

140<sup>me</sup> FASCICULE

ORTHOPTERA

# GENERA INSECTORUM

DIRIGÉS PAR

P. WYTSMAN

ORTHOPTERA

FAM. LOCUSTIDÆ

SUBFAM. EPHIPPIGERINÆ (= PYCNOGASTERINÆ)

by A. N. CAUDELL

WITH I COLOURED PLATE

1912

PRIX : FR. 5.00

En vente chez V. VERTENEUIL & L. DESMET, Imprimeurs-Éditeurs, 60-62, rue T'Kint, BRUXELLES.

Prospectus gratis et franco sur demande

Direction scientifique : M. P. WYTSMAN, Zoologiste, Quatre-Bras, TERVUEREN (Belgique).



# ORTHOPTERA

## FAM. LOCUSTIDÆ

SUBFAM. EPHIPPIGERINÆ (= PYCNOGASTERINÆ)



# ORTHOPTERA

## FAM. LOCUSTIDÆ

### SUBFAM. EPHIPPIGERINÆ (= PYCNOGASTERINÆ)

by A. N. CAUDELL

WITH I COLOURED PLATE



THE subfamily Ehippigerinæ is a moderate sized subfamily of the Locustidæ containing few genera but a goodly number of species. The insects composing this group are large heavy creatures, queer of appearance and of exceeding interest in as much as the females are provided with stridulating tympani, these organs being equally well developed in both sexes.

Belgium, in northern Europe, is the northern limit of distribution of this group of Orthoptera according to Dr. Burr. Southward they range over northern Africa, but they preponderate in the Iberian Peninsula according to the above authority, who also states that a few species are recorded from the Mediterranean Islands, Italy and the Balkan Peninsula.

The Ehippigerinæ are insects of slow motion and frequent shrubbery and bushy ground, where they are said to be seen with difficulty so well do they match in with surroundings. Both sexes often betray their presence by their stridulation, which occurs not only when the insects are undisturbed, but also when they are angry or excited. The females stridulate as freely as the males and when held in the hand either sex bites freely, proving very vicious little captives. In food habits they are probably omnivorous. Some species deposit their eggs in stems similar to *Æcanthus*. These insects mutilate each other if inclosed together and in nature probably eat other insects.

Dr. Doederlein. *Mittheil. Philomath. Ges. Elsass-Loth.* Vol. 3, p. 26-28, plate (1895), in writing of *Ehippigerita vitium*, says the females chirp when disturbed and states that the food is by choice dried vegetation, but when such is unavailable they will eat other material, and fruit, as grapes etc. He says they will also eat dead insects but not living ones, but will chew each other up if one gets badly wounded.

This subfamily is briefly characterized as follows :

Antennæ inserted between the lower edge of the eyes, nearer the clypeal suture than the top of the occiput. Prosternum unarmed or armed with a pair of spines; pronotum without spines or serrations, the disk flat or sellate, lateral carinæ present or absent. Both sexes winged, but the organs of flight are always short and, especially in the female, almost or quite concealed beneath the pronotum; tympanii well developed in both sexes. Tarsi depressed, the posterior ones with the third segment longer than the second; fore tibiæ furnished with conchate foramina and armed above with an apical spine on the outer side only; hind tibiæ with four apical spurs below and above without apical spines or with one on the inner side only; femora not strongly swollen basally. Ovipositor usually as long as, or longer than, the abdomen and curved more or less strongly upwards.

The first general review of this subfamily was by Bolivar in 1878, *Anal. Soc. Espan. Hist. Nat.* Vol. 7, p. 446. He gave tables of genera and species as then known. The same author twenty-five years later, *Ann. Mus. Zool. Univ. Napoli* (n. ser.), Vol. 1, p. 1, 2 (1903), enumerates the genera and points out that the sternum furnishes promising characters for classification. Recently Dr. Malcolm Burr, *Ent. Record*, Vol. 19, p. 237-239 (1907), gives a brief but able discussion of the subfamily with a table of genera and then follows with a treatment of the species found in western Europe.

Nine genera comprise this subfamily. They may be separated by the following table :

TABLE OF GENERA OF THE FAMILY EPHIPPIGERINÆ 1)

1. Pronotum flat above (with distinct persistent lateral carinæ); prosternum armed with a pair of spines . . . . .	1. Genus PYCNOGASTER, Graells.
— Pronotum sellate, the metazona in a different plane than that of the prozona; prosternum unarmed . . . . .	2.
2. Vertex inclined, with the fastium forming a tubercle, and generally sulcate longitudinally, contiguous beneath with a frontal tubercle, which is narrower than the first segment of the antennae . . . . .	3.
— Vertex vertical, with fastigium little prominent; no frontal tubercle; suture of the union with the vertex greater than the breadth of the first segment of the antennae . . . . .	6.
3. Pronotum with no lateral keels separating disc from side flaps, more or less cylindrical . . . . .	2. Genus EPHIPPIGERA, Latreille.
— Pronotum with lateral keels separating the disc from the side flaps. . . . .	4.
4. Supraanal plate of male not separated from the anal segment, which is produced between the cerci (ovipositor, in the European species, strongly curved upwards). . . . .	3. Genus UROMENUS, Bolivar.
— Supraanal plate of male more or less separated from the anal segment. (Ovipositor slightly curved) . . . . .	5.
5. Ventral segments entire, that is, represented by a smooth or lumpy central plate; supraanal plate of male joined to the anal segment, the point of union marked by a distinct furrow. Cerci of male conical or cylindrical and truncate obliquely at the extremity, with an inner tooth in the middle or apical half . . . . .	4. Genus STEROPLEURUS, Bolivar.
— Ventral segments represented, at least at the base of the abdomen, by	

1) After Burr, with slight modification.

- two callosities, placed one on each side of the median line, and near to each other. Supraanal plate of male placed below the anal segment. Cerci of male large, with the base broad and produced interiorly into a strong tooth, then slender, and longer than the supraanal plate, bent inwards, at the apex, which ends in a sharp point . . . . . 5. GENUS CALLICRANIA, Bolivar.
6. Side flaps of pronotum roundly inserted; pronotum with no lateral keels. . . . . 7.
- Side flaps of pronotum set at an angle; metazona with lateral keels . . . . . 6. GENUS PLATYSTOLUS, Bolivar.
7. Small, less than 30 mm. long in either sexe, exclusive of the ovipositor; color above black . . . . . 7. GENUS PRÆPHIPPIGERA, Bolivar.
- Large, over 40 mm. long in both sexes; green. . . . . 8. GENUS BÆTICA, Bolivar.
- Unplaced . . . . . 9. GENUS SYNEPHIPPUS, Navás.

## I. GENUS PYCNOGASTER, GRAELLS

**Pycnogaster.** Graells, Mem. Acad. Sc. Madrid (3), Vol. 1 (2), p. 155 (1851); Bolivar, Orth. Esp. Portug. p. 177 (1876); Brunner, Prodr. Eur. Orth. p. 403 (1882); Rev. Orth. p. 189 (1893); Navás, Bol. Soc. Esp. Hist. Nat. Vol. 2, p. 266 (1902); Kirby, Syn. Cat. Orth. Vol. 2, p. 173 (1906); Burr, Ent. Record, Vol. 20, p. 199 (1908).

**Bathyscapes.** Fieber, Lotos, Vol. 3, p. 188 (1853).

**Characters.** — General form stout and plump. Pronotum more or less flat above, not sellate, lateral carinae present, distinct and persistent; lateral lobes vertical, longer than high, the lower margins generally emarginate or concave; prosternum armed with a pair of spines. Elytra almost or quite concealed beneath the pronotum, especially in the female. Posterior femora short and weak, but slightly swollen at the base; hind tibiae with or without an apical spine in the inner side above, none on the outer side.

**Type.** — *Pycnogaster jugicola*, Graells.

**Geographical distribution of species.** — Europe, Africa.

1. *P. bolivari*, Brunner, Prodr. Europ. Orth. p. 403-404, pl. 10, f. 92 (1882). Spain.
2. *P. brevipes*, Navás, Act. Soc. Esp. p. 235 (1899). Spain.
3. *P. cucullatus*, Charpentier, Hor. Ent. p. 98 (1825) (*Barbitistes*). Spain, Portugal.
4. *P. finotii*, Bolivar, An. Soc. Esp. Hist. Nat. Vol. 10, p. 503, pl. 8, f. 1 (1881). Oran, Algeria, Spain.  
*gaditanus*, Bolivar, Ann. Sc. Nat. Porto, Vol. 6, p. 4 (1900).
5. *P. graellsii*, Bolivar, An. Soc. Esp. Hist. Nat. Vol. 2, p. 218, pl. 9, f. 2 Spain.  
(1873). — **Plate, Fig. 1. 2.**
6. *P. inermis*, Rambur, Faune Andal. Vol. 2, p. 57, pl. 4, f. 1, 2 (1839) Sierra Nevada, Spain.  
(*Bradyporus*).
7. *P. jugicola*, Graells, Mem. Acad. Sc. Madrid (3), Vol. 1 (2), p. 157, pl. 9, Spain, Portugal.  
f. 1-3 (1851).
8. *P. sanchez-gomezi* Bolivar, Act. Soc. Esp. Hist. Nat. p. 172 (1897). Ahmeria, Valenzia, Spain.

## 2. GENUS EPHIPPIGER, LATREILLE

**Ephippiger.** Latreille, Cuvier's Regne Anim. (new edit.), p. 184, footnote (1829); Serville, Ann. Sc. Nat. Vol. 22, p. 165 (1831); Bolivar, Anal. Soc. Esp. Hist. Nat. Vol. 7, p. 446 (1878); Saussure,



Rev. Suisse Zool. Vol. 5, p. 231 (1878); Kirby, Proc. Royal Dublin Soc. Vol. 6, p. 579 (1890); Syn. Cat. Orth. Vol. 2, p. 166 (1906); Burr, Ent. Rec. Vol. 19, p. 239 (1907).

**Ephippigerida.** Buysson, Bull. Mus. Hist. Nat. Paris, Vol. 9, p. 226 (1903); Kirby, Syn. Cat. Orth. Vol. 2, p. 166 (1906); Caudell, Ent. News Philad. Vol. 22, p. 166 (1911).

**Characters.** — Fastigium of the vertex compressed between the antennæ as a more or less elevated tubercle, usually concave above. Pronotum distinctly sellate, without lateral carinæ, the lateral lobes rounded; prosternum unarmed. Legs of various lengths but usually short, but little swollen basally; anterior tibiæ with an apical spine above on the outer side; hind tibiæ with an apical spine above on the inner side only. Elytra very short, being almost concealed beneath the pronotum.

**Type.** — *Gryllus ephippiger*, Fiebig.

**Geographical distribution of species.** — Europe, North Africa.

1. *E. andalusius*, Rambur, Faune Andal. Vol. 2, p. 49, pl. 3, f. 3-4 (1839) Spain, Portugal, North Africa.  
(*Ephippiger*).  
*scabricollis*, Rambur, Faune Andal. Vol. 2, p. 51 (1839).  
*var. levantina*, Bolivar, Bolet. Soc. Esp. Hist. Nat. Vol. 8, p. 332 (1908). Cartagena.
2. *E. areolaria*, Bolivar, Orth. Esp. p. 188, 210, pl. 5, f. 6 (1876) Spain.  
(*Ephippiger*).
3. *E. borellii*, Griffini, Boll. Mus. Torino, Vol. 8, n° 138, p. 1, f. 1 (1893) Italy.  
(*Ephippigera*).
4. *E. bormansi*, Brunner, Prodr. Eur. Orth. p. 373, 394 (1882) (*Ephippigera*). Italy, France.
5. *E. carinata*, Bolivar, Orth. Esp. p. 189, 212, pl. 5, f. 5 (1876) (*Ephippiger*). Spain.
6. *E. crucigera*, Fieber, Lotos, Vol. 3, p. 202 (1853) (*Ephippigera*). Sicily.
7. *E. cunii*, Bolivar, Orth. Esp. p. 188, 208, pl. 4, f. 12a-b (1876) France, Spain.  
(*Ephippiger*).
8. *E. diluta*, Bolivar, Anal. Soc. Esp. Hist. Nat. Vol. 7, p. 442, 447, Spain.  
pl. 4, f. 9, 9a (1878) (*Ephippiger*).  
*gracilis*, Brunner, Prodr. Eur. Orth. p. 370, 379 (1882) (*Ephippigera*).
9. *E. discoidalis*, Fieber, Lotos, Vol. 3, p. 203 (1853) (*Ephippigera*). Europe.  
*minor*, Krauss, Sitzungsab. Akad. Wiss. Wien. Vol. 68 (1), p. 520 (1879).  
*sphaeophila*, Krauss, ibidem, Vol. 68, p. 531, pl. 5, f. 2a-d (1879).  
*limbata*, Fischer, Orth. Eur. p. 216, pl. 10, f. 7 (1853) (*Ephippigera*).  
*selenophora*, Fieber, Lotos, Vol. 3, p. 204 (1853).  
*major*, Krauss, Sitzungsab. Akad. Wiss. Wien. Vol. 68 (1), p. 520 (1879).
10. *E. nigromarginata*, Lucas, Explor. Alg. Vol. 3, p. 19 (4), pl. 2, f. 5a-c Sicily, Algeria.  
(1849) (*Ephippigera*).  
*dorsalis*, Fieber, Lotos, Vol. 3, p. 202 (1853) (*Ephippigera*).
11. *E. elegans*, Fischer, Orth. Eur. p. 219, pl. 10, f. 13a-d (1853) Italy.  
(*Ephippigera*).
12. *E. ephippiger*, Fiebig, Schrift. Berl. Ges. Nat. Freunde. Vol. 5, p. 263, France, Holland, Germany,  
pl. 4, f. 6-8 (1784) (*Gryllus*). Belgium, Switzerland,  
*silvicola*, Azam, Misc. Ent. Vol. 6, p. 198 (1901). Austria, Italy, Hungary,  
*rituum*, Serville, Ann. Sc. Nat. Vol. 22, p. 165 (1831). Spain, Bulgaria, etc.  
*fiebigii*, Fieber, Lotos, Vol. 3, p. 203 (1853).  
*fabricii*, Fieber, Lotos, Vol. 3, p. 203 (1853).  
*var. mogantiaca*, Schuster, Jahrb. Nassau. Nat. Vol. 59, p. 153 (1906). Mayence.
13. *E. hispanica*, Fieber, Lotos, Vol. 3, p. 202 (1853). Spain.
14. *E. latipennis*, Fischer, Orth. Eur. p. 215 note, pl. 10, f. 5-5a (1853). Algeria.
15. *E. longicauda*, Bolivar, Anal. Soc. Esp. Hist. Nat. Vol. 2, p. 220, pl. 9, Spain.  
f. 3 (1873) — **Plate, Figs 3, 4.**
16. *E. ornata*, Schmidt, Haidinger, Ber. Mitth. Freund. Nat. Wien, Vol. 6, Carniola.  
p. 184 (1850).
17. *E. pantingana*, Navas, Bol. Soc. Aragon. Sc. Nat. Vol. 3, p. 191 (1904). Spain.



18. *E. paulinoi*, Bolivar, Orth. Esp. p. 189, 215, pl. 5, f. 3a-b (1876). Granada.  
 19. *E. perforata*, Rossi, Fauna Etrusca, Vol. 1, p. 267, pl. 8, f. 3-4 (1790) Italy.  
     (*Locusta*).  
     *rossii*, Fieber, Lotos, Vol. 3, p. 202 (1853).  
 20. *E. provincialis*, Yersin, Bull. Soc. Vaud. Vol. 4, p. 65, pl. 1, f. 9-15 (1856). France.  
 21. *E. saussureanus*, Bolivar, Anal. Soc. Esp. Hist. Nat. Vol. 7, p. 442, 447 Spain.  
     pl. 4, f. 8 (1878).  
 22. *E. taeniata*, Saussure, Rev. Suisse Zool. Vol. 5, p. 238 (1898). Morocco.  
 23. *E. terrestris*, Yersin, Bull. Soc. Vaud. Vol. 4, p. 63, pl. 1, f. 1-8 (1856). Provence, Piedmont.  
     *minor*, Azam, Bull. Soc. Sc. Litt. Basses-Alpes, Vol. 6, p. 219 (1893).  
 24. *E. verticalis*, Fieber, Lotos, Vol. 3, p. 201 (1853). Sicily.  
 25. *E. zabaterii*, Bolivar, Orth. Esp. p. 188-206, pl. 5, f. 7 (1876). Aragon.  
 26. *E. selleri*, Fischer, Orth. Eur. p. 220, pl. 10, f. 15-a-d (1853). Rome.

NOTE. — Burr, Ent. Record, Vol. 20, p. 113 (1908), mentions *Ephippiger politus* as a species unknown to him. He attributes the name to Navás and gives the date as 1899. I can not find that such a species was ever described by Navás and I do not know to what Dr. Burr referred. (Later Rev. Navás writes me that this refers to *Steropleurus polita*, Bolivar.)

### 3. GENUS UROMENUS, BOLIVAR

**Uromenus.** Bolivar, Anal. Soc. Esp. Hist. Nat. Vol. 7, p. 446 (1878); Buysson, Bull. Hist. Nat. Paris, Vol. 9, p. 225 (1903); Kirby, Syn. Cat. Orth. Vol. 2, p. 161 (1906).

**Stenopleurus.** Saussure, Rev. Suisse Zool. Vol. 5, p. 231 (1898).

**Characters.** — Fastigium of the vertex as in *Ephippiger*. Pronotum sellate, but provided with more or less distinct lateral carinæ, at least posteriorly; prosternum unarmed. Both fore and hind tibiæ furnished with an apical spine above. Supraanal plate of the ♂ not separated from the anal segment. Ovipositor curved upwards, usually quite strongly so.

**Type.** — *Ephippiger rugosicollis*, Serville.

**Geographical distribution of species.** — Europe, Africa.

1. *U. agareus*, Brunner von Wattenwyl, Prodr. Europ. Orth. p. 370, 377 Ceuta.  
(1882) (*Ephippigera*).
2. *U. compressicollis*, Fischer, Orth. Eur. p. 215, pl. 10, f. 6 (1853) Algeria.  
(*Ephippigera*).  
    *transfuga*, Brunner von Wattenwyl, Prodr. Europ. Orth. p. 372, 389  
    (1882) (*Ephippigera*).
3. *U. confusus*, Finot, Ann. Soc. Ent. Fr. Vol. 65, p. 539, 542 (1897) France, Algeria.  
(*Ephippigera*).
4. *U. costaticollis*, Lucas, Explor. Alger. Vol. 3, p. 17, Orth. pl. 2, f. 3. Algeria.  
(1849) (*Ephippigera*). — **Plate, Fig. 5.**
5. *U. finoti*, Brunner von Wattenwyl, Prodr. Eur. Orth. p. 370, 376 Algeria.  
(1882) (*Ephippigera*).
6. *U. hastatus*, Saussure, Rev. Suisse Zool. Vol. 5, p. 807 (1898) (*Ephip-* Morocco.  
*igera*).
7. *U. innocentii*, Finot & Bonnett, Rev. Montpell. (3), Vol. 4, p. 345, Tunis.  
pl. 16, f. 8-13 (1885) (*Ephippiger*).  
    *var. lobata*, Saussure, Rev. Suisse Zool. Vol. 5, p. 236 (1898) (*Ephippigera*). Algeria.
8. *U. laticollis*, Lucas, Explor. Alger. Vol. 3, p. 18, Orth. pl. 2, f. 4 (1849) Algeria.  
(*Ephippigera*).
9. *U. maroccanus*, Saussure, Rev. Suisse Zool. Vol. 5, p. 235 (1898) Morocco.  
(*Ephippigera*).

10. *U. mauretanicus*, Saussure, Rev. Suisse Zool. Vol. 5, p. 233 (1898) Morocco.  
(*Ephippigera*).
11. *U. poncyi*, Bolivar, Bull. Soc. Ent. Fr. p. 222 (1902) (*Ephippigera* Morocco, Atlas.  
[*Uromenus*]).
12. *U. rhombifer*, Bolivar, Bol. Soc. Esp. Hist. Nat. Vol. 8, p. 330 (1908). Marruecos.
13. *U. rugosicollis*, Serville, Ins. Orth. p. 475 (1839) (*Ephippigera*). France, Spain, Corsica,  
*durieui*, Bolivar, Orth. Esp. p. 187, 203, 300, pl. 4, f. 10 (1876) (*Ephippigera*). Sardinia, Alger.  
*vespertina*, Dufour, Rech. Anat. Phys. Orth. p. 347, pl. f. 36 (1841)  
(*Ephippigera*).
14. *U. vosseleri*, Krauss, Jahr. Ver. Württemb. Vol. 49, p. 96 (1893) Algeria.  
(*Ephippigera*).
15. *U. vaucherianus*, Saussure, Rev. Suisse Zool. Vol. 5, p. 232 (1898) Morocco.  
(*Ephippigera*).

#### 4. GENUS STEROPLEURUS, BOLIVAR

**Steropleurus.** Bolivar, Anal. Soc. Esp. Hist. Nat. Vol. 7, p. 449 (1878); Kirby, Syn. Cat. Orth. Vol. 2, p. 163 (1906); Burr, Ent. Record, Vol. 20, p. 58 (1908).

**Characters.** — In general structure agreeing with *Uromenus* but is separable from that genus by the supraanal plate of the ♂ being more or less separated from the anal segment and the ovipositor is not usually so strongly curved upwards. The ventral segments of the abdomen are entire and the cerci of the ♂ are conical or cylindrical with an inner tooth at the middle or in the basal half.

**Type.** — *Ephippigera brunneri*, Bolivar.

**Geographical distribution of species.** — Europe, Africa.

1. *S. algericus*, Brunner, Prodr. Eur. Orth. p. 371, 382 (1882) (*Ephippigera*). Algeria.
2. *S. annae*, Targioni-Tozzetti, Bull. Soc. Ent. Ital. Vol. 13, p. 181 (1881) Sardinia.  
(*Ephippigera*).  
*coronata*, Costa, Atti Accad. Nap. (2), Vol. 1 (9), p. 50 (1884) (*Ephippigera*).
3. *S. antennatus*, Brunner, Prodr. Eur. Orth. p. 371, 383 (1882) (*Ephippigera*). Algeria.
4. *S. asturiensis*, Bolivar, Ann. Sc. Nat. Porto, Vol. 5, p. 140, 144 (1898) Asturias.  
(*Ephippigera*).
5. *S. balearica*, Bolivar, C. R. Soc. Ent. Belg. Vol. 28, p. 106 (1884) Majorca.  
(*Ephippigera*).
6. *S. brevicollis*, Fischer, Orth. Eur. p. 219 note, pl. 10, f. 12, 12a (1853) Algeria?  
(*Ephippigera*).
7. *S. brunneri*, Bolivar, Orth. Esp. p. 186, 190, pl. 4, f. 4, 4a (1876) Spain.  
(*Ephippigera*).
8. *S. castellanus*, Bolivar, Anal. Soc. Esp. Hist. Nat. Vol. 7, p. 444, 450, Burgos.  
pl. 4, f. 11 (1878) (*Ephippigera*).
9. *S. catalaunicus*, Bolivar, Ann. Sc. Nat. Porto, Vol. 5, p. 140, 143 (1898) Catalonia.  
(*Ephippigera*).
10. *S. cavannae*, Targioni-Tozzetti, Bull. Soc. Ent. Ital. Vol. 13, p. 181 Calabria.  
(1881) (*Ephippigera*).
11. *S. flavovittatus*, Bolivar, Anal. Soc. Esp. Hist. Nat. Vol. 7, p. 445, 450 ?  
(1878) (*Ephippigera*).
12. *S. inenarmis*, Buysson, Bull. Hist. Nat. Paris, Vol. 9, p. 225 (1903) Algeria.  
*Nomen nudum, undiscrbed.*
13. *S. lucasi*, Brunner, Prodr. Eur. Orth. p. 372, 386 (1882) (*Ephippigera*). Algeria.
14. *S. martorellii*, Bolivar, Anal. Soc. Esp. Hist. Nat. Vol. 7, p. 444, 450, Spain.  
pl. 4, f. 12 (1878) (*Ephippigera*).  
*var. angulata*, Bolivar, Bolet. Soc. Esp. Hist. Nat. Vol. 8, p. 332 (1908). Molinicos.

15. *S. nerii*, Vosseler, Zool. Jahrb. Syst. Vol. 16, p. 398, pl. 18, f. 7, 8 N. Africa.  
(1902) (*Ephippigera*).
16. *S. nobrei*, Bolivar, Ann. Sc. Nat. Porto, Vol. 5, p. 141, 145 (1898) Spain, Portugal.  
(*Ephippigera*).
17. *S. obsoletus*, Bolivar, ibidem, Vol. 5, p. 143, 148 (1898) (*Ephippigera*). Spain.
18. *S. ortegai*, Pantel, Anal. Soc. Esp. Hist. Nat. Vol. 25, p. 72 (1896) Spain.  
(*Ephippigera*).
19. *S. panteli*, Navás, Act. Soc. Esp. Hist. Nat. p. 46, 176 (1899) (*Ephippigera*). Tarragona.
20. *S. perezii*, Bolivar, Orth. Esp. p. 187, 200, pl. 4, f. 9 (1876) (*Ephippigera*). Spain.  
— Plate, Fig. 6.
21. *S. polita*, Bolivar, Bolet. Soc. Esp. Hist. Nat. Vol. 1, p. 335 (1901). Spain.
22. *S. pseudolus*, Bolivar, Anal. Soc. Esp. Hist. Nat. Vol. 7, p. 445, 450 Spain.  
(1878) (*Ephippiger*) (*Steropleurus*).
23. *S. siculus*, Fieber, Lotos, Vol. 3, p. 201 (1853) (*Ephippigera*). Sicily.  
*idomenaei*, Lucas, Rev. Zool. (2), Vol. 6, p. 165, pl. 2, f. 1 (1854) (*Ephippigera*).  
*maculatis*, Yersin, Ann. Soc. Ent. Fr. (3), Vol. 8, p. 517, pl. 10, f. 3-6 (1860)  
(*Ephippigera*).
24. *S. staeli*, Bolivar, Orth. Esp. p. 187, 202, pl. 4, f. 11 (1876) (*Ephippiger*). Spain.

## 5. GENUS CALLICRANIA, BOLIVAR

**Callicrania.** Bolivar, Ann. Sc. Nat. Porto, Vol. 5, p. 134 (1898); Azam, Misc. Ent. Vol. 9, p. 110 (1901); Kirby, Syn. Cat. Orth. Vol. 2, p. 171 (1906); Burr, Ent. Record. Vol. 20, p. 196 (1908).

**Lamprogaster.** Bolivar, Anal. Soc. Esp. Hist. Nat. Vol. 7, p. 451 (1878); Kirby, Syn. Cat. Orth. Vol. 7, p. 171 (1906).

**Characters.** — Fastigium of the vertex more or less lubercular. Pronotum sellate, the lateral carinæ more or less well developed, at least towards the posterior portion; prosternum unarmed. Fore and middle tibiæ with an apical spine above, at least on one side. Ventral segments of the abdomen, at least the basal ones, represented by two callosities, one on each side of the median line and near to each other. Supraanal plate of the ♂ placed below the anal segment; cerci of ♂ large with the base broad and produced interiorly into a strong tooth, then slenderer and longer than the supraanal plate, sharp and bent inward apically. Subanal plate of ♀ furnished at the base with two oblique keels and bent inwards, forming a depression on each side, the rest membranous.

**Type.** — *Ephippiger* (*Steropleurus*) *ramburii*, Bolivar.

**Geographical distribution of species.** — Europe, Africa.

1. *C. bolivari*, Seoane, C. R. Soc. Ent. Belg. Vol. 21, p. 71 (1878) (*Ephippiger*). Spain.
2. *C. miegii*, Bolivar, Anal. Soc. Esp. Hist. Nat. Vol. 2, p. 224, pl. 9, f. 5 Spain, Portugal.  
(1872) (*Ephippigera*): Kirby, Syn. Cat. Orth. Vol. 2, p. 172 (1906)  
(*Callicrania*).
3. *C. pellucida*, Bolivar, Le Naturaliste, Vol. 7, p. 116 (1885) (*Ephippigera*). Western Europe, Portugal,  
Spain, North Africa.
4. *C. selliger*, Charpentier, Hor. Ent. p. 99 (1825) (*Barbitistes*). Spain, Portugal.
5. *C. seoanei*, Bolivar, Orth. Esp. p. 187, 197, pl. 4, f. 7a-b (1876) Spain, Portugal.  
(*Ephippiger*). — Plate, Figs. 7, 8.  
*laeta*, Navás, Bol. Soc. Esp. Hist. Nat. Vol. 2, p. 333 (1903) (*Ephippigera*);  
Kirby, Syn. Cat. Orth. Vol. 2, p. 171 (1906).
6. *C. monticola*, Serville, Ins. Orth. p. 476 (1839) (*Ephippiger*). Spain.  
*ramburii*, Bolivar, Anal. Soc. Esp. Hist. Nat. Vol. 7, p. 443, 449, pl. 4,  
f. 19, 19a (1878) (*Ephippiger* [*Steropleurus*]).
7. *C. serrata*, Bolivar, Le Naturaliste, Vol. 7, p. 117 (1885) (*Ephippigera*). Spain, Portugal.

## 6. GENUS PLATYSTOLUS, BOLIVAR

**Platystolus.** Bolivar, Anal. Soc. Esp. Hist. Nat. Vol. 7, p. 450 (1878); Brunner, Prodr. Eur. Orth. p. 399 (1882); Navás, Bol. Soc. Aragon. Scienc. Nat. Vol. 3, p. 197 (1904); Notas Zool. Vol. 9, p. 5 (1905); Kirby, Syn. Cat. Orth. Vol. 2, p. 173 (1906).

**Characters.** — Fastigium of the vertex scarcely tubercular and no tubercle situated below it as common in most the foregoing genera. Pronotum sellate, lateral carinae present posteriorly, the lateral lobes declivate; prosternum unarmed. Posterior tibiae with an apical spine above.

**Type.** — *Ephippiger surcularius*, Bolivar.

**Geographical distribution of species.** — Europe.

1. *P. martinezii*, Bolivar, Anal. Soc. Esp. Hist. Nat. Vol. 2, p. 222, pl. 9, Spain. f. 4 (1873) (*Ephippigera*).
2. *P. surcularius*, Bolivar, Orth. Esp. p. 186, 198, pl. 5, f. 9a-b (1876) Spain, Portugal. (*Ephippiger*). — Plate, Fig. 9.

## 7. GENUS PRÆPHIPPIGERIDA, BUYSSON

**Præphippigeraida.** Buysson, Bull. Mus. Paris, Vol. 9, p. 227 (1903); Kirby, Syn. Cat. Orth. Vol. 2, p. 172 (1906).

**Præphippigera.** Bolivar, Ann. Mus. Zool. Univ. Napoli (n. ser.), Vol. 1, p. 1 (1903). — *Nomencludum*, no species included.

**Characters.** — This genus is similar to *Platystolus* but for the pronotum, which is without lateral carinae. The pronotum is elevated anteriorly and keeled mesially behind. The lateral lobes of the pronotum are sinuate on the lower border. The ovipositor is slightly incurved. The single species belonging here is a very large plump insect of a green or yellowish color.

**Type.** — *Ephippigera pachygaster*, Lucas.

**Geographical distribution of species.** — Africa, Europe (Sardinia).

1. *P. pachygaster*, Lucas, Expl. Alg. Vol. 3, p. 15 (4); Orth. pl. 2, f. 2 Algeria, Tunis (Sardinia). (1849) (*Ephippigera*). — Plate, Fig. 10.  
*laemeister*, Fieber, Lotos, Vol. 3, p. 201-1853 *Ephippigera*.  
*audryanus*, Bonnet & Finot, Bull. Soc. Ent. Fr. 61, Vol. 4, p. 27 1884 (*Ephippiger*).

## 8. GENUS BÆTICA, BUYSSON

**Baetica.** Buysson, Bull. Mus. Paris, Vol. 9, p. 227 (1903).

**Platephippius.** Navás, Bol. Soc. Aragon, Sc. Nat. Vol. 3, p. 197 (1904).

**Characters.** — Structurally very close to the previous genus but the single species comprising it may be easily separated from the single species of *Præphippigeraida* by the much smaller size and the color of the entire upper surface, which is black with light tinge on hinder part of the pronotum. The legs are not black.

**Type.** — *Ephippiger ustulata*, Rambur.

**Geographical distribution of species.** — Andalusia.

1. *B. ustulata*, Rambur, Faune Andal. Vol. 2, p. 52, pl. 4, f. 3, 4 (1839) Andalusia. (*Ephippiger*); Brunner, Prodr. Eur. Orth. pp. 399, 401 (1882) (*Platystolus*); Buysson, Bol. Mus. Paris, Vol. 9, p. 227 (1903) (*Baetica*); Syn. Cat. Orth. Vol. 2, p. 172 (1906); Burr, Ent. Record, Vol. 20, p. 198 (1908). — Plate, Fig. 11.

**9. GENUS SYNEPHIPIUS, NAVÁS**

**Synephippius.** Navás, Notas Zool. Vol. 9, p. 4, 5 (1905).

**Characters.** — Original after Navás. « Fronte inter antennas tuberculo transverso minuto, a tuberculo verticis deplanato, medio impresso, sejuncto. Pronoto carinis lateralibus distinctis in prozona et metazona; metazona disco fornicato, medio haud carinato. Segmento anali in ♂ postice elongato in duos lobulos, medio longitudinaliter impresso, laminam supraanalem bilobatam fere occultante; cercis externe acuminatis, dente acuto ante apicem interne instructis. Lamina subgenitalis in ♀ postice medio emarginata, lateribus sulco obliquo distincta. Femoribus posterioribus subtus spinulis paucis instructis. Cetera ut in genere antiquo *Platystolus* ».

**Type.** — *Platystolus obvius*, Navás.

**Geographical distribution of species.** — Spain.

1. *S. obvius*, Navás, Bol. Soc. Aragon Scienc. Nat. Vol. 3, p. 196 (1904) Spain. (*Platystolus*).

## INDEX

	Pages		Pages		Pages
agareus, Brunn. ( <i>g. Uromenus</i> )	5	brunneri, Bol. ( <i>g. Steropleurus</i> )	6	elegans, Fisch. ( <i>g. Ephippiger</i> )	4
algericus, Brunn. ( <i>g. Steropleurus</i> )	6	<b>Callicrana</b> (gen.), Bol.	7	<b>Ephippiger</b> (gen.), Latr.	3
andalusius, Ramb. ( <i>g. Ephippiger</i> )	4	carinata, Bol. ( <i>g. Ephippiger</i> )	4	ephippiger, Fieb. ( <i>g. Ephippiger</i> )	4
angulata, Bol. ( <i>g. Steropleurus</i> )	6	castellanus, Bol. ( <i>g. Steropleurus</i> )	6	<b>Ephippigerida</b> (gen.), Buys.	4
annae, Targ.-Tozz. ( <i>g. Steropleurus</i> )	6	catalaunicus, Bol. ( <i>g. Steropleurus</i> )	6	<b>EPHIPPIGERINÆ</b> (Subfam.)	1
antennatus, Brunn. ( <i>g. Steropleurus</i> )	6	cavannae, Targ.-Tozz. ( <i>g. Steropleurus</i> )	6	<i>fabricii</i> , Fieb. ( <i>g. Ephippiger</i> )	4
areolaria, Bol. ( <i>g. Ephippiger</i> )	4	compressicollis, Fisch. ( <i>g. Uromenus</i> )	5	<i>fhigii</i> , Fieb. ( <i>g. Ephippiger</i> )	4
asturiensis, Bol. ( <i>g. Steropleurus</i> )	6	confusus, Fin. ( <i>g. Uromenus</i> )	5	finoti, Brunn. ( <i>g. Uromenus</i> )	5
<b>Baetica</b> (gen.), Buys.	8	<i>coronata</i> , Costa ( <i>g. Steropleurus</i> )	6	finotii, Bol. ( <i>g. Pycnogaster</i> )	3
balearica, Bol. ( <i>g. Steropleurus</i> )	6	costaticollis, Luc. ( <i>g. Uromenus</i> )	5	flavovittatus, Bol. ( <i>g. Steropleurus</i> )	6
<b>Bathyscapes</b> (gen.), Fieb.	3	crucigera, Fieb. ( <i>g. Ephippiger</i> )	4	<i>gaditanus</i> , Bol. ( <i>g. Pycnogaster</i> )	3
bolivari, Seoane ( <i>g. Callicrana</i> )	7	cucullatus, Charp. ( <i>g. Pycnogaster</i> )	3	<i>gracilis</i> , Brun. ( <i>g. Ephippiger</i> )	4
bolivari, Brunn. ( <i>g. Pycnogaster</i> )	3	cunii, Bol. ( <i>g. Ephippiger</i> )	4	graellsii, Bol. ( <i>g. Pycnogaster</i> )	
borellii, Griff. ( <i>g. Ephippiger</i> )	4	diluta, Bol. ( <i>g. Ephippiger</i> )	4	hastatus, Sauss. ( <i>g. Uromenus</i> )	5
bormansi, Brunn. ( <i>g. Ephippiger</i> )	4	discoïdalis, Fieb. ( <i>g. Ephippiger</i> )	4	hispanica, Fieb. ( <i>g. Ephippiger</i> )	4
brevicollis, Fisch. ( <i>g. Steropleurus</i> )	6	<i>dorsalis</i> , Fieb. ( <i>g. Ephippiger</i> )	4	<i>idomenaei</i> , Luc. ( <i>g. Steropleurus</i> )	7
brevipes, Nav. ( <i>g. Pycnogaster</i> )	3	<i>durieui</i> , Bol. ( <i>g. Uromenus</i> )	6		
burmeisteri, Fieb. ( <i>g. Praephippigerida</i> )	8				

	Pages		Pages		Pages
<i>inenarmis</i> , Buys. ( <i>g. Steropleura</i> )	6	<i>obsoletus</i> , Bol. ( <i>g. Steropleurus</i> )	7	<i>sanchez-gomezi</i> , Bol. ( <i>g. Pycnogaster</i> )	3
<i>inermis</i> , Ramb. ( <i>g. Pycnogaster</i> )	3	<i>obvious</i> , Nav. ( <i>g. Synephippius</i> )	9	<i>surcularius</i> , Bol. ( <i>g. Platystolus</i> )	8
<i>innocentii</i> , Fin. & Bon. ( <i>g. Uromenus</i> )	5	<i>ornata</i> , Schmidt ( <i>g. Ephippiger</i> )	4	<i>saussureanus</i> , Bol. ( <i>g. Ephippiger</i> )	5
<i>jugicola</i> , Graells ( <i>g. Pycnogaster</i> )	3	<i>ortegai</i> , Pant. ( <i>g. Steropleurus</i> )	7	<i>scabricollis</i> , Ramb. ( <i>g. Ephippiger</i> )	4
<i>laeta</i> , Nav. ( <i>g. Callicrana</i> )	7	<i>oudryanus</i> , Bonn. & Fin. ( <i>g. Praehippigerida</i> )	8	<i>selenophora</i> , Fieb. ( <i>g. Ephippiger</i> )	4
<b>Lamprogaster</b> (gen.), Bol.	7	<i>pachygaster</i> , Luc. ( <i>g. Praehippigerida</i> )	8	<i>selliger</i> , Charp. ( <i>g. Callicrana</i> )	7
<i>laticollis</i> , Luc. ( <i>g. Uromenus</i> )	5	<i>panteli</i> , Nav. ( <i>g. Steropleura</i> )	7	<i>seoanei</i> , Bol. ( <i>g. Callicrana</i> )	7
<i>latipennis</i> , Fisch. ( <i>g. Ephippiger</i> )	4	<i>pantingana</i> , Nav. ( <i>g. Ephippiger</i> )	7	<i>serrata</i> , Bol. ( <i>g. Callicrana</i> )	7
<i>levantina</i> , Bol. ( <i>g. Ephippiger</i> )	4	<i>paulinoi</i> , Bol. ( <i>g. Ephippiger</i> )	4	<i>siculus</i> , Fieb. ( <i>g. Steropleurus</i> )	7
<i>lumbata</i> , Fisch. ( <i>g. Ephippiger</i> )	4	<i>pellucida</i> , Bol. ( <i>g. Callicrana</i> )	7	<i>silvicola</i> , Az. ( <i>g. Ephippiger</i> )	4
<i>lobata</i> , Sauss. ( <i>g. Uromenus</i> )	5	<i>perezii</i> , Bol. ( <i>g. Steropleura</i> )	7	<i>sphaeophila</i> , Krauss ( <i>g. Ephippiger</i> )	4
<i>longicauda</i> , Bol. ( <i>g. Ephippiger</i> )	4	<i>perforata</i> , Ross. ( <i>g. Ephippiger</i> )	5	<i>staeli</i> , Bol. ( <i>g. Steropleurus</i> )	7
<i>lucasi</i> , Brun. ( <i>g. Steropleura</i> )	6	<b>Platehippius</b> (gen.), Nav.	8	<b>Stenopleurus</b> (gen.), Sauss.	5
<i>maculatis</i> , Yers. ( <i>g. Steropleurus</i> )	7	<b>Platystolus</b> (gen.), Bol.	8	<b>Steropleurus</b> (gen.), Bol.	6
<i>major</i> , Krauss ( <i>g. Ephippiger</i> )	4	<i>polita</i> , Bol. ( <i>g. Steropleura</i> )	7	<b>Synephippius</b> (gen.), Nav.	9
<i>maroccanus</i> , Sauss. ( <i>g. Uromenus</i> )	5	<i>politus</i> , Nav. ( <i>g. Ephippiger</i> )	5	<i>tæniata</i> , Sauss. ( <i>g. Ephippiger</i> )	5
<i>martinezii</i> , Bol. ( <i>g. Platystolus</i> )	8	<i>poncyi</i> , Bol. ( <i>g. Uromenus</i> )	6	<i>terrestris</i> , Yers. ( <i>g. Ephippiger</i> )	5
<i>martorellii</i> , Bol. ( <i>g. Steropleurus</i> )	6	<b>Praehippiger</b> (gen.), Bol.	8	<i>transfuga</i> , Brunn. ( <i>g. Uromenus</i> )	5
<i>mauretanicus</i> , Sauss. ( <i>g. Uromenus</i> )	6	<b>Praehippigerida</b> (gen.), Buys	8	<b>Uromenus</b> (gen.), Bol.	5
<i>miegii</i> , Bol. ( <i>g. Callicrana</i> )	7	<i>provincialis</i> , Yers. ( <i>g. Ephippiger</i> )	5	<i>ustulata</i> , Ramb. ( <i>g. Baetica</i> )	9
<i>minor</i> , Azam ( <i>g. Ephippiger</i> )	5	<i>pseudolus</i> , Bol. ( <i>g. Steropleura</i> )	7	<i>vaucherianus</i> , Sauss. ( <i>g. Uromenus</i> )	6
<i>minor</i> , Krauss ( <i>g. Ephippiger</i> )	4	<b>Pycnogaster</b> (gen.), Graells.	3	<i>verticalis</i> , Fieb. ( <i>g. Ephippiger</i> )	5
<i>moguntiaca</i> , Schust. ( <i>g. Ephippiger</i> )	4	<b>PYCNOGASTERINÆ</b> (Subfam.)	1	<i>vespertina</i> , Duf. ( <i>g. Uromenus</i> )	6
<i>monticola</i> , Serv. ( <i>g. Callicrana</i> )	7	<i>ramburi</i> , Bol. ( <i>g. Callicrana</i> )	7	<i>vittium</i> , Serv. ( <i>g. Ephippiger</i> )	1, 4
<i>nerii</i> , Voss. ( <i>g. Steropleurus</i> )	7	<i>rhombifer</i> , Bol. ( <i>g. Uromenus</i> )	6	<i>vösseleri</i> , Krauss ( <i>g. Uromenus</i> )	6
<i>nigromarginata</i> , Luc. ( <i>g. Ephippiger</i> )	4	<i>rossii</i> , Fieb. ( <i>g. Ephippiger</i> )	5	<i>zapaterii</i> , Bol. ( <i>g. Ephippiger</i> )	5
<i>nobrei</i> , Bol. ( <i>g. Steropleurus</i> )	7	<i>rugosicollis</i> , Bol. ( <i>g. Uromenus</i> )	6	<i>zelleri</i> , Fisch. ( <i>g. Ephippiger</i> )	5

## EXPLANATION OF PLATE

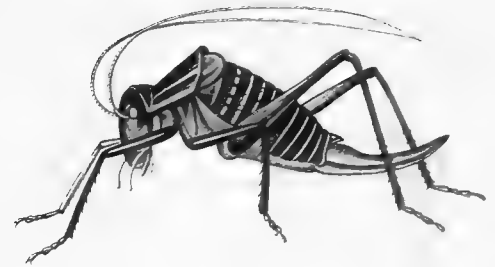
- Fig. 1 *Pycnogaster graellsii*, Bolivar (♂, pronotum, side view), after Bolivar.  
 2. — — — — (♂, pronotum, top view), after Bolivar.  
 3. *Ephippiger longicauda*, Bolivar (♀, side view), after Bolivar.  
 4. — — — — (♂, end of abdomen from above), after Bolivar.  
 5. *Uromenus costaticollis*, Lucas (♂, side view), after Lucas.  
 6. *Steropleurus perezii*, Bolivar (♀, side view), after Bolivar.  
 7. *Callicrania seoanei*, Bolivar (♂, end of abdomen from above), after Bolivar.  
 8. — — — — (♀, ovipositor from the side), after Bolivar.  
 9. *Platystolus surcularius*, Bolivar (♂, tip of abdomen from above), after Bolivar.  
 10. *Praehippigerida pachygaster*, Lucas (♂, side view), after Lucas.  
 11. *Baetica ustulata*, Rambur (♂, original).

11



*Baetis ustulata* Rambur.

6



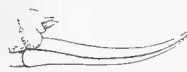
*Steropleurus perezii* Bolivar.

7



*Callicrania seoanei* Bol.  
End of abdomen from above.

8



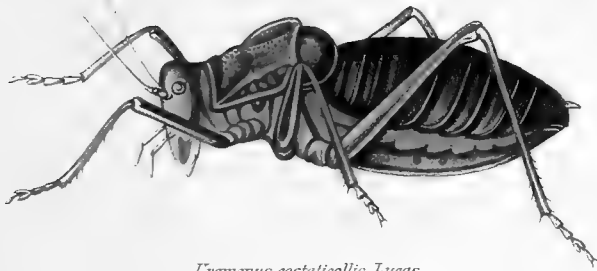
*Callicrania seoanei* Bol. ovipositor

9



*Platystolus surcularius* Bol.  
tip of abdomen from above.

5



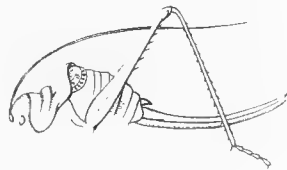
*Trimenus costalicolis* Lucas

10



*Praehippigerida pachygaster* Lucas.

3



*Ephippiger longicauda* Bolivar.

2



*Pycnogaster graellsii* Bol.  
pronotum, side view.

1



*Pycnogaster graellsii* Bol.  
pronotum, side view.

4



*Ephippiger longicauda* Bol.  
End of abdomen from above.

FAM. LOCUSTIDÆ

SUBFAM. EPHIPPIGERINÆ









# GENERA INSECTORUM

DIRIGÉS PAR

P. WYTSMAN

ORTHOPTERA

FAM. LOCUSTIDÆ

SUBFAM. EPHIPPIGERINÆ (= PYCNOGASTERINÆ)

by A. N. CAUDELL

WITH I COLOURED PLATE

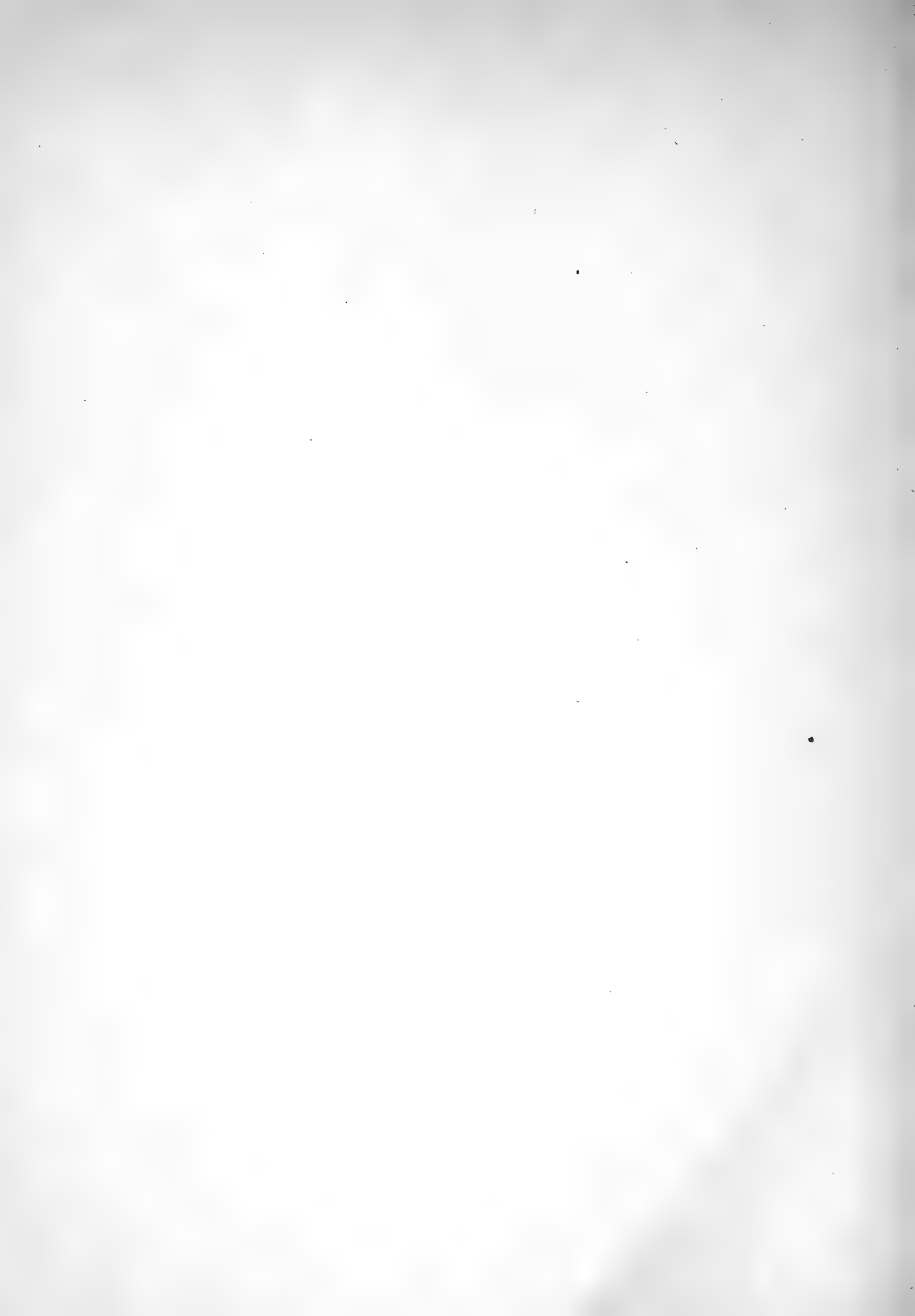
1912

PRIX : FR. 5.00

En vente chez V. VERTENEUIL & L. DESMET, Imprimeurs-Éditeurs, 60-62, rue T'Kint, BRUXELLES.

Prospectus gratis et franco sur demande

Direction scientifique : M. P. WYTSMAN, Zoologiste, Quatre-Bras, TERVUEREN (Belgique).



# ORTHOPTERA

## FAM. LOCUSTIDÆ

SUBFAM. EPHIPPIGERINÆ (= PYCNOGASTERINÆ)





# ORTHOPTERA

## FAM. LOCUSTIDÆ

### SUBFAM. EPHIPPIGERINÆ (= PYCNOGASTERINÆ)

by A. N. CAUDELL

WITH I COLOURED PLATE



THE subfamily Ephippigerinæ is a moderate sized subfamily of the Locustidæ containing few genera but a goodly number of species. The insects composing this group are large heavy creatures, queer of appearance and of exceeding interest in as much as the females are provided with stridulating tympani, these organs being equally well developed in both sexes.

Belgium, in northern Europe, is the northern limit of distribution of this group of Orthoptera according to Dr. Burr. Southward they range over northern Africa, but they preponderate in the Iberian Peninsula according to the above authority, who also states that a few species are recorded from the Mediterranean Islands, Italy and the Balkan Peninsula.

The Ephippigerinæ are insects of slow motion and frequent shrubbery and bushy ground, where they are said to be seen with difficulty so well do they match in with surroundings. Both sexes often betray their presence by their stridulation, which occurs not only when the insects are undisturbed, but also when they are angry or excited. The females stridulate as freely as the males and when held in the hand either sex bites freely, proving very vicious little captives. In food habits they are probably omnivorous. Some species deposit their eggs in stems similar to *Æcanthus*. These insects mutilate each other if inclosed together and in nature probably eat other insects.

Dr. Doederlein, *Mittheil. Philomath. Ges. Elsass-Loth.* Vol. 3, p. 26-28, plate (1895), in writing of *Ephippigera vitium*, says the females chirp when disturbed and states that the food is by choice dried vegetation, but when such is unavailable they will eat other material, and fruit, as grapes etc. He says they will also eat dead insects but not living ones, but will chew each other up if one gets badly wounded.

This subfamily is briefly characterized as follows :

Antennæ inserted between the lower edge of the eyes, nearer the clypeal suture than the top of the occiput. Prosternum unarmed or armed with a pair of spines; pronotum without spines or serrations, the disk flat or sellate, lateral carinæ present or absent. Both sexes winged, but the organs of flight are always short and, especially in the female, almost or quite concealed beneath the pronotum; tympanii well developed in both sexes. Tarsi depressed, the posterior ones with the third segment longer than the second; fore tibiæ furnished with conchate foramina and armed above with an apical spine on the outer side only; hind tibiæ with four apical spurs below and above without apical spines or with one on the inner side only; femora not strongly swollen basally. Ovipositor usually as long as, or longer than, the abdomen and curved more or less strongly upwards.

The first general review of this subfamily was by Bolivar in 1878, *Anal. Soc. Espan. Hist. Nat.* Vol. 7, p. 446. He gave tables of genera and species as then known. The same author twenty-five years later, *Ann. Mus. Zool. Univ. Napoli* (n. ser.), Vol. 1, p. 1, 2 (1903), enumerates the genera and points out that the sternum furnishes promising characters for classification. Recently Dr. Malcolm Burr, *Ent. Record*, Vol. 19, p. 237-239 (1907), gives a brief but able discussion of the subfamily with a table of genera and then follows with a treatment of the species found in western Europe.

Nine genera comprise this subfamily. They may be separated by the following table :

TABLE OF GENERA OF THE FAMILY EPHIPPIGERINÆ 1)

1. Pronotum flat above (with distinct persistent lateral carinæ); prosternum armed with a pair of spines . . . . .	1. GENUS PYCNOGASTER, Graells.
— Pronotum sellate, the metazona in a different plane than that of the prozona; prosternum unarmed . . . . .	2.
2. Vertex inclined, with the fastium forming a tubercle, and generally sulcate longitudinally, contiguous beneath with a frontal tubercle, which is narrower than the first segment of the antennæ . . . . .	3.
— Vertex vertical, with fastigium little prominent; no frontal tubercle; suture of the union with the vertex greater than the breadth of the first segment of the antennæ . . . . .	6.
3. Pronotum with no lateral keels separating disc from side flaps, more or less cylindrical . . . . .	2. GENUS EPHIPPIGERA, Latreille.
— Pronotum with lateral keels separating the disc from the side flaps. . . . .	4.
4. Supraanal plate of male not separated from the anal segment, which is produced between the cerci (ovipositor, in the European species, strongly curved upwards). . . . .	3. GENUS UROMENUS, Bolivar.
— Supraanal plate of male more or less separated from the anal segment. (Ovipositor slightly curved) . . . . .	5.
5. Ventral segments entire, that is, represented by a smooth or lumpy central plate; supraanal plate of male joined to the anal segment, the point of union marked by a distinct furrow. Cerci of male conical or cylindrical and truncate obliquely at the extremity, with an inner tooth in the middle or apical half . . . . .	4. GENUS STEROPLEURUS, Bolivar
— Ventral segments represented, at least at the base of the abdomen, by	

1) After Burr, with slight modification.

- two callosities, placed one on each side of the median line, and near to each other. Supraanal plate of male placed below the anal segment. Cerci of male large, with the base broad and produced interiorly into a strong tooth, then slender, and longer than the supraanal plate, bent inwards, at the apex, which ends in a sharp point . . . . . 5. GENUS CALLICRANIA, Bolivar.
6. Side flaps of pronotum roundly inserted; pronotum with no lateral keels. . . . . 7.
- Side flaps of pronotum set at an angle; metazona with lateral keels . . . . . 6. GENUS PLATYSTOLUS, Bolivar.
7. Small, less than 30 mm. long in either sexe, exclusive of the ovipositor; color above black . . . . . 7. GENUS PRÆPHIPPIGERA, Bolivar.
- Large, over 40 mm. long in both sexes; green. . . . . 8. GENUS BÆTICA, Bolivar.
- Unplaced . . . . . 9. GENUS SYNEPHIPPUS, Navás.

## I. GENUS PYCNOGASTER, GRAELLS

**Pycnogaster.** Graells, Mem. Acad. Sc. Madrid (3), Vol. 1 (2), p. 155 (1851); Bolivar, Orth. Esp. Portug. p. 177 (1876); Brunner, Prodr. Eur. Orth. p. 403 (1882); Rev. Orth. p. 189 (1893); Navás, Bol. Soc. Esp. Hist. Nat. Vol. 2, p. 266 (1902); Kirby, Syn. Cat. Orth. Vol. 2, p. 173 (1906); Burr. Ent. Record, Vol. 20, p. 199 (1908).

**Bathyscapes.** Fieber, Lotos, Vol. 3, p. 188 (1853).

**Characters.** — General form stout and plump. Pronotum more or less flat above, not sellate, lateral carinæ present, distinct and persistent; lateral lobes vertical, longer than high, the lower margins generally emarginate or concave; prosternum armed with a pair of spines. Elytra almost or quite concealed beneath the pronotum, especially in the female. Posterior femora short and weak, but slightly swollen at the base; hind tibiæ with or without an apical spine in the inner side above, none on the outer side.

**Type.** — *Pycnogaster jugicola*, Graells.

**Geographical distribution of species.** — Europe, Africa.

1. *P. bolivari*, Brunner, Prodr. Europ. Orth. p. 403-404, pl. 10, f. 92 (1882). Spain.
2. *P. brevipes*, Navás, Act. Soc. Esp. p. 235 (1899). Spain.
3. *P. cucullatus*, Charpentier, Hor. Ent. p. 98 (1825) (*Barbitistes*). Spain, Portugal.
4. *P. finotii*, Bolivar, An. Soc. Esp. Hist. Nat. Vol. 10, p. 503, pl. 8, f. 1 (1881). Oran, Algeria, Spain.  
*gaditanus*, Bolivar, Ann. Sc. Nat. Porto, Vol. 6, p. 4 (1900).
5. *P. graellsii*, Bolivar, An. Soc. Esp. Hist. Nat. Vol. 2, p. 218, pl. 9, f. 2 (1873) — **Plate, Fig. 1. 2.** Spain.
6. *P. inermis*, Rambur, Faune Andal. Vol. 2, p. 57, pl. 4, f. 1, 2 (1839) Sierra Nevada, Spain.  
(*Bradyporus*).
7. *P. jugicola*, Graells, Mem. Acad. Sc. Madrid (3), Vol. 1 (2), p. 157, pl. 9, f. 1-3 (1851). Spain, Portugal.
8. *P. sanchez-gomezi* Bolivar, Act. Soc. Esp. Hist. Nat. p. 172 (1897). Ahmeria, Valenzia, Spain.

## 2. GENUS EPHIPPIGER, LATREILLE

**Ephippiger.** Latreille, Cuvier's Regne Anim. (new edit.), p. 184, footnote (1829); Serville, Ann. Sc. Nat. Vol. 22, p. 165 (1831); Bolivar, Anal. Soc. Esp. Hist. Nat. Vol. 7, p. 446 (1878); Saussure,

Rev. Suisse Zool. Vol. 5, p. 231 (1878); Kirby, Proc. Royal Dublin Soc. Vol. 6, p. 579 (1890); Syn. Cat. Orth. Vol. 2, p. 166 (1906); Burr, Ent. Rec. Vol. 19, p. 239 (1907).

**Ephippigerida.** Buysson, Bull. Mus. Hist. Nat. Paris, Vol. 9, p. 226 (1903); Kirby, Syn. Cat. Orth. Vol. 2, p. 166 (1906); Caudell, Ent. News Philad. Vol. 22, p. 166 (1911).

**Characters.** — Fastigium of the vertex compressed between the antennæ as a more or less elevated tubercle, usually concave above. Pronotum distinctly sellate, without lateral carinæ, the lateral lobes rounded; prosternum unarmed. Legs of various lengths but usually short, but little swollen basally; anterior tibiæ with an apical spine above on the outer side; hind tibiæ with an apical spine above on the inner side only. Elytra very short, being almost concealed beneath the pronotum.

**Type.** — *Gryllus ephippiger*, Fiebig.

**Geographical distribution of species.** — Europe, North Africa.

1. *E. andalusius*, Rambur, Faune Andal. Vol. 2, p. 49, pl. 3, f. 3-4 (1839) Spain, Portugal, North Africa.  
(*Ephippiger*).  
*scabricollis*, Rambur, Faune Andal. Vol. 2, p. 51 (1839).  
*var. levantina*, Bolivar, Bolet. Soc. Esp. Hist. Nat. Vol. 8, p. 332 (1908). Cartagena.
2. *E. areolaria*, Bolivar, Orth. Esp. p. 188, 210, pl. 5, f. 6 (1876) Spain.  
(*Ephippiger*).
3. *E. borellii*, Griffini, Boll. Mus. Torino, Vol. 8, n° 138, p. 1, f. 1 (1893) Italy.  
(*Ephippigera*).
4. *E. bormansi*, Brunner, Prodr. Eur. Orth. p. 373, 394 (1882) (*Ephippigera*). Italy, France.
5. *E. carinata*, Bolivar, Orth. Esp. p. 189, 212, pl. 5, f. 5 (1876) (*Ephippiger*). Spain.
6. *E. crucigera*, Fieber, Lotos, Vol. 3, p. 202 (1853) (*Ephippigera*). Sicily.
7. *E. cunii*, Bolivar, Orth. Esp. p. 188, 208, pl. 4, f. 12a-b (1876) France, Spain.  
(*Ephippiger*).
8. *E. diluta*, Bolivar, Anal. Soc. Esp. Hist. Nat. Vol. 7, p. 442, 447, pl. 4, f. 9, 9a (1878) (*Ephippiger*). Spain.  
*gracilis*, Brunner, Prodr. Eur. Orth. p. 370, 379 (1882). *Ephippigera*.
9. *E. discoidalis*, Fieber, Lotos, Vol. 3, p. 203 (1853) (*Ephippigera*). Europe.  
*minor*, Krauss, Sitzungsab. Akad. Wiss. Wien, Vol. 68 (11), p. 520 (1870).  
*sphaecolula*, Krauss, ibidem, Vol. 68, p. 531, pl. 5, f. 2a-d (1870).  
*limbata*, Fischer, Orth. Eur. p. 216, pl. 10, f. 7 (1853) (*Ephippigera*).  
*selenophora*, Fieber, Lotos, Vol. 3, p. 204 (1853).  
*major*, Krauss, Sitzungsab. Akad. Wiss. Wien, Vol. 68 (11), p. 520 (1870).
10. *E. nigromarginata*, Lucas, Explor. Alg. Vol. 3, p. 19 (4), pl. 2, f. 5a-c (1849) (*Ephippigera*). Sicily, Algeria.  
*dorsalis*, Fieber, Lotos, Vol. 3, p. 202 (1853) (*Ephippigera*).
11. *E. elegans*, Fischer, Orth. Eur. p. 219, pl. 10, f. 13a-d (1853) Italy.  
(*Ephippigera*).
12. *E. ephippiger*, Fiebig, Schrift. Berl. Ges. Nat. Freunde, Vol. 5, p. 203, pl. 4, f. 6-8 (1784) (*Gryllus*). France, Holland, Germany, Belgium, Switzerland, Austria, Italy, Hungary, Spain, Bulgaria, etc.  
*silvicola*, Azam, Misc. Ent. Vol. 4, p. 108 (1811).  
*nitum*, Serville, Ann. Sc. Nat. Vol. 22, p. 105 (1831).  
*fibigeri*, Fieber, Lotos, Vol. 3, p. 203 (1853).  
*fabricii*, Fieber, Lotos, Vol. 3, p. 203 (1853).  
*var. mequiniaca*, Schuster, Jahrb. Nassau. Nat. Vol. 50, p. 153 (1901). Mayence.
13. *E. hispanica*, Fieber, Lotos, Vol. 3, p. 202 (1853). Spain.
14. *E. latipennis*, Fischer, Orth. Eur. p. 215 note, pl. 10, f. 5-5a (1853). Algeria.
15. *E. longicauda*, Bolivar, Anal. Soc. Esp. Hist. Nat. Vol. 2, p. 220, pl. 9, f. 3 (1873) — **Plate, Figs 3, 4.** Spain.
16. *E. ornata*, Schmidt, Haidinger, Ber. Mitth. Freund. Nat. Wien, Vol. 6, p. 184 (1850). Carniola.
17. *E. pantingana*, Navas, Bol. Soc. Aragon. Sc. Nat. Vol. 3, p. 191 (1904). Spain.

18. *E. paulinoi*, Bolivar, Orth. Esp. p. 189, 215, pl. 5, f. 3a-b (1876). Granada.  
 19. *E. perforata*, Rossi, Fauna Etrusca, Vol. 1, p. 267, pl. 8, f. 3-4 (1790) Italy.  
     (*Locusta*).  
     *rossii*, Fieber, Lotos, Vol. 3, p. 202 (1853).  
 20. *E. provincialis*, Yersin, Bull. Soc. Vaud. Vol. 4, p. 65, pl. 1, f. 9-15 (1856). France.  
 21. *E. saussureanus*, Bolivar, Anal. Soc. Esp. Hist. Nat. Vol. 7, p. 442, 447 Spain.  
     pl. 4, f. 8 (1878).  
 22. *E. taeniata*, Saussure, Rev. Suisse Zool. Vol. 5, p. 238 (1898). Morocco.  
 23. *E. terrestris*, Yersin, Bull. Soc. Vaud. Vol. 4, p. 63, pl. 1, f. 1-8 (1856). Provence, Piedmont.  
     *minor*, Azam, Bull. Soc. Sc. Litt. Basses-Alpes, Vol. 6, p. 219 (1893).  
 24. *E. verticalis*, Fieber, Lotos, Vol. 3, p. 201 (1853). Sicily.  
 25. *E. zabaterii*, Bolivar, Orth. Esp. p. 188-206, pl. 5, f. 7 (1876). Aragon.  
 26. *E. selleri*, Fischer, Orth. Eur. p. 220, pl. 10, f. 15-a-d (1853). Rome.

NOTE. — Burr, Ent. Record, Vol. 20, p. 113 (1908), mentions *Ephippiger politus* as a species unknown to him. He attributes the name to Navás and gives the date as 1899. I can not find that such a species was ever described by Navás and I do not know to what Dr. Burr referred. (Later Rev. Navás writes me that this refers to *Steropleurus polita*, Bolivar.)

### 3. GENUS UROMENUS, BOLIVAR

**Uromenus.** Bolivar, Anal. Soc. Esp. Hist. Nat. Vol. 7, p. 446 (1878); Buysson, Bull. Hist. Nat. Paris, Vol. 9, p. 225 (1903); Kirby, Syn. Cat. Orth. Vol. 2, p. 161 (1906).

**Stenopleurus.** Saussure, Rev. Suisse Zool. Vol. 5, p. 231 (1898).

**Characters.** — Fastigium of the vertex as in *Ephippiger*. Pronotum sellate, but provided with more or less distinct lateral carinæ, at least posteriorly; prosternum unarmed. Both fore and hind tibiæ furnished with an apical spine above. Supraanal plate of the ♂ not separated from the anal segment. Ovipositor curved upwards, usually quite strongly so.

**Type.** — *Ephippiger rugosicollis*, Serville.

**Geographical distribution of species.** — Europe, Africa.

1. *U. agavenus*, Brunner von Wattenwyl, Prodr. Europ. Orth. p. 370, 377 Ceuta.  
(1882) (*Ephippigera*).
2. *U. compressicollis*, Fischer, Orth. Eur. p. 215, pl. 10, f. 6 (1853) Algeria.  
(*Ephippigera*).  
*transjuga*, Brunner von Wattenwyl, Prodr. Europ. Orth. p. 372, 389  
(1882) (*Ephippigera*).
3. *U. confusus*, Finot, Ann. Soc. Ent. Fr. Vol. 65, p. 539, 542 (1897) France, Algeria.  
(*Ephippigera*).
4. *U. costaticollis*, Lucas, Explor. Alger. Vol. 3, p. 17, Orth. pl. 2, f. 3 Algeria.  
(1849) (*Ephippigera*). — **Plate, Fig. 5.**
5. *U. finoti*, Brunner von Wattenwyl, Prodr. Eur. Orth. p. 370, 376 Algeria.  
(1882) (*Ephippigera*).
6. *U. hastatus*, Saussure, Rev. Suisse Zool. Vol. 5, p. 807 (1898) (*Ephippigera*). Morocco.
7. *U. innocentii*, Finot & Bonnett, Rev. Montpellier. (3), Vol. 4, p. 345, Tunisia.  
pl. 16, f. 8-13 (1885) (*Ephippiger*).  
*var. lobata*, Saussure, Rev. Suisse Zool. Vol. 5, p. 236 (1898) (*Ephippigera*). Algeria.
8. *U. laticollis*, Lucas, Explor. Alger. Vol. 3, p. 18, Orth. pl. 2, f. 4 (1849) Algeria.  
(*Ephippigera*).
9. *U. maroccanus*, Saussure, Rev. Suisse Zool. Vol. 5, p. 235 (1898) Morocco.  
(*Ephippigera*).

10. *U. mauretanicus*, Saussure, Rev. Suisse Zool. Vol. 5, p. 233 (1898) Morocco.  
(*Ephippigera*).
11. *U. poncyi*, Bolivar, Bull. Soc. Ent. Fr. p. 222 (1902) (*Ephippigera* Morocco, Atlas.  
[*Uromenus*]).
12. *U. rhombifer*, Bolivar, Bol. Soc. Esp. Hist. Nat. Vol. 8, p. 330 (1908). Marruecos.
13. *U. rugosicollis*, Serville, Ins. Orth. p. 475 (1839) (*Ephippigera*). France, Spain, Corsica,  
*duvieni*, Bolivar, Orth. Esp. p. 187, 203, 300, pl. 4, f. 10 (1876) (*Ephippigera*). Sardinia, Alger.  
*vespertina*, Dufour, Rech. Anat. Phys. Orth. p. 347, pl. f. 36 (1841)  
(*Ephippigera*).
14. *U. vosseleri*, Krauss, Jahr. Ver. Württemb. Vol. 49, p. 96 (1893) Algeria.  
(*Ephippigera*).
15. *U. vaucherianus*, Saussure, Rev. Suisse Zool. Vol. 5, p. 232 (1898) Morocco.  
(*Ephippigera*).

#### 4. GENUS STEROPLEURUS, BOLIVAR

**Steropleurus.** Bolivar, Anal. Soc. Esp. Hist. Nat. Vol. 7, p. 449 (1878); Kirby, Syn. Cat. Orth. Vol. 2, p. 163 (1906); Burr, Ent. Record, Vol. 20, p. 58 (1908).

**Characters.** — In general structure agreeing with *Uromenus* but is separable from that genus by the supraanal plate of the ♂ being more or less separated from the anal segment and the ovipositor is not usually so strongly curved upwards. The ventral segments of the abdomen are entire and the cerci of the ♂ are conical or cylindrical with an inner tooth at the middle or in the basal half.

**Type.** — *Ephippigera brunneri*, Bolivar.

**Geographical distribution of species.** — Europe, Africa.

1. *S. algericus*, Brunner, Prodr. Eur. Orth. p. 371, 382 (1882) (*Ephippigera*). Algeria.
2. *S. annae*, Targioni-Tozzetti, Bull. Soc. Ent. Ital. Vol. 13, p. 181 (1881) Sardinia.  
(*Ephippigera*).  
*coronata*, Costa, Atti Accad. Nap. (2), Vol. 19, p. 50 (1884) (*Ephippigera*).
3. *S. antennatus*, Brunner, Prodr. Eur. Orth. p. 371, 383 (1882) (*Ephippigera*). Algeria.
4. *S. asturiensis*, Bolivar, Ann. Sc. Nat. Porto, Vol. 5, p. 140, 144 (1898) Asturias.  
(*Ephippigera*).
5. *S. balearica*, Bolivar, C. R. Soc. Ent. Belg. Vol. 28, p. 106 (1884) Majorca.  
(*Ephippigera*).
6. *S. brevicollis*, Fischer, Orth. Eur. p. 210 note, pl. 10, f. 12, 12a (1853) Algeria?  
(*Ephippigera*).
7. *S. brunneri*, Bolivar, Orth. Esp. p. 186, 190, pl. 4, f. 4, 4a (1876) Spain.  
(*Ephippigera*).
8. *S. castellanus*, Bolivar, Anal. Soc. Esp. Hist. Nat. Vol. 7, p. 444, 450, Burgos.  
pl. 4, f. 11 (1878) (*Ephippigera*).
9. *S. catalaunicus*, Bolivar, Ann. Sc. Nat. Porto, Vol. 5, p. 140, 143 (1898) Catalonia.  
(*Ephippigera*).
10. *S. cavannae*, Targioni-Tozzetti, Bull. Soc. Ent. Ital. Vol. 13, p. 181 Calabria.  
(1881) (*Ephippigera*).
11. *S. flavovittatus*, Bolivar, Anal. Soc. Esp. Hist. Nat. Vol. 7, p. 445, 450 ?  
(1878) (*Ephippigera*).
12. *S. inenarmis*, Buysson, Bull. Hist. Nat. Paris, Vol. 9, p. 225 (1903) Algeria.  
*Nomen nudum, undiscibed.*
13. *S. lucasi*, Brunner, Prodr. Eur. Orth. p. 372, 386 (1882) (*Ephippigera*). Algeria.
14. *S. martorellii*, Bolivar, Anal. Soc. Esp. Hist. Nat. Vol. 7, p. 444, 450, Spain.  
pl. 4, f. 12 (1878) (*Ephippigera*).  
*var. angulata*, Bolivar, Bolet. Soc. Esp. Hist. Nat. Vol. 8, p. 332 (1908). Molinicos.

15. *S. nerii*, Vosseler, Zool. Jahrb. Syst. Vol. 16, p. 398, pl. 18, f. 7, 8 N. Africa.  
(1902) (*Ephippigera*).
16. *S. nobrei*, Bolivar, Ann. Sc. Nat. Porto, Vol. 5, p. 141, 145 (1898) Spain, Portugal.  
(*Ephippigera*).
17. *S. obsoletus*, Bolivar, ibidem, Vol. 5, p. 143, 148 (1898) (*Ephippigera*). Spain.
18. *S. ortegai*, Pantel, Anal. Soc. Esp. Hist. Nat. Vol. 25, p. 72 (1896) Spain.  
(*Ephippigera*).
19. *S. panteli*, Navás, Act. Soc. Esp. Hist. Nat. p. 46, 176 (1899) (*Ephippigera*). Tarragona.
20. *S. perezii*, Bolivar, Orth. Esp. p. 187, 200, pl. 4, f. 9 (1876) (*Ephippigera*). Spain.  
— Plate, Fig. 6.
21. *S. polita*, Bolivar, Bolet. Soc. Esp. Hist. Nat. Vol. 1, p. 335 (1901). Spain.
22. *S. pseudolus*, Bolivar, Anal. Soc. Esp. Hist. Nat. Vol. 7, p. 445, 450 Spain.  
(1878) (*Ephippiger*) (*Steropleurus*).
23. *S. siculus*, Fieber, Lotos, Vol. 3, p. 201 (1853) (*Ephippigera*). Sicily.  
*idomenaei*, Lucas, Rev. Zool. (2), Vol. 6, p. 165, pl. 2, f. 1 (1854) (*Ephippigera*).  
*maculatis*, Yersin, Ann. Soc. Ent. Fr. (3), Vol. 8, p. 517, pl. 10, f. 3-6 (1860)  
(*Ephippigera*).
24. *S. staeli*, Bolivar, Orth. Esp. p. 187, 202, pl. 4, f. 11 (1876) (*Ephippiger*). Spain.

## 5. GENUS CALLICRANIA, BOLIVAR

**Callicrania.** Bolivar, Ann. Sc. Nat. Porto, Vol. 5, p. 134 (1898); Azam, Misc. Ent. Vol. 9, p. 110 (1901); Kirby, Syn. Cat. Orth. Vol. 2, p. 171 (1906); Burr, Ent. Record, Vol. 20, p. 196 (1908).

**Lamprogaster.** Bolivar, Anal. Soc. Esp. Hist. Nat. Vol. 7, p. 451 (1878); Kirby, Syn. Cat. Orth. Vol. 7, p. 171 (1906).

**Characters.** — Fastigium of the vertex more or less lubercular. Pronotum sellate, the lateral carinae more or less well developed, at least towards the posterior portion; prosternum unarmed. Fore and middle tibiae with an apical spine above, at least on one side. Ventral segments of the abdomen, at least the basal ones, represented by two callosities, one on each side of the median line and near to each other. Supraanal plate of the ♂ placed below the anal segment; cerci of ♂ large with the base broad and produced interiorly into a strong tooth, then slenderer and longer than the supraanal plate, sharp and bent inward apically. Subanal plate of ♀ furnished at the base with two oblique keels and bent inwards, forming a depression on each side, the rest membraneous.

**Type.** — *Ephippiger* (*Steropleurus*) *ramburii*, Bolivar.

**Geographical distribution of species.** — Europe, Africa.

1. *C. bolivari*, Seoane, C. R. Soc. Ent. Belg. Vol. 21, p. 71 (1878) (*Ephippiger*). Spain.
2. *C. miegii*, Bolivar, Anal. Soc. Esp. Hist. Nat. Vol. 2, p. 224, pl. 9, f. 5 Spain, Portugal.  
(1872) (*Ephippigera*); Kirby, Syn. Cat. Orth. Vol. 2, p. 172 (1906)  
(*Callicrania*).
3. *C. pellucida*, Bolivar, Le Naturaliste, Vol. 7, p. 116 (1885) (*Ephippigera*). Western Europe, Portugal,  
Spain, North Africa.
4. *C. selliger*, Charpentier, Hor. Ent. p. 99 (1825) (*Barbitistes*). Spain, Portugal.
5. *C. seoanei*, Bolivar, Orth. Esp. p. 187, 197, pl. 4, f. 7a-b (1876) Spain, Portugal.  
(*Ephippiger*). — Plate, Figs. 7, 8.  
*laeta*, Navás, Bol. Soc. Esp. Hist. Nat. Vol. 2, p. 333 (1903) (*Ephippigera*);  
Kirby, Syn. Cat. Orth. Vol. 2, p. 171 (1906).
6. *C. monticola*, Serville, Ins. Orth. p. 476 (1839) (*Ephippiger*). Spain.  
*ramburi*, Bolivar, Anal. Soc. Esp. Hist. Nat. Vol. 7, p. 443, 449, pl. 4,  
f. 19, 19a (1878) (*Ephippiger* [*Steropleurus*]).
7. *C. serrata*, Bolivar, Le Naturaliste, Vol. 7, p. 117 (1885) (*Ephippigera*). Spain, Portugal.



## 6. GENUS PLATYSTOLUS, BOLIVAR

**Platystolus.** Bolivar, Anal. Soc. Esp. Hist. Nat. Vol. 7, p. 450 (1878); Brunner, Prodr. Eur. Orth. p. 399 (1882); Navás, Bol. Soc. Aragon. Scienc. Nat. Vol. 3, p. 197 (1904); Notas Zool. Vol. 9, p. 5 (1905); Kirby, Syn. Cat. Orth. Vol. 2, p. 173 (1906).

**Characters.** — Fastigium of the vertex scarcely tubercular and no tubercle situated below it as common in most the foregoing genera. Pronotum sellate, lateral carinae present posteriorly, the lateral lobes declivate; prosternum unarmed. Posterior tibiae with an apical spine above.

**Type.** — *Ephippiger surcularius*, Bolivar.

**Geographical distribution of species.** — Europe.

1. *P. martinezii*, Bolivar, Anal. Soc. Esp. Hist. Nat. Vol. 2, p. 222, pl. 9, Spain, f. 4 (1873) (*Ephippigera*).
2. *P. surcularius*, Bolivar, Orth. Esp. p. 186, 198, pl. 5, f. 9a-b (1876) Spain, Portugal. (*Ephippiger*). — Plate, Fig. 9.

## 7. GENUS PRÆPHIPPIGERIDA, BUYSSON

**Præphippigerida.** Buysson, Bull. Mus. Paris, Vol. 9, p. 227 (1903); Kirby, Syn. Cat. Orth. Vol. 2, p. 172 (1906).

**Præphippigera.** Bolivar, Ann. Mus. Zool. Univ. Napoli (n. ser.), Vol. 1, p. 1 (1903). — *Nomem nudum*, no species included.

**Characters.** — This genus is similar to *Platystolus* but for the pronotum, which is without lateral carinae. The pronotum is elevated anteriorly and keeled mesially behind. The lateral lobes of the pronotum are sinuate on the lower border. The ovipositor is slightly incurved. The single species belonging here is a very large plump insect of a green or yellowish color.

**Type.** — *Ephippigera pachygaster*, Lucas.

**Geographical distribution of species.** — Africa, Europe (Sardinia).

1. *P. pachygaster*, Lucas, Expl. Alg. Vol. 3, p. 15 (4); Orth. pl. 2, f. 2 (Algeria, Tunis (Sardinia), (1840) (*Ephippigera*). — Plate, Fig. 10.  
*lurmeisteri*, Fieber, Lotos, Vol. 3, p. 201 (1853) (*Ephippigera*).  
*ebdyanus*, Bonnet & Finot, Bull. Soc. Ent. Fr. 6, Vol. 4, p. 27 (1884) (*Ephippigera*).

## 8. GENUS BÆTICA, BUYSSON

**Baetica.** Buysson, Bull. Mus. Paris, Vol. 9, p. 227 (1903).

**Platephippius.** Navás, Bol. Soc. Aragon, Sc. Nat. Vol. 3, p. 197 (1904).

**Characters.** — Structurally very close to the previous genus but the single species comprising it may be easily separated from the single species of *Præphippigerida* by the much smaller size and the color of the entire upper surface, which is black with light tinge on hinder part of the pronotum. The legs are not black.

**Type.** — *Ephippigera ustulata*, Rambur.

**Geographical distribution of species.** — Andalusia.

1. *B. ustulata*, Rambur, Faune Andal. Vol. 2, p. 52, pl. 4, f. 3, 4 (1839) Andalusia.  
 (*Ephippiger*); Brunner, Prodr. Eur. Orth. pp. 399, 401 (1882) (*Platystolus*);  
 Buysson, Bol. Mus. Paris, Vol. 9, p. 227 (1903) (*Baetica*);  
 Syn. Cat. Orth. Vol. 2, p. 172 (1906); Burr, Ent. Record, Vol. 20,  
 p. 198 (1908). — **Plate, Fig. 11.**

**9. GENUS SYNEPHIPIUS, NAVÁS**

**Synephippius.** Navás, Notas Zool. Vol. 9, p. 4, 5 (1905).

**Characters.** — Original after Navás. « Fronte inter antennas tuberculo transverso minuto, a tuberculo verticis deplanato, medio impresso, sejuncto. Pronoto carinis lateralibus distinctis in prozona et metazona; metazona disco fornicato, medio haud carinato. Segmento anali in ♂ postice elongato in duos lobulos, medio longitudinaliter impresso, laminam supraanalem bilobatam fere occultante; cercis externe acuminatis, dente acuto ante apicem interne instructis. Lamina subgenitalis in ♀ postice medio emarginata, lateribus sulco obliquo distincta. Femoribus posterioribus subtus spinulis paucis instructis. Cetera ut in genere antiquo *Platystolus* ».

**Type.** — *Platystolus obvius*, Navás.

**Geographical distribution of species.** — Spain.

1. *S. obvius*, Navás, Bol. Soc. Aragon Scienc. Nat. Vol. 3, p. 196 (1904) Spain.  
 (*Platystolus*).

## INDEX

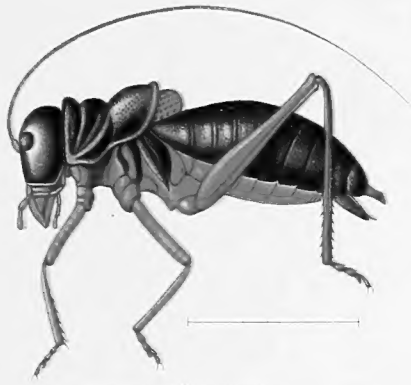
	Pages		Pages		Pages
agareus, Brunn. (g. <i>Uromenus</i> ),	5	brunneri, Bol. (g. <i>Steropleurus</i> )	6	elegans, Fisch. (g. <i>Ephippiger</i> )	4
algericus, Brunn. (g. <i>Steropleurus</i> )	6	<b>Callicrana</b> (gen.), Bol.	7	<b>Ephippiger</b> (gen.), Latr.	3
andalusius, Ramb. (g. <i>Ephippiger</i> )	4	carinata, Bol. (g. <i>Ephippiger</i> )	4	ephippiger, Fieb. (g. <i>Ephippiger</i> )	4
angulata, Bol. (g. <i>Steropleurus</i> )	6	castellanus, Bol. (g. <i>Steropleurus</i> )	6	<b>Ephippigerida</b> (gen.), Buyss.	4
annae, Targ.-Tozz. (g. <i>Steropleurus</i> )	6	catalaunicus, Bol. (g. <i>Steropleurus</i> )	6	<b>EPHIPPIGERINÆ</b> Subfam.)	1
antennatus, Brunn. (g. <i>Steropleurus</i> )	6	cavannae, Targ.-Tozz. (g. <i>Steropleurus</i> )	6	<i>fabricii</i> , Fieb. (g. <i>Ephippiger</i> )	4
areolaria, Bol. (g. <i>Ephippiger</i> )	4	compressicollis, Fisch. (g. <i>Uromenus</i> )	5	<i>fhigi</i> , Fieb. (g. <i>Ephippiger</i> )	4
asturiensis, Bol. (g. <i>Steropleurus</i> )	6	confusus, Fin. (g. <i>Uromenus</i> )	5	finoti, Brunn. (g. <i>Uromenus</i> )	5
<b>Baetica</b> (gen.), Buyss.	8	coronata, Costa (g. <i>Steropleurus</i> )	6	finotii, Bol. (g. <i>Pycnogaster</i> )	3
balearica, Bol. (g. <i>Steropleurus</i> )	6	costaticollis, Luc. (g. <i>Uromenus</i> )	5	flavovittatus, Bol. (g. <i>Steropleurus</i> )	6
<b>Bathyscapes</b> (gen.), Fieb.	3	crucigera, Fieb. (g. <i>Ephippiger</i> )	4	<i>gaditanus</i> , Bol. (g. <i>Pycnogaster</i> )	3
bolivari, Seoane (g. <i>Callicrana</i> )	7	cucullatus, Charp. (g. <i>Pycnogaster</i> )	3	<i>gracilis</i> , Brun. (g. <i>Ephippiger</i> )	4
bolivari, Brunn. (g. <i>Pycnogaster</i> )	3	cunii, Bol. (g. <i>Ephippiger</i> )	4	<i>graellsii</i> , Bol. (g. <i>Pycnogaster</i> )	
borellii, Griff. (g. <i>Ephippiger</i> )	4	diluta, Bol. (g. <i>Ephippiger</i> )	4	hastatus, Sauss. (g. <i>Uromenus</i> )	5
bormansi, Brunn. (g. <i>Ephippiger</i> )	4	discoidalis, Fieb. (g. <i>Ephippiger</i> )	4	hispanica, Fieb. (g. <i>Ephippiger</i> )	4
brevicollis, Fisch. (g. <i>Steropleurus</i> )	6	dorsalis, Fieb. (g. <i>Ephippiger</i> )	4	<i>idomenei</i> , Luc. (g. <i>Steropleurus</i> )	7
brevipes, Nav. (g. <i>Pycnogaster</i> )	3	<i>durieui</i> , Bol. (g. <i>Uromenus</i> )	6		
<i>burmeisteri</i> , Fieb. (g. <i>Praephippigerida</i> )	5				

	Pages		Pages		Pages
inenarmis, Buys. ( <i>g. Steropleura</i> )	6	obsoletus, Bol. ( <i>g. Steropleurus</i> )	7	sanchez-gomezi, Bol. ( <i>g. Pycnogaster</i> )	3
inermis, Ramb. ( <i>g. Pycnogaster</i> )	3	obvious, Nav. ( <i>g. Synephippius</i> )	9	surcularius, Bol. ( <i>g. Platystolus</i> )	8
innocentii, Fin. & Bon. ( <i>g. Uromenus</i> )	5	ornata, Schmidt ( <i>g. Ephippiger</i> )	4	saussureanus, Bol. ( <i>g. Ephippiger</i> )	5
		ortegai, Pant. ( <i>g. Steropleurus</i> )	7	scabricollis, Ramb. ( <i>g. Ephippiger</i> )	4
jugicola, Graells ( <i>g. Pycnogaster</i> )	3	oudryanus, Bonn. & Fin. ( <i>g. Praeephippigerida</i> )	8	selenophora, Fieb. ( <i>g. Ephippiger</i> )	4
				selliger, Charp. ( <i>g. Callicrana</i> )	7
laeta, Nav. ( <i>g. Callicrana</i> )	7	pachygaster, Luc. ( <i>g. Praeephippigerida</i> )	8	seoanei, Bol. ( <i>g. Callicrana</i> )	7
<b>Lamprogaster</b> (gen.), Bol.	7			serrata, Bol. ( <i>g. Callicrana</i> )	7
laticollis, Luc. ( <i>g. Uromenus</i> )	5	panteli, Nav. ( <i>g. Steropleura</i> )	7	siculus, Fieb. ( <i>g. Steropleurus</i> )	7
latipennis, Fisch. ( <i>g. Ephippiger</i> )	4	pantingana, Nav. ( <i>g. Ephippiger</i> )	4	silvicola, Az. ( <i>g. Ephippiger</i> )	4
levantina, Bol. ( <i>g. Ephippiger</i> )	4	paulinoi, Bol. ( <i>g. Ephippiger</i> )	5	sphaeophila, Krauss ( <i>g. Ephippiger</i> )	4
lobata, Fisch. ( <i>g. Ephippiger</i> )	4	pellucida, Bol. ( <i>g. Callicrana</i> )	7	staeli, Bol. ( <i>g. Steropleurus</i> )	7
lobata, Sauss. ( <i>g. Uromenus</i> )	5	perezii, Bol. ( <i>g. Steropleura</i> )	7	<b>Stenopleurus</b> (gen.), Sauss.	5
longicauda, Bol. ( <i>g. Ephippiger</i> )	4	perforata, Ross. ( <i>g. Ephippiger</i> )	5	<b>Steropleurus</b> (gen.), Bol.	6
lucasi, Brun. ( <i>g. Steropleura</i> )	6	<b>Platephippius</b> (gen.), Nav.	8	<b>Synephippius</b> (gen.), Nav.	6
		<b>Platystolus</b> (gen.), Bol.	8		
maculatus, Yers. ( <i>g. Steropleurus</i> )	7	polita, Bol. ( <i>g. Steropleura</i> )	7	tæniata, Sauss. ( <i>g. Ephippiger</i> )	5
major, Krauss ( <i>g. Ephippiger</i> )	4	politus, Nav. ( <i>g. Ephippiger</i> )	5	terrestris, Yers. ( <i>g. Ephippiger</i> )	5
maroccanus, Sauss. ( <i>g. Uromenus</i> )	5	poncyi, Bol. ( <i>g. Uromenus</i> )	6	transfuga, Brunn. ( <i>g. Uromenus</i> )	5
martinezii, Bol. ( <i>g. Platystolus</i> )	8	<b>Praeephippiger</b> (gen.), Bol.	8		
martorellii, Bol. ( <i>g. Steropleurus</i> )	6	<b>Praeephippigerida</b> (gen.), Buys.	8	<b>Uromenus</b> (gen.), Bol.	5
mauretanicus, Sauss. ( <i>g. Uromenus</i> )	6	provincialis, Yers. ( <i>g. Ephippiger</i> )	5	ustulata, Ramb. ( <i>g. Baetica</i> )	6
miegii, Bol. ( <i>g. Callicrana</i> )	7	pseudolus, Bol. ( <i>g. Steropleura</i> )	7		
minor, Azam ( <i>g. Ephippiger</i> )	5	<b>Pycnogaster</b> (gen.), Graells.	3	vaucherianus, Sauss. ( <i>g. Uromenus</i> )	6
minor, Krauss ( <i>g. Ephippiger</i> )	4	<b>PYCNOGASTERINÆ</b> Subfam.	1	verticalis, Fieb. ( <i>g. Ephippiger</i> )	5
mogantiaca, Schust. ( <i>g. Ephippiger</i> )	4			vespertina, Duf. ( <i>g. Uromenus</i> )	6
monticola, Serv. ( <i>g. Callicrana</i> )	7	ramburi, Bol. ( <i>g. Callicrana</i> )	7	vitium, Serv. ( <i>g. Ephippiger</i> )	1, 4
		rhom bifera, Bol. ( <i>g. Uromenus</i> )	6	vosseleri, Krauss ( <i>g. Uromenus</i> )	6
nerii, Voss. ( <i>g. Steropleurus</i> )	7	rossii, Fieb. ( <i>g. Ephippiger</i> )	5		
nigromarginata, Luc. ( <i>g. Ephippiger</i> )	4	rugosicollis, Bol. ( <i>g. Uromenus</i> )	7	zapaterii, Bol. ( <i>g. Ephippiger</i> )	5
nobrei, Bol. ( <i>g. Steropleurus</i> )	7			zelleri, Fisch. ( <i>g. Ephippiger</i> )	5

## EXPLANATION OF PLATE

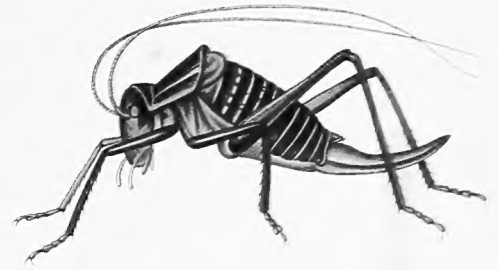
- Fig. 1 *Pycnogaster graellsii*, Bolivar (♂, pronotum, side view), after Bolivar.  
 2. — — — (♂, pronotum, top view), after Bolivar.  
 — 3. *Ephippiger longicauda*, Bolivar (♀, side view), after Bolivar.  
 — 4. — — — (♂, end of abdomen from above), after Bolivar.  
 — 5. *Uromenus costaticollis*, Lucas (♂, side view), after Lucas.  
 — 6. *Steropleurus perezii*, Bolivar (♀, side view), after Bolivar.  
 — 7. *Callicrana seoanei*, Bolivar (♂, end of abdomen from above), after Bolivar.  
 — 8. — — — (♀, ovipositor from the side), after Bolivar.  
 — 9. *Platystolus surcularius*, Bolivar (♂, tip of abdomen from above), after Bolivar.  
 — 10. *Praeephippigerida pachygaster*, Lucas (♂, side view), after Lucas.  
 — 11. *Baetica ustulata*, Rambur (♂, original).

11



*Baetia ustulata* Rambur.

6



*Steropleurus perezii* Bolivar.

7



*Callicrania seaneii* Bol.  
End of abdomen from above.

8



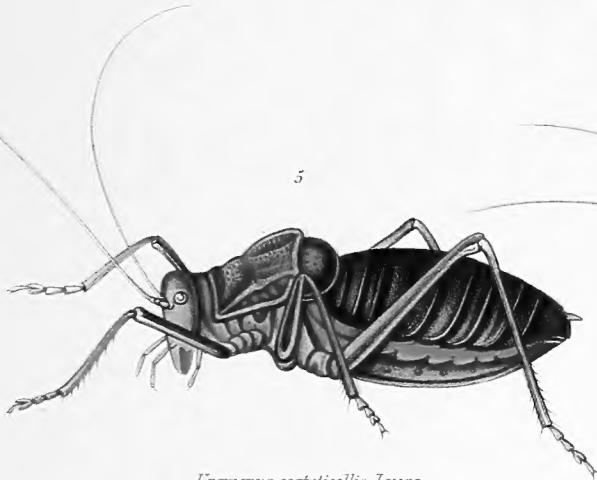
*Callicrania seaneii* Bol. ovipositor

9



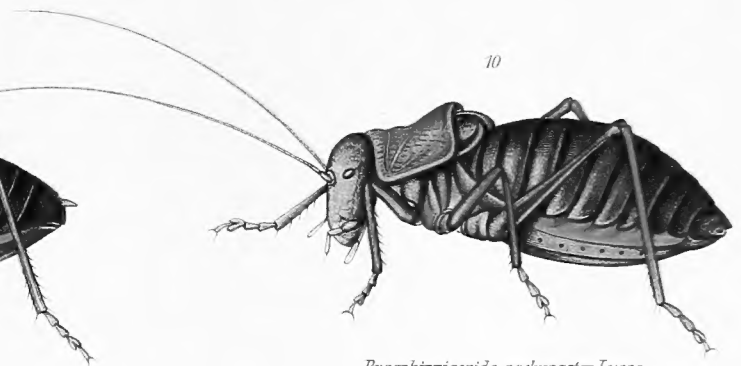
*Platystolus surcularius* Bol.  
tip of abdomen from above.

5



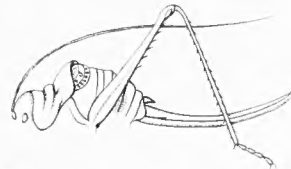
*Uromenus costaticollis* Lucas.

10



*Praehippigerida pachygaster* Lucas.

3



*Ephippiger longicauda* Bolivar.

2



*Pycnogaster graellsii* Bol.  
pronotum, side view.

1



*Pycnogaster graellsii* Bol.  
pronotum, side view.

4



*Ephippiger longicauda* Bol.  
End of abdomen from above.

FAM. LOCUSTIDÆ

SUBFAM. EPHIPPIGERINÆ







