prozona raised with a faint depression in middle on either side of median line close to anterior margin, metazona weakly depressed. Elytra well developed, surface above obscurely punctulate, humeral angles prominent, costal



Figs. 1-7: *Rudrax brindlei* sp. n. Holotype (male) 1. Dorsal view; 2. Right antennal segments; 3. Left antennal segments; 4. Thoracic sternite; 5. Hind tarsi; 6. Penultimate sternite and 7. Genitalia.

margin with a raised ridge, feeble at shoulder, hind margin obliquely concave. Wings short, about half as long as head, surface above obscurely punctate. Prosternum longer than broad, narrowed posteriorly with hind margin straight. Mesosternum about as long as broad, sides straight and hind margin briefly rounded. Metasternum about as long as broad, posteriorly narrowed between hind coxae with free margin feebly sinuate. Legs with fore-femora thickened, tarsi clad with hairs on underside, hind tarsi with basal segment $1/5$ as broad as long; 2nd elongated, about $1/3$ as long as the basal one and $1/2$ as long as apical segment; claw without an arolium. Abdomen moderately convex, gently dilated in middle, rugosely striolate with punctulations above and on sides, sides of segments broadly convex, tergites 8th and 9th comparatively less rugosely striolate above, hind margin of each tergite with a row of small, distantly placed compressed tubercles. Penultimate sternite rectangular, transverse, finely punctulate, disc broadly depressed in middle, postero-lateral angles rounded with hind margin straight; manubrium slightly shorter than the length of sternite, in basal half triangular, in apical half narrow, parallel sided. Ultimate tergite rectangular, strongly transverse, moderately convex, obscurely punctulate laterally, with numerous small tubercles on lateral and posterior side, hind margin in middle straight or feebly concave, laterally oblique and concave. Pygidium subvertical, pentagonal, gently widened posteriorly with margin slightly raised, postero-lateral angles produced into minute point and in middle with a triangular tubercle. Forceps long, faintly trigonal near base, slender, depressed, slightly curved in middle, tapering apically but gently expanded near apices with tip pointed, internal margin in basal $1/4$ sharp with numerous small tubercles internally and as above. Genitalia with parameres oval, tip sharply pointed; virga short, stout with various chitinous accessory plates. Length : body-11.0 mm ; forceps-7.45 mm.

♀ : Unknown.

Material examined : Holotype ♂ (genitalia attached), S. CHINA : Fukien, Changting, Niuling, 9.vi.1940, T.C. Maa ; deposited in the B.P. Museum, Honolulu, Hawaii, U.S.A.

Remarks : The second tarsal segment is quite elongated in being three times longer than broad but it is essentially of Labiid type. Although it is narrowed at base and wider apically, it is not lobed. In this respect it approaches, amongst various species of Labiidae, members of genus *Homotages* Burr, which possess ecarinate elytra laterally.

PERICOMINAE

Pericominae Burr, 1911. *Dt. ent. natn. Bibl-thk.*, 2 : 59 (Type genus—*Pericomus* Burr, 1911).

Diagnostic characters : Elytra perfect, rugose, with coarse granulations and punctulations, costal margin with a row of small tubercles, each bearing a thick setate. Wings of the same texture as the elytra. Legs with first segment five times or a little more than its width ; second segment longer than broad.

Distribution : Neotropical and Australian Regions.

Remarks : The inclusion of this subfamily under the division with keeled elytra is not justified since the costal margin is not keeled but it is provided with a row of tubercles and a thick seta arising from each. In this respect this comes close to *Irdexinae* Srivastava, but latter differs by the shape of second tarsal segment and smooth elytra.

LIST OF GENERA AND SPECIES

Pericomus Burr, 1911

- P. ater* Brindle, 1988 ... Panama
P. tenuipes Burr, 1905 ... Peru and Ecuador

Parapericomus Ramamurthi, 1967

(This genus was placed under *Physogastrinae* by Ramamurthi (1967) which is now a synonym of *Ramamurthiinae*. It should be included under *Pericominae* as has been done by Steinmann (1989).

- P. noonadanae*, Ramamurthi, 1876 ... New Britain

HOMOTAGINAE} Srivastava

Homotaginae Srivastava, 1985. *Annali Mus. Civ. Stor. nat. Giacomo Doria*, 85 : 206 (Type genus—*Homotages* Burr, 1909).

Diagnostic characters : Body smooth, glabrous and head longer than broad, convex. Eyes shorter than post-ocular area. Antennae 15-segmented, 1st stout, narrowed basally ;

2nd about as broad as long ; 3rd long and slender ; 4th subconical, shorter than preceding ; 5th longer than 4th but shorter than 3rd, remaining cylindrico-conical, gradually increasing in length distally. Elytra and wings well developed, smooth. Legs long, slender, 1st tarsal segment equal or longer than the combined length of 2nd and 3rd ; 2nd longer than broad, of uniform width throughout, except at base, slightly narrowed. Forceps, in males, strongly undulated and toothed.

Distribution : Oriental Region (India, Myanmar and Nepal-in mountain region only).

Remarks : This subfamily can be easily distinguished by the shape of hind tarsal segments, especially 2nd one which is of uniform width throughout, besides some other minor characters.

LIST OF GENERAL AND SPECIES

Homotages Burr, 1907

<i>H. feae</i> (Bormans, 1888)	—India, Myanmar and Nepal
<i>H. tawangensis</i> Srivastava, 1977	—India (Arunachal Pradesh)
<i>H. principalis</i> Steinmann, 1989	—Vietnam

Paratages Srivastava, 1987

P. sakail Srivastava, 1987

SPONGIPHORINAE Burr

Spongiphorinae Burr, 1911. *Dt. ent. natn. Bibl-thk.*, 2 : 49 (Type-genus : *Spongiphora* Serville, 1831).

Diagnostic characters : Size medium to large. Head with sutures distinct. Eyes generally longer than the post-ocular area. Antennae with 3rd segment longer than 4th or equal and longer than 5th. Wings and elytra glabrous, smooth in most of the species. Legs with hind tarsal segment slightly longer than broad, strongly narrowed posteriorly and half as long as the 3rd ; 1st tarsal segment shorter than the combined length of 2nd and 3rd.

Distribution : Worldwide.

LIST OF GENERA AND SPECIES

Filolabia Steinmann, 1989*F. exigus* Steinmann, 1989

—Brazil

Formicilabia Rehn and Hebard, 1917*F. caribea* Rehn and Hebard, 1917

—Dominian Republic

Marava Burr, 1911(= *Prolabia* Burr, 1911)(= *Larex* Burr, 1911)(= *Laprobia* Hincks, 1960)*M. alluaudi* (Burr, 1904)

—Madagascar

M. arachidis (Yersin, 1860)

—Worldwide

M. bidentata Brindle, 1917

—Ecuador

M. brasiliانا Brindle, 1971

—Brazil and Trinidad

M. calverti Rehn, 1921

—Costa Rica

M. championi (Bormans, 1893)—Panama, Venezuela, Suriname,
French Guiana and Brazil*M. dominica* (Rehn and Hebard, 1917)

—West Indies

M. draco Steinmann, 1985

—Jamaica

M. elegantula Brindle, 1973

—Costa Rica

M. emarginata Brindle, 1977

—Venezuela

M. equatoria (Burr, 1899)—Ecuador, Colombia, Guyanas,
Panama and Suriname*M. feae* (Dubrony, 1879)

—Philippine Isls, New Guinea

M. flaviscuta (Rehn, 1903)

—Mexico and Guatemala

M. flavohumeralis Brindle, 1988

—Panama

M. fulgida Brindle, 1970

—Solomon Isls and Bougainville

M. furia Steinmann, 1989 (New name for

—Venezuela

M. minuscula Brindle, 1977)*M. gracilis* Brindle, 1988

—Panama

M. grata Steinmann, 1985

—Venezuela

M. grenadensis Brindle, 1971

—Grenada and Costa Rica

<i>M. graeaudi</i> Brindle, 1966	—Madagascar
<i>M. hildebrandti</i> (Burr, 1912)	—Madagascar
<i>M. jamaicana</i> (Rehn and Hebard, 1917)	—Jamaica
<i>M. lucida</i> (Brindle, 1968)	—Suriname
<i>M. luzonica</i> (Dohrn, 1864)	—Oriental and Indo-Australian Regions
<i>M. machupicchuensis</i> Brindle, 1971	—Peru
<i>M. mexicana</i> (Bormans, 1883)	—Mexico
<i>M. moreirai</i> (Menozzi, 1933)	—Brazil
<i>M. nigrella</i> (Dubrony, 1879)	—Oriental Region and Solomon Isls.
<i>M. nigrocincta</i> Brindle, 1988	—Panama
<i>M. nitida</i> (Burr, 1904)	—Madagascar
<i>M. pallida</i> Brindle, 1988	—Panama
<i>M. paradoxa</i> (Burr, 1904)	—Ecuador
<i>M. paraguayensis</i> (Caudell, 1904)	—Paraguay
<i>M. parva</i> (Burr, 1904)	—Suriname, French Guiana, Argetina, Venezuela and Costa Rica
<i>M. parvula</i> Brindle, 1988	—Panama
<i>M. pulchella</i> (Serville, 1849)	—East and South U. S. A. and West Indies
<i>M. pygidata</i> Brindle, 1988	—Panama
<i>M. pyxis</i> Steinmann, 1985	—Panama
<i>M. quadrata</i> Brindle, 1971	—St. Vincent (West Indies)
<i>M. rogersi</i> (Bormans, 1893)	—Costa Rica, Haiti
<i>M. rotundata</i> (Scudder, 1876)	—Mexico, Guatemala, West Indies and Peru
<i>M. servini</i> (Burr, 1900)	—Colombia
<i>M. silvestrii</i> (Borelli, 1905)	—Costa Rica, Panama, Ecuador, Brazil, Paraguay and Argentina
<i>M. splendida</i> Steinmann, 1985	—New Guinea
<i>M. surinamensis</i> (Brindle, 1968)	—Suriname
<i>M. towensi</i> Brindle, 1979	—Guatemala
<i>M. tricolor</i> (Kirby, 1891)	—Brazil
<i>M. triquetra</i> (Hebard, 1917)	—Mexico
<i>M. unidentata</i> (Beauvois, 1805)	—Neotropical Region and Canada
<i>M. venezuelica</i> Brindle, 1917	—Venezuela

Pseudomarava Steinmann, 1989*P. prominens* Steinmann, 1989

—Guatemala

Purex Burr, 1911*P. brunneri* (Bormans in Burr, 1903)

—Venezuela, Ecuador and Brazil

P. divergens (Burr, 1899)

—Ecuador and Peru

P. esuivetae Brindle, 1968

—Venezuela

P. eminens Steinmann, 1989

—Ecuador

P. formosanus Hebard, 1920

—French Guiana

P. frontalis (Dohrn, 1864)—Costa Rica, Panama, Venezuela,
Ecuador and Peru*P. parvicollis* (Stal, 1860)

—Brazil and Panama

P. propinquus (Burr, 1911)

—Peru

P. pulchellus Brindle, 1971

—Venezuela

P. remotus Burr, 1899

—Ecuador

P. sinuatus Brindle, 1971

—Venezuela and Mexico

P. staudinger Brindle, 1971

—Peru

P. surinamensis Brindle, 1971

—Suriname

P. versicolor (Bormans, 1883)

—Colombia and Venezuela

Spogiphora Serville, 1831(= **Psolidophora** Serville, 1839)(= **Spogophora** Agassig, 1846)—Invalid emendation(= **Pilex** Burr, 1910)*S. bormansi* Burr, 1897

—Brazil, Paraguay and Argentina

S. buprestoides (Kirby, 1891)

—Brazil, Bolivia and Peru

S. corceipennis Serville, 1839

—Central and South America

S. dissimilis Borelli, 1909

—Costa Rica

S. elongatus (Fabricius, 1793)

—West Indies

S. miracula Steinmann, 1984

—Ecuador

S. moreirai Machado and Castro, 1947

—Brazil

S. paradisea Steinmann, 1984

—Guyana

S. proluxa (Scudder, 1876)—Mexico, Guatemala, Costa Rica
and Ecuador(new name for *Psolidophora parallela*
Dohrn, 1862)*S. salvadorensis* Brindle, 1971

—Salvador

Spongovostox Burr, 1911

(= **Andex** Burr, 1911)

(= **Microvostox** Hebard, 1917)

(= **Afrolabia** Hincks, 1949)

- | | |
|--|---|
| <i>S. alogsiisabaudiae</i> (Borelli, 1906) | —Central and Eastern Africa |
| <i>S. alter</i> Burr, 1912 | —Panama, Suriname, Brazil,
Bolivia and Argentina |
| <i>S. anamalaiensis</i> Srivastava, 1969 | —(South) India |
| <i>S. asper</i> (Menozzi, 1935) | —West and Central Africa |
| <i>S. assiniensis</i> (Bormans, 1893) | —Equatorial Africa |
| <i>S. barberi</i> Hebard, 1917 | —Guatemala |
| <i>S. basilewskyi</i> Hincks 1954 | —Congo Republic |
| <i>S. bilineatus</i> (Scudder, 1869) | —South and Central Africa |
| <i>S. burgeoni</i> Borelli, 1923 | —Congo Republic and Uganda |
| <i>S. carinatus</i> Brindle, 1975 | —Tanzania |
| <i>S. caudex</i> Steinmann, 1985 | —Brazil |
| <i>S. cornutus</i> Brindle, 1973 | —Angola |
| <i>S. cosmos</i> Steinmann, 1985 | —Mexico |
| <i>S. decellei</i> (Brindle, 1968) | —Ivory Coast, Cameron, Gabon
and Nigeria |
| <i>S. doddi</i> (Burr, 1914) | —Australia : Queensland |
| <i>S. excavatus</i> Hincks, 1954 | —French Guinea |
| <i>S. ferrugineus</i> (Borelli, 1907) | —Congo Republic and Cameron |
| <i>S. flavicinctus</i> Brindle, 1982 | —Panama and Venezuela |
| <i>S. flavohumeralis</i> Brindle, 1973 | —Congo Republic |
| <i>S. flavostriatus</i> Brindle, 1982 | —Venezuela |
| <i>S. gestori</i> (Burr, 1909) | —Western and Central Africa
and Ethiopia |
| <i>S. ghilianii</i> (Dohrn, 1864) | —Venezuela, Suriname, French Guiana,
Brazil and Dominican Republic |
| <i>S. globus</i> Steinmann, 1985 | —Afr. ? |
| <i>S. guttulatus</i> (Burr, 1987) | —Malaysia, Indonesia (Sumatra Java,
Lombok) and Celebes |
| <i>S. hackeri</i> (Burr, 1914) | —Australia : Queensland and Victoria |
| <i>S. hakeni</i> Ramamurthi, 1967 | —Philippines : Tawi Tawi |

- S. hinnules* Hincks, 1956
S. kristenseni Burr, 1911
S. marginalis (Thunberger, 1887)
- S. masai* (Hincks, 1949)
S. medleri Brindle, 1976
S. mirabilis Steinmann, 1985
S. mirei Brindle, 1969
S. mucronatus (Stal, 1860)
- S. nigroflavida* (Rehn, 1905)
S. orion Steinmann, 1985
S. orpheus Steinmann, 1985
S. ocellai Steinmann, 1984
S. oweni (Burr, 1911)
S. pygmaeus (Dohrn, 1864)
- S. quadrimaculatus* (Stal, 1855)
S. ruber (Borelli, 1907)
- S. rubescens* Brindle, 1973
S. schlaeferi Burr, 1911
- S. schoutedeni* Borelli, 1923
S. schwarzi (Caudell, 1907)
S. semiflavus (Bormans, 1894)
- S. subaptera* (Kirby, 1891)
S. sumatranus Boesman, 1954
S. suspectus Steinmann, 1989
S. taurus Steinmann, 1985
S. tempus Steinmann, 1981
S. testaceus (Borelli, 1923)
- Cameroon
 —Ethiopia
 —Mainly eastern, central and southern Africa, extending southwards from the Congo Republic and Uganda through most of Africa to Natal
 —Tanzania
 —Nigeria
 —Thailand
 —Cameroon
 —Sri Lanka, India (Sikkim), China, Myanmar, throughout Malay Archipelago to New Guinea
 —Australia : Queensland
 —Tanzania
 —Ghana
 —Thailand
 —West-Central Africa
 —Guatemala, Nicaragua, Panama, Venezuela, Peru and Brazil
 —Eastern and Southern Africa
 —Equatorial Guinea : Bioko and Cameroon
 —Congo Republic
 —Ivory Coast, Ghana, Nigeria, Cameroon and Congo Republic
 —Congo Republic
 —Mexico, Guatemala and French Guiana
 —China : Yunnan, India (throughout India from North through South), Sri Lanka, Myanmar, Vietnam, Indonesia, Java, Sumatra, Sumba and Bismarck Isls.
 —Australia : Queensland and New Guinea
 —Sumatra
 —Java
 —Vietnam
 —Gabbon
 —East and Central Africa

- | | |
|---|--|
| <i>S. tripunctatus</i> (Borelli, 1907) | —Ivory Coast, Cameroon, Gabon, Congo
Republic, Zaire, Angola and Uganda |
| <i>S. trituberculatus</i> Brindle, 1973 | —Congo Republic |
| <i>S. tuberculatus</i> (Borelli, 1907) | —Sao Tombi Island |
| <i>S. victriae</i> (Burr, 1904) | —Australia : Victoria |

VOSTOX Burr, 1911

- | | |
|---|---|
| <i>V. americanus</i> Steinmann, 1975 | —Bolivia and Chile |
| <i>V. apicedentatus</i> (Caudell, 1904) | —South U. S. A. and Mexico |
| <i>V. asemus</i> (Hebard, 1920) | —Argentina and Brazil |
| <i>V. basalis</i> (Burr, 1912) | —Mexico and Guatemala |
| <i>V. bertonii</i> (Borelli, 1905) | —Paraguay and Argentina |
| <i>V. binotatus</i> (Kirby, 1891) | —Colombia |
| <i>V. bolivianus</i> Brindle, 1971 | —Bolivia |
| <i>V. brasiliensis</i> Steinmann, 1975 | —Brazil |
| <i>V. brunneipennis</i> (Serville, 1839) | —Canada, U. S. A. and Neotropical
America |
| <i>V. carinatus</i> Brindle, 1971 | —Venezuela |
| <i>V. cabreræ</i> Rehn, 1925 | —Cuba |
| <i>V. comitatus</i> Steinmann, 1989 | —Ecuador |
| <i>V. confusus</i> (Borelli, 1905) | —Colombia and Paraguay |
| <i>V. dubious</i> (Moreira, 1931) | —Argentina |
| <i>V. dugueti</i> Borelli, 1912 | —Mexico |
| <i>V. ecuadorensis</i> Steinmann, 1975 | —Ecuador |
| <i>V. excavatus</i> Nutting and Gurny, 1961 | —U. S. A. : Arizona, New Mexico,
California ; and Mexico |
| <i>V. similis</i> (Bormans, 1883) | —Mexico, Panama and Colombia |
| <i>V. vicinus</i> (Burr, 1912) | —Brazil |

IRDEXINAE Srivastava

Irdexinae Srivastava, 1985. *Annali. Mus. civ. Stor. nat. Giacomo Doria*, 85 : 207 (Type-genus : *Irdex* Burr, 1911).

Diagnostic characters : Eyes small or prominent. Elytra smooth, costal margin with a row of small tubercles, arising from each a thick setae. Wings well developed or consealed. Legs long, slender, 1st tarsal segment 1/5 as wide as long ; 2nd short,

broader than long and 3rd slightly shorter than 1st. Pygidium subvertical, posterior margin provided with tubercles. Forceps, in males, remote at base, gently undulate, internal margin with several minute teeth.

Distribution : Oriental Region.

Remarks : The genus *Irdex* Burr, was redefined by Srivastava (1985) after re-examination of the Type material of *I. nitidipennis* (Bormans).

LIST OF GENERA AND SPECIES

Irdex Burr, 1911

- | | |
|--|---|
| <i>I. singalensis</i> (Dohrn, 1865)
(= <i>S. carli</i> Borelli, 1931) | —Sri Lanka and India (South) |
| <i>I. escheri</i> (Borelli, 1931) | —India (South) |
| <i>I. nitidipennis</i> (Bormans, 1894)
(= <i>Spongophora lutea</i> Bormans, 1894)
(= <i>Spongovostox aborum</i> Burr, 1913)
(= <i>Spongovostox wuermalii</i> Brindle, 1975) | —India, Nepal, Bhutan, Myanmar,
Indonesia : Sumatra and Hainan Isls. |

NESOGASTRINAE Verhoeff

Nesogastrinae Verhoeff, 1902. *zool. Anz.*, 665 : 191 (Type-genus : *Nesogaster* Verhoeff, 1902).

Distribution : Oriental and Australian Region.

LIST OF GENERA AND SPECIES

Nesogaster Verhoeff, 1902

(= *Nesogastrella* Verhoeff, 1902)

- | | |
|---|--|
| <i>N. aculeatus</i> (Bormans, 1900)
(= <i>N. fulgor</i> Steinmann, 1983) | —Widely distributed from Phillippine
Isls to Micronesia |
| <i>N. amoenus</i> (Stal, 1855) | —Malaysia ; Indonesia : Sumatra, Java
and Celebes ; Philippine Isls ; New
Guinea and Australia |
| <i>N. bakeri</i> Hincks, 1947 | —New Hebrides |

<i>N. bidentatus</i> Srivastava, 1978	—Philippine Isls. : Mindanao
<i>N. burri</i> Rehn, 1946	—Philippine Isls. : Mindanao
<i>N. cristatus</i> Brindle, 1976	—New Caledonia
<i>N. dholicus</i> (Burr, 1897)	—Celebes
<i>N. dybasi</i> Srivastava, 1978	—Philippine Isls. : Mindanao
<i>N. grattiosus</i> Steinmann, 1989	—Fiji
<i>N. halli</i> Hincks, 1947	—Borneo
<i>N. lewisi</i> (Bormans in Burr, 1903)	—Japan and Taiwan
<i>N. magnus</i> Steinmann, 1989	—Fiji
<i>N. milleri</i> Steinmann, 1989	—Philippine : Mindanao
<i>N. minusculus</i> Rehn, 1946	—Indonesia : Mentawai Isls
<i>N. mounseyi</i> Burr, 1914	—Philippine Isls. : Mindanao
<i>N. nigritus</i> (Shiraki, 1905)	—Japan : Taiwan
<i>N. papuus</i> (Bormans in Burr, 1903)	—New Guinea
<i>N. rehni</i> Hincks, 1951	—Australia : Queensland
<i>N. ruficeps</i> (Erichson, 1842)	—Australia and Tasmania
<i>N. tristis</i> (Bormans in Burr, 1903)	—New Caledonia
<i>N. wallacei</i> Burr, 1908	—Celebes

VANDICINAE Burr

Vandicinae Burr, 1911. *Dt. ent. natn. Bibl-thk.*, 2: 59 (Type-genus : *Vandex* Burr, 1911).

Diagnostic characters : Antennae with 16 to 20 segments, cylindrical. Eyes small. Elytra short with well defined ridge along the costal margin. Legs slender, first and third tarsal segments equal in length.

Distribution : Confined to the mountains of Africa between 1500m and 3000m in altitude.

LIST OF GENERA AND SPECIES

Vandex Burr, 1911

<i>V. celisi</i> Brindle, 1966	—Uganda
<i>V. fantasticus</i> Steinmann, 1974	—Ghana
<i>V. hincksi</i> Brindle, 1966	—Rwanda : Lake Kivu
<i>V. leleupi</i> Brindle, 1966	—Rwanda : Lake Kivu
<i>V. pophami</i> Brindle 1969	—Tanzania

V. pygidiatus Brindle, 1975

—Tanzania, Burundi and Rwanda

V. schubotzi (Burr, 1909)

—Congo Republic, Zire, Burundi and Rwanda

STRONGYLOPSALINAE Burr

Strongylopsalinae Burr, 1911. *Dt. ent. natn. Bibl-thk*, 2 : 59 (Type-genus : *Strongylopsalis* Burr, 1900).

Distribution : Neotropical Region.

LIST OF GENERA AND SPECIES

Strongylolabis Steinmann, 1986

S. berlandi (Hebard, 1920)

—Guatemala

S. secunda Steinmann, 1986

—Panama

Strongylopsalis Burr, 1900

S. bidentatus, Brindle, 1971

—Colombia

S. boliviana (Bormans in Burr, 1903)

—Bolivia

S. cheliduroides (Bormans, 1888)

—Peru

S. dlmidlata Brindle, 1977

—Venezuela

S. dubia Moreira, 1932

—Brazil

S. eberhardi Steinmann, 1986

—Costa Rica

S. excavata Brindle, 1971

—Bolivia

S. flava Steinmann, 1987

—Venezuela

S. haitica Steinmann, 1986

—Haiti

S. iheringi Rehn, 1917

—Brazil

S. koepcke Brindle, 1968

—Peru

S. laminata Brindle, 1973

—Bolivia

S. mathurinii Ribeiro, 1931

—Brazil

S. puella Steinmann, 1986

—Main Range (? Central America)

S. tarsata Hebard, 1924

—Ecuador

SPARATTINAE Zacher

Sparattinae Zacher, 1902. *zool. Anz.*, 25 (665) : 198 (Type-genus : *Sparatta* Serville ; 1839).

Diagnostic characters : Build slender, body strongly depressed. Head strongly depressed. Eyes small, much shorter than the post-ocular area. Pronotum anteriorly narrowed to form a sort of neck. Elytra and wings perfect.

Distribution : Neotropical, Ethiopian, Oriental and Australian Regions.

LIST OF GENERA AND SPECIES

Auchenomus Karsch, 1886

- | | |
|--|--|
| <i>A. albaylensis</i> Srivastava, 1976 | —Philippine Isls : Luzon |
| <i>A. angusticollis</i> (Dubrony, 1879) | —Malaysia and Borneo |
| <i>A. arcuatus</i> Brindle, 1968 | —Philippine Isls : Luzon |
| <i>A. bidentatus</i> Borelli, 1924 | —Buru |
| <i>A. bifurcus</i> Steinmann, 1984 | —Australia : Queensland |
| <i>A. blumi</i> Steinmann, 1988 | —New Guinea |
| <i>A. dentatus</i> Srivastava, 1976 | —Philippines Isls : Mindanao |
| <i>A. elongatus</i> Brindle, 1970 | —Solomon Isls |
| <i>A. extractus</i> Steinmann, 1989 | —Fiji |
| <i>A. forcipatus</i> Ramamurthi, 1967 | —New Britain |
| <i>A. fragilis</i> Steinmann, 1988 | —New Guinea |
| <i>A. heros</i> Steinmann, 1984 | —New Guinea |
| <i>A. hincksi</i> Ramamurthi, 1960 | —India (South) |
| <i>A. insularis</i> Brindle, 1976 | —New Hebrides |
| <i>A. intermedius</i> Borelli, 1926 | —Sumatra |
| <i>A. javanus</i> (Bormans, 1883) | —Philippine Isls, Java, Key Island and
New Guinea |
| <i>A. kaszabi</i> Steinmann, 1988 | —New Guinea |
| <i>A. ligua</i> Burr, 1911 | —Sumatra |
| <i>A. longiforceps</i> Karsch, 1886 | —Madagascar |
| (= <i>A. tschitscherini</i> Semenov, 1908) | |
| (= <i>A. pandanicola</i> Chopard, 1951) | |
| <i>A. menozzi</i> Borelli, 1926 | —Philippine Isls : Mindanao |
| <i>A. minutus</i> Boeseman, 1954 | —Sumatra |

- | | |
|--|---|
| <i>A. nathani</i> Ramamurthi, 1968 | —India (South) |
| <i>A. pallidus</i> Brindle, 1968 | —Philippine Isls : Mindanao |
| <i>A. pandani</i> Hincks, 1960 | —New Guinea |
| <i>A. porrectus</i> Steinmann, 1989 | —Malaysia |
| <i>A. proprius</i> Steinmann, 1984 | —New Guinea |
| <i>A. pueritis</i> Steinmann, 1983 | —Philippine Isls : Luzon |
| <i>A. rapidus</i> Steinmann, 1984 | —Solomon Isls |
| <i>A. robustus</i> Borelli, 1921 | —Borneo |
| <i>A. setulosus</i> (Burr, 1900) | —Malaysia, Borneo, Sumatra and
Philippine Isls |
| <i>A. striatus</i> Srivastava, 1976 | —Philippine Isls : Luzon |
| <i>A. variabilis</i> Brindle, 1970 | —Solomon Isls : Bougainville |
| <i>A. variabilis egoloensis</i> Brindle, 1970 | —Solomon Isls : New Georgia Group |
| <i>A. variabilis guadalacanalensis</i> Brindle, 1970 | —Solomon Isls : Guadalcanal |
| <i>A. vicinus</i> Borelli, 1915 | —Philippine Isls : Luzon |

Mecomera Serville, 1839
(=*Metasparatta* Borelli, 1912)

- | | |
|--------------------------------------|--|
| <i>M. brunnea</i> Serville, 1839 | —Nicaragua, Costa Rica, French Guiana,
Brazil, Colombia, Peru, Bolivia and
Argentina |
| <i>M. chacoensis</i> (Borelli, 1912) | —Venezuela, Brazil and Argentina |
| <i>M. reichardti</i> Brindle, 1971 | —Brazil |

Sparatta Serville, 1839
(=*Prosparatta* Burr, 1911)
(=*Parasparatta* Burr, 1911)

- | | |
|---|--|
| <i>S. armata</i> Burr, 1899
(= <i>S. minuta</i> Caudell, 1907) | —Ecuador, Guatemala and Peru |
| <i>S. biolleyi</i> Borelli, 1903 | —Costa Rica, Venezuela and ? Bolivia |
| <i>S. bocainensis</i> (Machado, 1953) | —Brazil |
| <i>S. bolivari</i> Bormans, 1988 | —Costa Rica, Colombia, Suriname,
Venezuela and Peru |
| <i>S. bormansi</i> Kirby, 1896 | —Mexico |
| <i>S. calverti</i> Borelli, 1910 | —Costa Rica |
| <i>S. colombiana</i> Bormans, 1883 | —Costa Rica, Colombia, Brazil, and
Bolivia |

<i>S. dentifera</i> Rehn, 1901 (= <i>S. lobata</i> Borelli, 1909) (= <i>Parasparata guyanensis</i> Habard, 1920) (= <i>Parasparatta panamae</i> Habard, 1923)	—South and Central America
<i>S. diplatyoides</i> (Caudell, 1907)	—Guatemala and Mexico
<i>S. dominicana</i> (Brindle, 1971)	—Dominican Republic
<i>S. dudichi</i> (Steinmann, 1982)	—Brazil
<i>S. ecuadorensis</i> (Borelli, 1932)	—Ecuador
<i>S. flavipennula</i> Rehn, 1903	—Mexico and Guatemala
<i>S. humilis</i> (Hebard, 1917)	—Mexico, Panama, Venezuela and and Nicaragua
<i>S. incerta</i> Borelli, 1905	—Mexico to Argentina
<i>S. luederwaldti</i> (Menozzi, 1932)	—Brazil
<i>S. nigrina</i> Stal, 1855	—Brazil, Nicaragua, Suriname, Guatemala, Argentina and Dominican Republic
<i>S. pelvimetra</i> Serville, 1839	—Brazil
<i>S. picadoi</i> (Borelli, 1911)	—Costa Rica
<i>S. pulchra</i> Borelli, 1906	—Costa Rica and Panama
<i>S. quinquepunctata</i> (Borelli, 1932)	—Brazil
<i>S. rehni</i> (Hebard, 1929)	—Panama, Nicaragua and Guyanas
<i>S. rufina</i> Stal, 1855 (= <i>S. clarkii</i> Kirby, 1896)	—Brazil, Uruguay, Argentina, Paraguay and Guyanas
<i>S. schotti</i> Dohrn, 1865	—Argentina, Brazil and Mexico
<i>S. semirufa</i> Kirby, 1896	—Brazil, Suriname and French Guiana
<i>S. singularis</i> Steinmann, 1978	—Venezuela
<i>S. siunata</i> (Brindle, 1979)	—Brazil
<i>S. spiculifera</i> (Brindle, 1977)	—Venezuela

GERACINAE Brindle

Geracinae Brindle, 1971. *J. nat. Hist.*, 5 : 158 (Type-genus : *Gerax* Hebard, 1917).

Diagnostic characters : Size small. Head convex. Eyes variable in size. Legs with femora stout, smooth, hind tarsi with 1st segment longer than the combined length of 2nd and 3rd ; 2nd short ; claws with arolium. Elytra and wings well developed, generally pubescent, variable in size. Abdomen convex, usually pubescent. Forceps small, elongated or sometimes lamellate.

Distribution : Neotropical, Oriental and Ethiopian Regions.

Barygerax Hebard, 1917

- | | |
|--|----------------------|
| <i>B. auricoma</i> (Rehn, 1903) | —Costa Rica and Peru |
| <i>B. breviforceps</i> (Caudell, 1907) | —Guatemala |
| <i>B. esau</i> Hebard, 1917 | —Panama |
| <i>B. transversalis</i> Brindle, 1974 | —Venezuela |
| <i>B. venezuelicum</i> Brindle, 1974 | —Venezuela |

Eugerax Hebard, 1917

- | | |
|-------------------------------------|------------------------|
| <i>E. clavijoi</i> Brindle, 1974 | —Venezuela |
| <i>E. nigratum</i> Brindle, 1974 | —Venezuela |
| <i>E. poecilum</i> Hebard, 1917 | —Panama and Costa Rica |
| <i>E. salcedoi</i> Brindle, 1974 | —Venezuela |
| <i>E. semiapterum</i> Brindle, 1974 | —Venezuela |

Gerax Hebard, 1917

- | | |
|----------------------------------|------------|
| <i>G. fuscum</i> Brindle, 1974 | —Venezuela |
| <i>G. lucidum</i> Brindle, 1974 | —Venezuela |
| <i>G. phantasma</i> Hebard, 1917 | —Panama |

Nesolabia Hincks, 1957

- | | |
|------------------------------------|----------------------|
| <i>N. longicollis</i> Hincks, 1957 | —Mauritius, Re'union |
|------------------------------------|----------------------|

Pseudovostox Borelli, 1926

- | | |
|--|---------------------------------------|
| <i>P. africanus</i> (Brindle, 1968) | —Central and East Africa |
| <i>P. afrum</i> Menozzi, 1935 | —Ghana, Congo Republic and Mozambique |
| <i>P. bicolor</i> Borelli, 1926 | —Philippine Isls and Borneo |
| <i>P. bispinosus</i> Brindle, 1970 | —Uganda |
| <i>P. fasciatus</i> (Bormans, 1894) | —Myanmar |
| <i>P. flavofasciatis</i> Brindle, 1973 | —Sumatra |
| <i>P. hincksi</i> Brindle, 1970 | —Rhodesia |
| <i>P. mameti</i> (Hincks, 1950) | —Mauritius |
| <i>P. myrmecus</i> (Burr, 1908) | —Java |

- | | |
|-----------------------------------|-----------------|
| <i>P. rudebecki</i> Brindle, 1969 | —Angola, Gabon |
| <i>P. truncatus</i> Brindle, 1970 | —Kenya |
| <i>P. unicolor</i> Brindle, 1970 | —Congo Republic |

Yepezia Brindle, 1982

- | | |
|-------------------------------------|------------|
| <i>Y. venezuelica</i> Brindle, 1982 | —Venezuela |
|-------------------------------------|------------|

COSMOGERACINAE Brindle

Cosmogeracinae Brindle, 1982. *Bol. ent. Venez. N. S.*, 2 (4): 35 (Type-genus: *Cosmogerax* Hebard, 1933).

Diagnostic characters: Size small to very small (3.5-4.25 mm), head strongly convex, eyes prominent but smaller than the post-ocular area, pronotum small, elytra and wings well developed. Legs short, tarsal arola absent. Last abdominal tergite semicircular, sloping down to pygidium, almost hidden under the preceding tergites, last tergite together with pygidium and forceps forming a bowl shaped structure. Pygidium generally transverse in males and triangular in females. Genitalia Labiid type with single median lobe.

Distribution: Neotropical Region.

Remarks: Members of this subfamily are, in general, similar to Geracinae but distinct by the absence of tarsal arolia and by the structure of last tergite and forceps.

Generally it is difficult to ascertain the sex without dissecting out male genitalia. However, the species could be identified on the basis of either sex which are similar in morphological details.

LIST OF GENERA AND SPECIES

***Cosmogerax* Hebard, 1933**
(=*Geracides* Brindle, 1973)

- | | |
|--------------------------------------|----------------------|
| <i>C. araguensis</i> (Brindle, 1974) | —Venezuela |
| <i>C. diagonalis</i> Brindle, 1982 | —Venezuela |
| <i>C. doesburgi</i> Brindle, 1982 | —Suriname |
| <i>C. formica</i> (Burr, 1911) | —Guatemala to Brazil |

- C. guatemalensis* (Brindle, 1973) —Guatemala to Panama
C. magicum Steinmann, 1989 —Guatemala

CEACOLABLIINAE Steinmann

Caecolabiinae Steinmann, 1989. *Das Tierreich*, Berlin, 106 : 70 (Type-genus : *Caecolabia* Brindle, 1975).

Diagnostic characters : Size very small (3.5 to 4.5 mm in both sexes), blind and apterus. Body weakly sclerotised. Male genitalia with a tubular virga in median unpaired proparamere.

Distribution : Mascarene Islands : Re'union (near Madagascar and Mauritius).

LIST OF GENERA AND SPECIES

Caecolabia Brindle, 1975

- C. gomyi* Brindle, 1975 —Re'union Isls.

ISOPYGINAE Hincks

Isopyginae Hincks, 1951. *Ann. Mus. Congo belge*. (Ser in 8 vo) Zool., 8 : 12 (Type-genus : *Isopyge* Borelli, 1931).

Diagnostic characters : Head triangular, broader than long ; eyes prominent, longer than the post-ocular area. Antennae 15-segmented ; 2nd, 3rd subquadrate ; 4th and 5th transverse ; 6th onwards segments subquadrate to slightly elongated up to 12th, afterwards heavily built. Legs with tibiae short and broad, sulcate in apical half above ; claw strongly toothed and lacking arolium. Pygidium prominent and forceps similar in both sexes.

Distribution : Madagascar.

Remarks : This subfamily can be easily separated from other Labiid subfamilies by the transverse head ; stout, short segmented antennae and strongly toothed claw.

LIST OF GENERA AND SPECIES

Isopyge Borelli, 1931

I. madagascariensis Borelli, 1931

—Madagascar

LABIINAE Burr

Labiinae Burr, 1909. *Dt. ent. natn. Bibl-thk.*, 2 : 60 (Type-genus *Labial* Leach, 1815).

Diagnostic characters : Size generally small to medium ; form weakly convex or depressed. Eyes generally shorter than post-ocular area (longer in *Apovostox* Hebard). Antennae with 3rd segment shorter than 5th or slightly so. Elytra and wings well developed, usually punctured and pubescent.

Distribution : Worldwide.

Remarks : This subfamily was considered close to Spongiphorinae but on the basis of third antennal segment shorter than 5th and hind 2nd tarsal segment about as long as broad, it can be easily differentiated from the latter.

LIST OF GENERA AND SPECIES

Apovostox Hebard, 1927

(= *Argusina* Hebard, 1927)

<i>A. bicuneatus</i> (Borelli, 1932)	—North Borneo
<i>A. brevis</i> (Brindle, 1970)	—Solomon Isls. : Santa Isabel
<i>A. burri</i> (Srivastava, 1975)	—India
<i>A. ceylonensis</i> (Srivastava, 1983)	—Sri Lanka
<i>A. chapmani</i> (Brindle, 1980)	—Borneo
<i>A. chauhani</i> (Srivastava, 1975)	—India
<i>A. dakshinkaliensis</i> (Kapoor, Malla and Shah, 1978)	—Nepal
<i>A. elongatus</i> Srivastava, 1978	—Philippine Isls : Mindanao
<i>A. ernstmayri</i> (Günther, 1932)	—New Guinea
<i>A. fortunatus</i> (Steinmann, 1985)	—New Guinea
<i>A. gracilis</i> (Borelli, 1932)	—Borneo
<i>A. hilaris</i> (Bormans, 1900)	—New Guinea

- A. jupiter* (Burr, 1900)
 (= *Irdex novaguinea* Boeseman, 1954)
 (= *Irdex philippinensis* Ramamurthi, 1967)
- A. litus* (Hebard, 1927)
A. papuanus (Brindle, 1970)
A. pilosus Bey-Bienko, 1959
A. poggii (Srivastava, 1979)
A. pygidiatus (Dubrony, 1879)
A. rammei (Günther, 1929)
A. serratus (Kapoor, 1967)
A. stella (Bormans, 1900)
- A. s. samsingensis* (Srivastava, 1975)
A. tantalus (Steinmann, 1985)
A. unicolor (Steinmann, 1985)
A. unimitabilis (Steinmann, 1985)
A. wittmeri (Brindle, 1975)
- Borneo and Philippine Isls.
 and New Guinea
- Sumatra
 —Papua New Guinea
 —China (Yunnan) and Bhutan
 —New Guinea
 —Oriental Region and Hawaii
 —Borneo and New Guinea
 —India (South)
 —Philippine Isls., Malaysia and
 Borneo
 —India (Darjeeling dist.)
 —China : Kiangsi
 —Australia : Queensland
 —New Guinea
 —Bhutan and Nepal

Chaetolabia Brindle, 1972

- C. appendicina* (Menozzi, 1941)
C. bihastata (Börg, 1094)
- C. canaca* (Burr, 1903)
C. delicatula (Brindle, 1970)
C. dentata Brindle, 1976
C. esakii (Menozzi, 1941)
C. fryei (Burr, 1910)
C. hilaro Steinmann, 1985
C. montana Brindle, 1973
C. nebulosa Steinmann, 1985
C. parabola Steinmann, 1985
C. quadrilobata (Dohrn, 1867)
C. socculata Steinmann, 1985
C. spiciata Brindle, 1972
C. stoneri (Caudell, 1927)
C. tetragona (Borelli, 1907)
C. venusta Steinmann, 1985
- Carolina Isls. and ? India
 —West and Central Africa, ? New
 Britain and India (Darjeeling dist.)
 —New Caledonia : Noumea
 —Gabon
 —New Hebrides
 —Micronesia : Kusaie
 —Seychelles : Silhouette
 —New Guinea
 —Congo Republic
 —Fiji
 —Congo Republic
 —Principe Island
 —Solomon Isls : Guadalcanal
 —Caroline Isls. : Palau
 —New Hebrides and Fiji
 —São Tombé Island
 —Fiji

Cheatospania Karsch, 1886(= *Sparatta* Verhoeff, 1902)*Paraspania* Steinmann, 1985. *Int. Quart. ent.* (Izmir), 1 (1) : 14 (Type-species : *Sparatta brunneri* Bormans, 1883)—Syn. n.

- | | |
|--|--|
| <i>C. abortiva</i> Rehn, 1949 | —Society Isls |
| <i>C. aculeata</i> (Bormans in Burr, 1903) | —Celebes |
| <i>C. adolescence</i> Steinmann, 1985 | —Fiji |
| <i>C. anamalaiensis</i> Srivastava, 1969 | —India (South) |
| <i>C. andersoni</i> Brindle, 1971 | —Sri Lanka |
| <i>C. arguata</i> Steinmann, 1988 | —India |
| <i>C. attenuata</i> Steinmann, 1988 | —New Guinea |
| <i>C. auchenormoides</i> Hincks, 1954 | —Indonesia : Sumba |
| <i>C. australiana</i> (Mjöberg, 1913) | —Australia |
| <i>C. australica</i> (Bormans, 1883) | —Australia |
| <i>C. bellator</i> Steinmann, 1984 | —Indonesia : Bali Isl |
| <i>C. bilobata</i> Borelli, 1932 | —Borneo and Malaysia |
| <i>C. bispinosa</i> Shiraki, 1928 | —Taiwan |
| <i>C. bormansi</i> Srivastava, 1981 | —Myanmar |
| <i>C. borneensis</i> (Dubrony, 1879) | —Oriental Region and Solomon Isls |
| <i>C. brunneri</i> (Bormans, 1883) | —Philippine to New Zealand |
| <i>C. capella</i> Burr, 1905 | —Madagascar |
| <i>C. castor</i> Steinmann, 1988 | —New Guinea |
| <i>C. celer</i> Steinmann, 1984 | —Thailand |
| <i>C. concitata</i> Steinmann, 1988 | —Zimbabwe-Rhodesia |
| <i>C. dexter</i> Steinmann, 1984 | —Celebes |
| <i>C. distincta</i> Brindle, 1975 | —Tanzania |
| <i>C. discors</i> (Steinmann, 1985) | —Australia : Melbourne |
| <i>C. fallax</i> (Bormans, 1894) | —India, Myanmar, China (Yunnan),
Laos, Philippine Isls (Luzon) |
| <i>C. feae</i> Bormans, 1894 | —India, Sri Lanka, China (Yunnan),
Philippine Isls, Indonesia (Sumatra, Java,
Lombok & Borneo), Myanmar, Laos
and Vietnam |
| <i>C. ferox</i> Steinmann, 1984 | —Bali |
| <i>C. feuerborni</i> Günther, 1934 | —Bali, Lombok and Java |
| <i>C. foliata</i> (Burr, 1911) | —Sri Lanka and Buru Isl. |

- C. fulvescens* Hincks, 1953
C. fulvochracea Borelli, 1923
C. fuscata Brindle, 1972
C. f. clavata Brindle, 1972
C. f. yapensis Brindle, 1972
C. glaciata Steinmann, 1988
C. gardineri (Burr, 1910)
C. gnathonica Brindle 1970
C. hoogstraali Srivastava, 1978
C. huxleyi Brindle, 1970
C. inflecta (Steinmann, 1985)
C. inornata Karsch, 1886
C. javana Borelli, 1926
C. keiseri Brindle 1969
C. kivuensis Brindle, 1973
C. kurseongae Hebard, 1923
C. lakhanmandiensis Kapoor, Bharadwaj and Banerjee, 1971
C. laminata Burr, 1905
C. lanceolata Borelli, 1926
C. luxor Steinmann, 1988
C. malaisi Hincks, 1947
C. mendax Borelli, 1926
C. meridionalis Brindle, 1973
C. mindanaensis Borelli, 1926
C. minuta Borelli, 1921
C. mjöbergi Brindle, 1971

C. nigriceps (Kirby, 1891)

C. nigrītula Brindle, 1972
C. nossibiana Chopard, 1951
C. ochracea Brindle, 1966
C. paederina (Gerstaecker, 1883)

C. parva Brindle, 1970
C. parvula Burr, 1900
- Madagascar
 —Philippine Isls : Mindanao and Palawan
 —Micronesia : Caroline Isls
 —Micronesia : Marina Isl., Guam
 —Micronesia : Caroline Isls., Yap
 —Tanzania
 —Seychelles : Silhouette
 —Solomon Isls
 —Philippine Isls : Mindanao
 —Solomon Isls
 —New Guinea
 —Madagascar
 —Java
 —Madagascar
 —Rwanda : Lake Kivu
 —India (Darjeeling Dist.)

 —India (Himalaya)
 —Java and New Guinea
 —Philippine Isls
 —India
 —Myanmar
 —Myanmar
 —Rhodesia
 —Philippine Isls : Mindanao
 —Malaysia, Borneo and Philippine Isls
 —Australia (Queensland), Solomon Isls and Fiji
 —Papua New Guinea and Solomon Isls :
 Malaita and Choiseul ; Myanmar and Celebes
 —Micronesia : Palau Isls
 —Madagascar
 —Madagascar
 —Mainly West Central Africa from Portugese
 Guinea eastwards to the Zaire and
 extending to Tanzania
 —Solomon Isls
 —Borneo

- | | |
|---|---|
| <i>C. pauliani</i> Hincks, 1954 | —From Ivory Coast to Zaire |
| <i>C. pentagonalis</i> Brindle, 1976 | —New Caledonia |
| <i>C. pittarelli</i> Borelli, 1906 | —Madagascar and Natal |
| <i>C. ponapensis</i> Brindle, 1972 | —Caroline Isls : Ponape |
| <i>C. pygmaea</i> Mjöberg, 1924 | —Australia : Queensland |
| <i>C. quadrata</i> (Burr, 1902) | —Peilippine Isls, Java, Sumatra and
New Guinea |
| <i>C. ridens</i> (Bormans, 1894) | —Myanmar |
| <i>C. rodens</i> Burr, 1907 | —East Africa |
| <i>C. shillongensis</i> Srivastava 1982 | —India (N. E.) |
| <i>C. silvestrii</i> Borelli, 1927 | —Vietnam, Laos, Myanmar and
China : Yunnan |
| <i>C. stella</i> Burr, 1902 | —New Guinea ; Indonesia : Sumatra,
Celebes ; Malaysia and Philippine Isls. |
| <i>C. stilletta</i> Burr, 1911 | —India (South) |
| <i>C. styligera</i> (Burr, 1911) | —Vietnam |
| <i>C. sumatrana</i> Borelli, 1927 | —Sumatra |
| <i>C. thlenemanni</i> Günther | —Java |
| <i>C. thoracica</i> (Dohrn, 1867) | —Oriental Region, New Guinea and
Seychelles |
| <i>C. tibialis</i> Hincks, 1953 | —Madagascar |
| <i>C. torpeo</i> (Steinmann, 1989) | —South Australia |
| <i>C. triangulata</i> (Burr, 1904) | —Madagascar |
| <i>C. ugandana</i> Borelli, 1909 | —Congo Republic and Uganda |
| <i>C. vansomeri</i> Brindle, 1969 | —Tanzania |
| <i>C. villica</i> (Burr, 1911) | —South Africa |
| <i>C. volcana</i> Burr, 1904 | —Madagascar |

Circolabia Steinmann, 1987

- Circolabia* Steinmann, 1987. *Acta zool. hung.*, 33 : 178 (Type-species : *Labia arcuata* Scudder, 1876).
Spirolabia Steinmann, 1987. *Acta zool. hung.*, 33 : 179 (Type-species : *Labia pilicornis* Motschulsky, 1853)—Syn. n.
Paralabella Steinmann, 1990. *Das Tierreich*, 106 : 470 (Type-species : *Forficula annulata* Fabricius, 1793)—Syn. n.

- | | |
|--------------------------------------|----------------------------|
| <i>C. alpha</i> (Steinmann, 1987) | —Celebes |
| <i>C. annulata</i> (Fabricius, 1793) | —Central and South America |
| <i>C. arcuata</i> (Scudder, 1876) | —Central and South America |

- C. biolleyi* (Borelli, 1906)
C. bituberculata (Brindle, 1970)

C. borellii (Burr, 1908)
C. browni (Hincks, 1954)
C. chopardi (Hebard, 1920)
C. cicero Steinmann, 1989
C. conspicua (Borelli, 1906)
C. curvicauda (Motschulsky, 1863)
C. dorsalis (Burmeister, 1838)
C. dubronyi (Hebard, 1922)
C. emarginata (Srivastava, 1978)
C. flavoguttata (Shiraki, 1908)
C. forceps (Burr, 1904)
C. fruehstorferi (Burr, 1897)

C. fulleri (Ramamurthi, 1964)
C. heliconia (Brindle, 1985)
C. kernyi (Borelli, 1926)
C. kermadecensis (Giles, 1973)
C. legoci (Fernando, 1957)
C. maeklini (Dohrn, 1864)
C. malgacha (Brindle, 1966)
C. murrayi (Kirby, 1900)
 (= *Labia indistincta* Kirby, 1900)
 (= *Labia inserta* Kirby, 1900)
C. oraedivitis (Borelli, 1909)
C. pandleburyi (Borelli, 1932)
C. pillicornis (Motschulsky, 1863)
 (= *Labia rogenhoferi* Bormans in Burr, 1903)
 (= *Labia rehni* Hebard, 1917)
C. profana Steinmann, 1990
C. pyropi (Borelli, 1912)
C. reniformes (Srivastava, 1979)
C. rotundiformes (Hincks, 1954)
C. sicaria (Burr, 1902)
C. solitaria (Steinmann, 1987)
C. stigma (Dohrn, 1867)
C. sutteri (Hincks, 1954)
- Costa Rica
—Solomon Isls ; San Cristobal
 and New Hebrides
—Philippine Isls
—Seychelles
—Guyanas and Venezuela
—Costa Rica
—Costa Rica
—Worldwide
—Neotropical Region
—Hawaii and Sumba
—Philippine Isls : Calamine Group
—Taiwan
—Madagascar
—Philippine Isls, Java, Celebes, Lombok
 and New Guinea
—India (Darjeeling dist.)
—Ecuador
—Sumatra and Java
—Kermadec Isls
—Sri Lanka
—Brazil
—Madagascar
—Christmas Isls

—Costa Rica
—Malaysia : Pahang
—Worldwide

—Brazil
—Myanmar
—Borneo
—Sri Lanka
—New Guinea and Solomon Isls
—Fiji
—Colombia and Venezuela
—Sumba

- C. termitophila* (Brindle, 1970) —Solomon Isls. : Guadalcanal
C. testor (Steinmann, 1981) —New Hebrides : Raunon

Labia Leach, 1815

Labia Leach, 1815. *Edinburgh Encycl.*, 9 : 118 (Type-species : *Forficula minor* L., 1758).
Copiscelis Fieber, 1853. *Lotos, Prague*, 3 : 275 (Type-species : *Forficula minor* L., 1758).

- L. fanta* Steinmann, 1990 —Vietnam
L. harpya Steinmann, 1990 —Vietnam
L. minor (L., 1758) —Worldwide
L. phanduwalensis Kapoor, Bharadwaj
and Banerjee, 1971 —India
L. pluto Steinmann, 1990 —Philippine Isls : Luzon

Sphingolabis Bormans, 1883

- S. hawaliensis* (Bormans, 1882) —Philippine Isls to New Guinea ; New
Hebrides, Sandwich Isls and Hawaii
S. latro Steinmann, 1989 —Fiji
S. novaguineae Boeseman, 1954 —New Guinea
S. prolongata Hincks, 1954 —Myanmar
S. semifulva (Bormans, 1884) —Philippine Isls ; Indonesia,
Sumatra and Java
S. tuberosa Brindle, 1970 —Solomon Isls : Guadalcanal

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SUMMARY

An outline of the classification of higher taxa of Spongiphoridae is provided along with a list of species. A key for the discrimination of various subfamilies is presented. A new subfamily, *Rudraxinae* is erected for the reception of a new genus and species, *Rudrax brindlei* from China. It is proposed to synonymise *Paraspania* Steinmann under *Chaetospania* Karsch and *Spirolabia* Steinmann and *Paralabella* Steinmann under *Circolabia* Steinmann. *Chaetospania* is transferred under Labiinae.

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Steinmann, H. 1990. Dermaptera Part III. Eudemaptera (I). *Das Tierreich*, **106** part : 1-XIII + 1-558 (Walter de Gruyter, Berlin-New York).
