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SUBFAMILY: PAEDERINAE FLEMING, 1821

Paederinae can be recognized by having hind coxae narrow, triangular, its apex strongly projecting posteriorly; antennae inserted along the anterior margin of the head, insertion concealed in dorsal view; abdomen with six visible sterna, two pairs of paratergites per segment (terga and sterna fused into rings in genus *procirrus* Latrielle); apical maxillary palpomere either much smaller than previous one or larger and flattened, with apex oblique. All adults have 5-5-5 tarsi, but a few with short and lobed fourth tarsal segments.

The subfamily is divided into two tribes (Paederini and Pinophilini), both of which are widely distributed worldwide.

TRIBE: PAEDERINI FLEMING, 1821

Paederini can be recognized by their having last maxillary palpomere smaller than the preceding one, conical or acicular (Fig. 76&80) except in the subtribe Paederina, where it is short, compressed, and pubescent (Fig. 89).

Subtribe: Medonina Casey, 1905

This subtribe can be recognized by the pronotal length and width subequal; neck more than 1/3, usually more than 2/5, as wide as head; tarsal segments without ventral lobes. The

subtribe is worldwide in distribution, and may include few other genera. Two genera are represented in Egypt. These genera are: *Lithocharis* Lacord and *Pseudomedon* Mulsant and Rey.

Genus: *Lithocharis* Lacord, 1835

Lithocharis Boisd et Lacord Fn. Ent. Paris I, 1835, p. 431

Type species: *Lithocharis ochraceus* (Gravenhorst).

Members of this genus are distinguished from others in the tribe by the combination of densely dull sculpture of the disc of the head which has no discernable umbilicate punctures and the separate gular sutures.

This genus is represented in Egypt by only a single species *Lithocharis ochraceus* (Gravenhorst).

***Lithocharis ochraceus* (Gravenhorst, 1802)**

(PLATE XVII: 99 - 100; Figs. 81 – 83 and 129- 130)

Medon ochraceus Gravenhorst, Col. Micr, Brunsv., 1802, p. 59.

Medon (Lithocharis) ochraceus Gravenhorst, Fn. Ent. Paris I, 1835, p. 431.

Lithocharis ochraceus (Gravenhorst), Reitter, Fauna Germ. 1908, p. 147.

Diagnosis: this species is distinguished from others by the dark brown head (PL. XVII, 100), and the remaining parts are yellowish brown. The temple is distinctly smaller than the eye diameter. The head and pronotum are densely and finely punctuate, without umbilicate punctures.

Description: Length 3.5 – 3.75 mm; head dark brown; mouth parts, antennae, elytra and abdomen light brown; pronotum yellowish brown; head, pronotum finely and densely punctuate, somewhat dull, without umbilicate punctures, with very scattered pubescence; elytra densely punctuate, densely pubescent; abdomen terga densely punctuate and pubescent; head quadrate, as long as wide; neck one-third or slightly more the head width; eyes distinctly larger than temple, nearly 1.3 times as long as temple length; antennae filiform, sparsely pubescent (PL. XVII, 100); 1st antennal segment as long as the following two segments (2+3); 2nd to 10th antennal segments are equal in length, and distinctly longer than wide, nearly 1.6 times as long as wide, the terminal segments larger the preceding one; labrum transverse, slightly emarginated apically (Fig. 81), without teeth; mandible dentate at inner margin (Fig. 82); maxillary palp four palpomeres; 1st small; 2nd elongate, widest near apex; 3rd distinctly wider than second and nearly equal in length; 4th slender and small (Fig. 83); gular sutures

separate; pronotum subquadrate, slightly wider than head; narrower than elytra; very densely punctuate; lateral carina present; elytra quadrate; tibiae without spines on the outer edge; tarsi 5-segmented; anterior tarsus moderately dilated; 4th segment of mid and hind tarsi simple, not bilobed; 1st segment of posterior tarsus as long as the terminal segment; intermediate segments decreasing in length; abdomen densely pubescent; abdominal terga III – VII with paratergites; aedeagus as in figures 129 and 130.

Specimens examined:

Egypt, 1910, (21); Nawa 5/ 4/ 1907 (23); Alexandria, 1/ 1909 (1), Alexandria 8/ 5/ 1914 (2); Alexandria, 1910 (1); Alexandria, 1914 (1); Abu Rawash, 3/ 7/ 1909 (2); Barrage 1910 (3), Damietta 28/ 6/ 1906 (5), Shibin El-Qanater (Qaliubya), 27/4/1913, (9); luxor, 7/5/1909, (1) [EESC]
Shoubra, 20/6/1910, (1) [ALFC]
Giza, 23/7/1926, (2); Giza, 2/8/1926, (1); Maadi, 14/6/1936, (1) [MAC]
Cairo, 15/9/1936, (1); Cairo, 27/12/1937, (4); Cairo, 9/1/1937, (2); Cairo, 11/1/1937, (3); Cairo, 19/12/1937, (2); Cairo, 8/3/1937, (1); Cairo, 15/6/1936, (1); Cairo, 20/9/1936, (1); Cairo, 4/4/1936, (1); Cairo, 8/12/1937, (1) [CUC]

Genus: *Pseudomedon* Mulsant & Rey, 1877

Pseudomedon Mulsant & Rey, 1877, Ann. Soc. Linn. Lyon, XXIV, 122. (Subgenus of *Medon*).

Type species: *Pseudomedon obsoletum* Nordmann

This genus can be recognized as follows: labrum simply notched medially (Fig. 84), without teeth; gular sutures widely separated as in *Hypomedon*; the whole body covered with very fine punctuation; aedeagus is quite different from that of *Medon* and *Hypomedon* as in figures (131 - 132). The genus *Pseudomedon* divided into two subgenera, the subgenus *Pseudomedon* s. str. and the subgenus *Euphonus*. The first subgenus is represented in Egypt by only one species namely: *Pseudomedon obsoletum* Nordmann (Coiffait, 1984).

***Pseudomedon obsoletum* Nordmann, 1836**

(PLATE XVII: 101 & 102; Figs. 84-86 and 131 - 132)

Medon (Pseudomedon) obsoletum Nordmann, 1836, Symb. p. 416. **Type locality:** Berlin.

Medon (Pseudomedon) unicolor Curtis, Ann. Mag. Nat. Hist. V, 1840, p. 277.

Medon (Pseudomedon) opacum Ferrari in Redth. Fn. Austr. ed. II, 1858, p. 987.

Medon (Pseudomedon) brevipes Wollaston, Ann. Mag. Nat. Hist. (3) VI, 1860, p. 104.

Medon (Pseudomedon) aterrimus Saulcy, Mat. Cat. Gren. 1863, p: 36.

Pseudomedon obsoletum Nordmann – Coiffait, Col. Staph. de la Region Palearctique Occid., 1984, p: 127

Description: Length 3 – 3.8 mm; black to pitch black ; mouth parts, antennae and legs brownish yellow ; head without mouth parts slightly shorter than wide; temples with parallel-sides, about once a quarter as long as the diameter of eye; head dull, with finely and densely punctuation, sometimes with a narrow raised median line; labrum with median notched (Fig. 84); mandibles tridentate (Fig. 85); first maxillary palpomere small; the second distinctly longer than wide, nearly 2.5 times as long as wide; the third wider than the second, and slightly longer than it; the fourth palpomere smallest and needle-shaped (Fig. 86); antennae long; 3rd antennal segment slightly longer than the second; the following segments at least two times as long as wide; pronotum nearly as long as wide, distinctly wider than the head, slightly narrowed posteriorly; pronotum finely and densely punctuate, without impunctate area at midline; elytra longer than wide, much wider than pronotum, punctuation distinctly bigger and closer than pronotal punctures; anterior

tarsi of male dilated, wider than the apical margin of tibia; abdomen finely and densely punctuate; aedeagus asymmetrical, very small and very slender (Fig. 131 - 132).

Distribution: Algeria, Egypt, Tunisia, the Eastern Mediterranean region and Western and Central Europe;.

Specimens Examined:

Maadi 12/5/1933 (1)

[MAC]

Subtribe: Acanthoglossina

Genus: *Acanthoglossa* Kraatz, 1859

Acanthoglossa Kraatz, Arch. Naturg., XXV, 1859, I, p. 144.

Cephisus Fauvel, Fn. Gallo-rhen. III, 1872, p. 299.

Eomedon Sharp, Ann. Mag. Nat. Hist. (6) III, 1889, p. 319.

This genus is represented in Egypt by only one species
Acanthoglossa longipennis Sahlberg.

***Acanthoglossa longipennis* Sahlberg, 1908**

(PLATE XXI: 75-76; Figs. 74 – 77 and 125-126)

Acanthoglossa longipennis Sahlberg, Ofvers. F. Vet. Soc. L, 1908, p. 102.

Diagnosis: this species can be recognized by: the head distinctly larger than pronotum (PL. XXI, 76); neck one-third head width; head and pronotum very densely punctuate;

antennae moniliform; 3rd to 8th antennal segments transverse, nearly as long as wide; the three terminal antennal segments clavate; 4th tarsal segment of hind tarsi simple; eyes small, temple nearly two times as eye diameter.

Description: Length 2.3 – 2.5 mm; head, pronotum and abdomen reddish brown; palpi, legs and elytra yellowish brown; head and pronotum densely punctuate, distances between punctures smooth, somewhat shining; elytra and abdominal terga densely punctuate, densely pubescent; head quadrate, as long as wide; neck one-third as wide as head width; eye small, temple large, nearly 2 times as eye diameter; antennae 11-segmented, 1st the longest, 2nd one-half the length of the first one, 3rd to 8th are equal in length, nearly as long as wide, the three terminal antennal segments incrassate, forming distinct club; labrum strongly emarginate medially, rounded apically, without teeth (Fig. 74); mandible tridentate (Fig. 75); maxillary palp four palpomeres, first palpomere small, second one longer than wide, widest apically, 3rd segment larger than second and very widest apically; 4th segment very small and slender (Fig. 76); gular sutures separate; pronotum trapezoidal-shaped, widest apically; densely punctuate, intervals smooth, somewhat shiny; lateral carina present; elytra quadrate, densely punctuate; tibiae without spines on the outer edge; tarsi 5-

segmented; anterior tarsus moderately dilated; hind tarsus with the first segment slightly longer than 2nd + 3rd tarsal segments, as long as terminal segment; 4th tarsal segment not simple; abdominal terga densely pubescent; terga III to VII with yellow transversal bands at apical margin.

Specimens examined: 23 specimens

Luxor, 7/ 7/ 1910, (1); Abu Rawash, 1/ 1912, (1) [EESC]
Barrage, 13/ 9/ 1933, (5); Barrage, 10/ 9/ 1935, (1); Barrage,
13/ 9/ 1935, (1) [ALFC]
Barrage, 10/ 9/ 1933; Barrage, 13/ 9/ 1933; Beni Yousef, 25/ 9/
1933; Kafr Hakim, 22/ 10/ 1933 (14) [MAC]

Genus: *Chloecharis* Lynch, 1884

Chloecharis Lynch, 1884, Bol. Acad. Cordoba VII, 259.

Type species: *Chloecharis debilicornis* Wollaston

This genus was created by Lynch 1884 as a subgenus of the genus *Medon*. The type species *Ch. debilicornis* Wollaston described for the first time under the genus *Medon* and subgenus *Hypomedon*, then separated by Lynch in the subgenus *Chloecharis*. This genus differs from the genus *Medon* and related genera by:

The gular sutures widely separated at posterior half; mandibles bidentate as in (Fig. 79) (tri or quadridentate in

Medon and other related genera). The characters of this genus closer to the genus *Acanthoglossa*.

Description: Body small and wide; integument with reticulation sculptures, with more or less scattered punctures; labrum bilobed without teeth (Fig. 78); inner margin of both mandibles bidentate (Fig. 79); maxillae short, the second palpomere of maxillary palp about 2.5 times as long as wide; the third a little longer and much thicker than the second one; the fourth palpomere small and needle-shaped (Fig. 80); the first palpomere of labial palp short, slightly longer than wide; the second palpomere thickened, about 3 times as long as wide, and twice as wide as the first palpomere; third palpomere short and slender, pointed apically; prosternal process extended into a sharp point and recorded to about the middle of the procoxae; first visible abdominal sterna strongly carinate between the metacoxae (Coiffait, 1984).

Two species are represented in Egypt, *Chloecharis debilicornis* Wollaston and *Chloecharis niloticus* Koch.

Key to the species of the genus *Chloecharis* Lynch

- 1- Anterior margin of pronotum not or only slightly narrower than the head; pronotum sparsely punctate, distance between punctures as diameter of puncture, with strongly

reticulate integument; elytra quadrate, as long as wide or slightly longer than wide; length 2.5 mm

Chloecharis deblicornis Wollaston

- Anterior margin of pronotum distinctly narrower than the head; pronotum densely punctuate; distance between punctures much smaller than the diameter of puncture, with reticulate integument; elytra distinctly longer than wide; length 2 mm ... *Chloecharis niloticus* Koch

Chloecharis deblicornis Wollaston, 1857

(PLATE: XXI, 77 & 78; Figs. 78 – 80 and 127 - 128)

Medon (Hypomedon) deblicornis Woll. Cat. Col. Mader., 1857, p. 194. **Type locality:** Madeira.

Medon (Hypomedon) brevicornis Allard, Ann. Soc. Ent. Fr. (3) V, 1857, p. 747.

Medon (Hypomedon) aegyptiacus Motsch. Bull. Mosc. XXXI, 1858, II, p. 644.

Medon (Hypomedon) occultus Waterh. Ann. Mag. Nat. Hist. (4) XVIII, 1876, p. 108.

Medon (Chloecharis) rufulus Lynch, Bol. Ac. Cordoba VII, 1884, p. 259.

Chloecharis deblicornis Woll. - Coiffait, Col. Staph. de la Region Paléartique Occid. 1984, p. 142

Description: Length 2.5 – 2.8 mm; body reddish brown; legs, mouth parts and antennae yellowish red ; with parallel sides, slightly depressed; head without mouth parts nearly as long as wide; slightly wider toward the posterior margin; posterior angles of head well developed; eyes large, at least as long as the first antennal segment; temples about 1.5 times as long as diameter of eye; head coarsely and sparsely punctuate, distance between punctures as long as the diameter of puncture; head integument densely reticulate; antennae moniliform; first antennal segment nearly two times as long as wide, the second as thick as the first, but slightly longer than wide; the third as long but narrower than the second; 4th to 9th as long as wide; the 10th antennal segment slightly thickened and transverse; pronotum slightly transverse, slightly wider than long; the widest point located at the anterior angles, at this point as wide as the head; pronotum somewhat strongly narrowed towards the posterior margin; posterior angles rounded; punctuation and reticulation as head; elytra square, slightly wider than the head; shoulders well developed, sides parallel; surface covered with punctuation slightly larger and denser than the pronotum; background smooth and shiny; hind wing well developed; abdomen parallel-sides, with finer and sparser punctures than

elytra; posterior margin of the last sternite rounded in both sexes; aedeagus without parameres, as in figures 127 & 128.

Distribution: sub-cosmopolite species, found in warm temperate regions of the world.

Specimens examined: 14 specimens

Luxor 20/ 9/ 1912 (1) ; Alexandria 1910 (9) [EESC]

Luxor 20/ 9/ 1912 (1) ; Luxor 7/ 7/ 1909 (1) [ALFC]

Barrage 13/ 9/ 1933 (2) [MAC]

Chloecharis niloticus Koch, 1934

(PLATE: XXI, 79 – 80)

Medon (Chloecharis) niloticus Koch, Bull. Soc. Ent. Egypte, 1934, XVIII, p. 83. **Type locality:** Egypt, Kirdasa (Giza).

Chloecharis niloticus Koch - Coiffait, Col. Staph. de la Region Paléartique Occid. 1984, p. 142.

Description: Length 2 mm; this species differs from *Chloecharis debilicornis* by its smaller size and narrower form; the anterior margin of pronotum distinctly narrower than the base of the head; elytra distinctly longer than wide.

Distribution: Egypt.

Specimens examined: 3 specimens

Alexandria 13/ 10/ 1929 (3) [MAC]

Subtribe: Scopaeina Mulsant & Rey

Recognizable by the combination of fourth maxillary palpomere small (Fig. 89); neck very narrow, not more than 1/3 as wide as head width; gular sutures separate; pronotum longer than wide; tarsal segments without ventral lobes.

Genus: *Scopaeus* Erichson, 1839

Scopaeus Erichson, Gen. Spec. Staph., 1839 – 1840, p. 604.

Type species: *Scopaeus laevigatus* Gyll.

Polyodontus Solier in Gay, Hist. Chile, Zool. IV, 1849, p. 310.

Type species: *P. angustus* Sol.

Scoponeus Motschulsky, Bull. Mosc. XXXI, 1858, p. 641.

Type species: *S. testaceus* Motsch., 1858

Geoscopaeus Coiffait, Rev. Fr. Ent., XXVII, 1960, p. 284.

Subgenus: *Euscopaeus* Coiffait, Rev. Fr. Ent., XXVII, 1960, p. 284.

Subgenus: *Hyposcopaeus* Coiffait, Rev. Fr. Ent., XXVII, 1960, p. 284.

Subgenus: *Alloscopaeus* Coiffait, Bull. Soc. Hist. Nat. Toulouse, 1968, CIV, p. 414.

Subgenus: *Anomoscopaeus* Coiffait, Bull. Soc. Hist. Nat. Toulouse, CIV, 1968, p. 426.

Subgenus: *Asiascopaeus* Coiffait, Col. Staph. De La Region Paléartique Occid. V, 1984, p. 150.

Subgenus: *Hyperscopaeus* Coiffait, Col. Staph. De La Region Paléartique Occid. V, 1984, p. 150.

Scopaeus species are small or very small Paederinae, easily recognizable by their small size and very narrow neck.

Description: Labrum with four teeth, lateral teeth usually well developed than the median teeth (Fig. 87); mandibles robust, with large three teeth at inner edge (Fig. 88); the second and third palpomere of maxillary palp large and thick, hairy; fourth palpomere very small (Fig. 89); labial palp short, 2nd palpomere two times as long as the first one, with the same thickness; the 3rd palpomere very slender and short; head flat with temple much longer than diameter of eye; gular sutures parallel for much of their length, diverging at front of head; pronotum elongate and rounded at sides, rather tubular in form; abdominal terga densely punctuate; aedeagus without parameres (Figs 135 – 136), but with complex apical process that are useful for separating species.

The genus *Scopaeus* is widespread throughout the world. About 80 species are currently known to the Palaearctic and many tropical regions. Certainly, many species remain to be

discovered, especially in hot countries of the world (Coiffait, 1984).

Key to the species of genus *Scopaeus* Erichson

- 1- Eyes large, temple not more than 1.25 times as long as diameter of eye; anterior margin of labrum with four strong equal teeth; the greatest width of head near the midline or front; pronotum without anterior scutellar depression ... *S. (Hyposcopaeus) debilis* (Hochh.)
- Eyes smaller, temple more than 1.5 times as long as diameter of eye; lateral teeth of labrum weakly developed or smaller than the median teeth; the greatest width of head at eye level; pronotum with anterior scutellar depression..... 2
- 2- Colored reddish-brown; anterior scutellar depression of pronotum divided by a short carina into two divisions; aedeagus with short lateral lobe bearing a small tuft of setae (Fig. 133 - 134).....

***S. (Anomoscopaeus) sinaicus* Coiffait**

- Colored darker, pitch black to pitch brown; pronotum with elongated shiny hump, surrounded by a small horseshoe-shaped depression; aedeagus without distinct lateral lobe (Fig. 137 - 138).....

S. (Anomoscopaeus) gracilis (Sperk.)

Scopaeus (Hyposcopaeus) debilis Hochhuth, 1851

(PLATE XXVIII: 103 – 104; Figs. 87 - 89 & 135-136)

Scopaeus debilis Hochhuth, Bull. Mosc. XXIV, III, 1851, p. 50. **Type locality:** Arménie.

Scopaeus (Hyposcopaeus) debilis Hoch. – Coiffait, Col. Staph. De La Region Paléartique Occid. V, 1984, p. 191.

Description: Length 3 mm; color reddish brown, head and abdomen darker; mouth parts, antennae and legs lighter, yellowish red; body covered with very fine and dense punctuation; head slightly longer than wide; eyes large; temples sub-parallel, about 1.25 times as long as diameter of eye; anterior margin of labrum with four strong equal teeth (Fig. 87); mandible tridentate (Fig. 88); antennae long, 2nd to 4th antennal segments are equal in length and twice as long as wide; 5th - 10th nearly globular; pronotum oblong, widest point located towards anterior third, at this point, just as wide as the head; longitudinal median line impunctate; pronotum with raised shiny projection at posterior quarter, separated by strong depression from the posterior margin; elytra longer than wide, sub-parallel, slightly wider than the head; abdomen slightly widened backwards; apical lobe of aedeagus poorly developed,

weakly arcuate; lateral lobes bearing a small tuft of short setae directed towards the ventral side (Fig. 135 - 136).

Specimens examined: Cairo 6/ 6/ 1914 (7), Cairo 5/ 6/ 1915 (3), Cairo 25/ 6/ 1904 (1), Cairo 29/ 6/ 1909 (1), Cairo 23/ 7/ 1914 (1), Cairo 9/ 1908 (1), Cairo 22/ 9/ 1896 (1), Cairo 11/ 1914 (1), Shoubra 15/ 4/ 1915 (1), Shoubra 5/ 1915 (1), Shoubra 7/ 11/ 1914 (2), Beni Mazar (Minia) 21/ 5/ 1915 (1), Abu Rawash 1912 (1), Luxor 7/ 7/ 1909 (8), Helwan 6/ 1/ 1896 (1), Alexandria 1910 (36) **[EESC]**

Giza 9/ 5/ 1914 (1), Shoubra 14/ 8/ 1922 (1), Giza 27/ 7/ 1926 (1), Cairo 15/ 7/ 1909 (1), Cairo 29/ 6/ 1910 (2), Giza 10/ 8/ 1920 (1), W. Digla 1/ 8/ 1924 (1), Assiut 9/ 1958 (3), without label (9) **[ALFC]**

Nag Hamadi 17/ 8/ 1917 (1), W. Digla 1/ 8/ 1924 (2), Giza 2/ 8/ 1926 (1), Maadi 19/ 6/ 1933 (1), Maadi 9/ 7/ 1933 (1), Ramleh 13/ 6/ 1936 (1), Suez Road 21/ 6/ 1936 (1) **[MAC]**

***Scopaeus (Anomoscopaeus) sinaicus* Coiffait, 1970**

(Fig.s. 133 – 134)

Scopaeus (Anomoscopaeus) sinaicus Coiffait, Bull. Soc. Hist. Nat. Toulouse, CVI, 1970, 1 – 2, p. 107. **Type locality:** Sinai, Djebel Serbal, Egypt.

Description: After Coiffait, 1970

Length 3.5 mm; color light brown to reddish light brown, with head and the first four abdominal segments dark brown to pitch brown; widest point of head at eye level, at this point, head without mouth parts nearly longer than wide; head slightly narrowed posteriorly; temples about 1.5 times as long as the diameter of eye; head finely and densely punctuate; antennae long; 3rd antennal segment as long as the second; the following segment gradually decreasing in length; the penultimate segment slightly expanded, as long as wide; pronotum oblong, longer than wide, the widest point at anterior third, at this point, just as wide as head at eye level; anterior scutellar depression divided by a short carina into two distinct divisions; elytra longer than wide, slightly longer and considerably wider than pronotum, shoulders well developed, parallel-sides; punctuation of elytra somewhat larger than the pronotum and very denser; abdomen densely and finely punctuate; tarsi normal not delated; aedeagus asymmetrical, with tuft of bristles on both sides, apical lobes unequal, the left longer than the right (Figs 133 - 134).

Distribution: Sinai, Egypt.

Scopaeus (Anomoscopaeus) gracilis Sperk, 1835

(Figs. 137 – 138)

Scopaeus gracilis Sperk, Bull. Mosc. VIII, 1835, p. 152. Type locality: Russie.

Scopaeus apicalis Muls. et Rey, Ann. Soc. Linn. Lyon (2), II, 1855, p. 165.

Scopaeus (Anomoscopaeus) gracilis Sperk – Coiffait, Col. Staph. De La Region Paléartique Occid. V, 1984, p. 206.

Description: Length 3 to 3.5 mm; colored black to pitch-brown; mouth parts, antennae, legs and apex of abdomen testaceous; head without mouth parts a little longer than wide, parallel-sides; pronotum slightly longer than wide, about 1.3 times as long as wide; with impunctate median line, at its end of this line, a raised shiny bump, surrounded by horseshoe-shaped depression; elytra as wide as head, nearly 1.25 times as long as wide; head and pronotum with a thin but very little punctuation; elytra finely and densely punctuation; abdomen dull, integument with dense reticulate; the 5th sternite of male slightly sinuate at its posterior edge; aedeagus as in figure (137-138).

Distribution: England, France and Mediterranean region at least from Algeria to Russia.

Subtribe: Astenina Hatch

This subtribe can be recognized by minute of last palpomere of maxillary palp (Fig. 100); 4th tarsal segment bilobed; labrum bidentate at apical margin; mandible with 4 teeth at inner margin (Fig. 99).

Genus: *Astenus* Stephens, 1832

Astenus Steph. Ill. Brit. Ent. Mand. V, 1832, p. 275. **Type species:** *Astenus angustatus* Paykull

Sunius Er. Käf. Mk. Brandenb. I, 1837 – 1839 (1839), p. 523.

Astenognathus Reitter Fauna Germ. II, 1909, p. 150. (subgenus of *Astenus*).

Astenus s. str. Reitter Fauna Germanica II, 1909, p. 151. (Subgenus of *Astenus*).

Diagnosis: This genus can be recognized from other genera of Paederini by the fourth tarsal segment is bilobed; small species less than 4 mm; head large and quadrate; temple usually as long as diameter of eye, usually with parallel sides.

Description: Small species (3 – 3.5 mm.); head quadrate, as long as wide or slightly longer than wide; with dense umbilicate punctures (PL.XX, 73B); neck one-fourth as wide as head; eyes located near the middle of the lateral margin of the head, slightly protruding; temple well developed, usually

with parallel sides, slightly shorter than diameter of eye or as long as eye diameter; antennae filiform, 11-segmented; 3rd antennal segment longer than 2nd, also 4th to 10th segments; all segments elongate, longer than wide; mandibles long, slender with three median teeth (Fig. 99); labrum emarginated medially, bounded on each side by a small tooth (Fig. 98); maxillary palp four palpomeres; first small; second palpomere longer than wide, widest at apex; third segment a little longer and wider than second, widest near apical third; fourth palpomere minute (Fig. 100); ocelli absent; gular sutures fused for most of their length; pronotum oval, distinctly longer than wide, with dense umbilicate punctures; distinctly narrower than the head or elytra; without lateral carina; sometimes with long black setae on lateral margin; elytra quadrate, narrowed at apex, strongly punctured, the punctures and pubescence directed backwards; tibia without spines on outer edge; tarsi 5-segmented; anterior tarsus not dilated; middle and posterior tarsi with the first segment longer than the next two segments; fourth segments bilobed; abdominal terga 3 – 6 with paratergites; sometimes apical margin of first four abdominal terga with long black setae on each side beside paratergites; usually with the same punctures and pubescence of elytra (Coiffait, 1984).

There are over 400 species worldwide, only six species are recorded from Egypt, one of them *A. indicus* Kraatz is recorded from Egypt (Alfieri, 1976), but doubtful habitat.

Subgenus: *Astenognathus* Reitter, 1909

Subgenus: *Astenognathus* Reitter, 1909, Fauna Germ. II, p. 150; **Type species:** *Astinus bimaculatus* (Er.).

Key to the species of the genus *Astenus* in Egypt

- 1- Larger species, more than 4 mm; (4.5 – 5.2 mm.); elytra black, with a large testaceous apical borders, ascending to the midline, sometimes shoulders also testaceous; head without mouth parts longer than wide behind the eyes; elytra as wide as head, each of them wider than pronotum; temple slightly shorter than the diameter of eye..... .. *A. filiformis* Latt.
- Maximum size 4 mm; reddish yellow, sometimes with 6th and 7th abdominal segments more or less darkened **2**
- 2- Each of the first four abdominal terga with black, erect long lateral seta at anterior margins, beside the paratergites; this seta as long as the first segment of middle tarsus; elytra usually with a dark discal spot, sometimes absent **3**

- Abdominal terga without lateral black setae; sometimes with short black setae or bristles much shorter than the first segment of middle tarsus; elytra usually without discal spot..... 4
- 3- The third antennal segment 1.5 times as long as the second segment; head with distinct posterior angles; temples with parallel-sides behind eyes; head as long as wide, not or hardly narrower than the elytra; reddish yellow to reddish brown with the last abdominal segment darker; elytra generally with a dark discal spot; aedeagus as in figures 150 & 151.

A. nigromaculatus (Motsch)

- The third antennal segment slightly longer than the second segment; posterior angles of the head completely erased, temples non-parallel sides behind eyes, broadly arched; elytra as wide as the head; reddish yellow, with the head and the last abdominal segment more or less darkened; elytra with a large dark spot touching the lateral margin, sometimes the dark spot completely absent; in some specimens, abdomen, head and pronotum more or less entirely dark brown; aedeagus as in figure 152 – 153 *A. bimaculatus* (Erichson)
- 4- The diameter of eye as long as temple length or slightly

more; head distinctly wider behind the eyes than before them; pronotum slightly longer than wide, as long as the head at its widest point, which is located towards the anterior quarter each of anterior and posterior angles with long black seta, without a smaller setae between them; adeagus as in figure 154 – 155

..... *A. melanurus* (Kuster)

- The diameter of eye distinctly longer than the temple length; head much longer than wide; pronotum distinctly longer than wide at its widest point, which is located towards the anterior third; in this point, much narrower than the head; angles erased, each bearing a seta; lateral margin also with a two smaller setae, one of them between anterior and posterior angular setae, another seta between the anterior seta and the neck seta; adeagus as in figure 156 - 157

A. aegyptiacus Coiffait

Astenus (Astenognathus) aegyptiacus Coiffait, 1971

(PLATE : XX, 74 and Figs 156 -157)

Astenus (Astenognathus) aegyptiacus Coiffait, 1971, Nouv. Rev. Ent., I, 189. Type locality: Egypt, Siwa.

Description: Length 3.5 – 4 mm; form slender and parallel; reddish yellow except the last abdominal segment slightly darker; legs reddish brown; antennae and mouth parts yellow; head without mouth parts, much longer than wide; posterior angles clearly marked, angulated; temples with parallel sides; eyes large, distinctly longer than the temple; antennae short; the third antennal segment little longer than the second and the fourth; antennal segments 1.5 times as long as wide; 10th antennal segment 1.25 times as long as wide; head with umbilicate punctures; pronotum oval, distinctly longer than wide at its widest point, which is located towards the anterior third; much narrower than the head; anterior angles broadly rounded, without distinct angles; each of lateral margins of pronotum with two long black setae and with two smaller setae, one of them at the middle between anterior and posterior long seta, the other one between the anterior seta and neck seta; surface of the pronotum with umbilicated punctures, punctures slightly larger than the head punctures; elytra rectangular, longer than wide; shoulders well developed; longer and wider than pronotum; widest head, including eyes; elytra with dense and coarse punctures; abdomen with parallel sides, not or hardly expanded at the 4th visible segment; punctuation weaker than elytra punctuation; aedeagus as in figures 156 and 157.

Distribution: Egypt.

Specimen examined:

Siwa, 12/ 2/ 2004; Kafer El-Sheikh 28/ 5/ 2006 [MAC]

Astenus (Astenognathus) bimaculatus (Erichson, 1839)

(Plate : XX, 71 and Figs. 152 – 153)

Sunius bimaculatus Erichson, Gen. Spec. Staph. 1839 – 1840, p. 641. Type locality: Sardinia.

Sunius biguttatus Baudi, Berl. Ent. Zeitschr. I, 1857, p. 106.

Sunius immaculatus Motsch. Bull. Mosc. XXXIII, 1860, II, p. 56.

Description: Length 3.5 – 4 mm; form slender and parallel; reddish yellow, sometimes with discal spot on elytra; head and abdomen more or less darkened; antennae, legs and mouth parts yellow; head without mouth parts distinctly longer than wide, behind the eyes narrowly rounded; temples as long as diameter of eye; eyes large and convex; head with somewhat coarse and dense umbilicate punctures; antennae short; the third antennal segment slightly longer than the second and fourth segments; antennal segments 5 – 10 less than two times as long as wide; pronotum oval, nearly as long as the head without mouth parts, much narrower than the head, the widest point toward the anterior third; pronotum with umbilicate

punctures, slightly larger than punctures of head; anterior and posterior angles with long lateral seta, this seta as long as the third antennal segment; elytra longer than wide, much longer than pronotum at its midline; slightly wider than the head; strongly and densely granulated; the first four abdominal terga, each with a long, erect seta on lateral anterior margin, beside the paratergites; abdominal terga with the same punctures of the elytra, becoming finer and more sparser on posterior terga; adeagus as in figure 152 & 153.

Distribution: Widespread species in the Mediterranean region; Egypt, Tunisia, Southern Portugal.

Specimens examined:

Barrage 10/9/1933

[MAC]

Astenus (Astenognathus) filiformis (Latreille, 1806)

Sunius filiformis Latreille, Gen. Crust. Ins., 1806 – 1807, p. 293. Type locality: Paris (France).

Sunius extensus Mannh. Brach. 1830, p. 39.

Sunius sericatus Motsch. Bull. Mosc. XXXIII, 1860, II, p. 561.

Sunius unicolor Muls. et Rey, Ann. Soc. Linn. Lyon, XXIV, 1877, p. 276.

Description: Length 4.5 – 5.2 mm; color black, the elytra with yellow brown apical border, sometimes shoulder usually

spotted; legs, antennae and mouth parts reddish yellow; head distinctly longer than wide, slightly narrowed behind eyes towards the neck; the posterior angles well marked but rounded; the temple as long as eye diameter; head with thin umbilicate punctuation; antennae somewhat long, the third antennal segment much longer than the second, slightly longer than wide; pronotum oval, much longer than wide at its widest point, which is located towards the anterior quarter, at this point, a little narrower than head; pronotum with dense umbilicate punctures; each of anterior and posterior angles with a long black seta, this seta at least as long as the third segment of antenna; elytra distinctly longer than wide, longer than the pronotum on its midline, as wide as head at eye level; elytra densely and coarsely granulated; abdominal terga with the same punctures of elytra.

Distribution: Central Europe and Balkans, Egypt, North Africa, Malta and Tunisia.

Specimen examined:

Barrage 10/9/1933

[MAC]

Astenus (Astenognathus) melanurus (Kuster, 1853)

(PLATE : XX, 72 and Figs. 98 – 100 and 154 & 155)

Sunius melanurus Kuster, Käf. Eur. XXVI, 1853, p. 76.

Sunius apicalis Motsch. Bull. Mosc. XXXIII, 1860, II, p. 560.

Description: Length 3.5 – 3.7 mm; color reddish light brown to yellowish red; last abdominal segment more or less darkened; legs, antennae and mouth parts yellow; head without mouth parts, much longer than wide; eye large and strongly convex, hardly longer than the temple; head with fine and dense umbilicate punctures; antennae short, the 3rd segment slightly longer than the second and fourth; antennal segments 5 – 10 nearly 1.5 times as long as wide; pronotum oval, slightly longer than wide, as long as head without mouth parts; the widest point of pronotum is located towards the anterior quarter; usually as wide as head behind eyes; pronotum somewhat coarsely umbilicate punctures than the head; each anterior and posterior angles with black long seta, this seta as long as the third antennal segment; elytra longer than wide and longer than pronotum on its midline, at least as wide as head at eye level; densely and coarsely punctuate; the first three abdominal terga without erect, long setae to their apical border, beside paratergites, or with short black setae, these setae usually shorter than the first segment of middle tarsus; adeagus as in figures 154 & 155.

Distribution: Widespread species in Mediterranean region, Egypt, Tunisia, Portugal and Persia.

Specimen examined: Rod El-Farag (Shoubra, Cairo) 12/ 11/ 1907 (1), Cairo 2/ 5/ 1909 (2), Luxor 7/ 7/ 1904 (4), Tura 1/ 5/ 1913 (1), Tura 16/ 10/ 1910 (2), Tura October (3), Tura (1), Marg 9/ 1907 (1), Marg 18/ 10/ 1907 (2), Abu Rawash 1/ 1/ 1912 (5), Abu Rawash 20/ 9/ 1909 (2), Mazghona (Giza) 20/ 10/ 1907 (2), Massara 4/ 10/ 1907 (1), Katta 15/ 11/ 1910 (1), Egypt 1910 (29) [EESC]

Talbiah 29/ 11/ 1915 (1), Maadi 1/ 3/ 1912 (1), Kirdasa 20/ 1/ 1921 (1), Kirdasa 5/ 12/ 1920 (2) [ALFC]

Benha (Qaliubiya) 25/ 6/ 1912 (24), W. Digla 7/ 9/ 1923, W. Digla 1/ 8/ 1924, W. Digla 23/ 8/ 1925, Giza 2/ 8/ 1926, Asyut 12/ 11/ 1930, Helwan 26/ 6/ 1933, Barrage 10/ 9/ 1933, W. Digla 28/ 10/ 1934, Benha 25/ 11/ 1934, King Mariout 17/ 3/ 1935, Ramleh 12/ 6/ 1930 [MAC]

***Astenus (Astenognathus) nigromaculatus* Motsch., 1858**

(PLATE: XX, 73 and Figs. 150 and 151)

Sunius nigromaculatus Motsch., Bull. Mosc. XXXIII, 1858, II, p. 637.

Sunius simillimus Eppelsh. Deutsche Ent. Zeitschr. XXIV, 1885, p. 123.

Description: Length 3.5 mm; color reddish yellow to reddish brown; elytra with discal dark brown spot; last abdominal

tergite dark brown; legs, antennae and mouth parts yellow; head without mouth parts, as long as wide at eye level, slightly narrower behind eyes; eyes large and protruding, slightly longer than the temples; head covered with fine and dense umbilicated punctures; antennae rather long; 3rd antennal segment longer than the second or fourth; antennal segments 5 – 10 about twice as long as wide; pronotum oval, longer than wide, as long as the head without mouth parts; the widest point of pronotum is located towards the anterior third; pronotum slightly narrower than the head behind eyes; umbilicate punctures of the pronotum stronger and denser than punctures of the head; lateral side of pronotum with two long, black setae, at least as long as the third antennal segment, sometimes with one or two small setae between lateral long setae; elytra large, much longer than wide, much longer than pronotum on its midline, at least as wide as the head at eye level; elytra densely and coarsely punctuate; the first four abdominal terga, each with a long erect black seta on the apical margin near the paratergites; punctuation of abdomen of the same type of elytra, but finer and more denser than it; aedeagus as in figures 150 & 151.

Distribution: Egypt, Europe and Mauritania.

Specimen examined: 19 specimens

Beni Mazar 21/ 5/ 1915 (1), Alexandria 1910 (2), Tura 18/ 7/ 1909 (1), Tura October (1), Pyramids 12/ 11/ 1911 (1), Luxor 7/ 7/ 1909 (3), Luxor 20/ 9/ 1912 (10). [EESC]

Subtribe: Lathrobiina Laporte, 1835

Recognizable by the combination of: metatibiae at apex having a ctenidium on both sides; protarsi strongly dilated; head and pronotum shining, without microsculpture.

Genus: *Achenium* Curtis, 1826

Achenium Samouelle, British Ent. III, 1826, t. 115.

Type species: *Achenium depressum* (Gravehorst) Coleop. Microp. P: 182, n. 6.

Diagnosis: (After Coiffait, 1984) This genus can be recognized by the body flatter than all other paederinae; head quadrangular; eyes very small, several times smaller than the temple; head and pronotum bipunctate, with two distinct punctures diameters; antennae long, pilose, basal segment the longest, the 2nd shorter than the third one, 3rd slightly longer than fourth one, the following clavate, of nearly equal length; terminal segment conical (Fig. 96); labrum elongate, deeply bilobed, lobes ciliated internally, with few long bristles apically

(Fig. 94); mandible with two teeth on internal edge (Fig. 95); maxillary palp four palpomeres, 2nd and 3rd large, clavate; terminal segment much smaller and tapered toward apex (Fig. 97); pronotum with glabrous longitudinal strip medially and unevenly distributed punctures either side leaving areas devoid of coarse punctures; terminal segment of tarsi very long, nearly as long as the four basal segments; each of abdominal segments 1 – 5 with narrow yellow band at apical margin.

Description: Length 7 – 12 mm; form moderately sized, more flatter than other species of Paederinae; punctures of head and pronotum with two distinct diameters, intervals smooth and shining; elytra somewhat finer punctuate; abdominal tergites denser punctuate than pronotum and elytra, intervals leathery; head, pronotum and elytra with sparse, erect long setae, abdominal terga with denser setae; abdominal segments 1 – 5 with narrow yellow band at apical margin; head quadrangular, slightly wider than long, as wide as pronotum; eyes very small; temple large, nearly 2 times or more than diameter of eye; neck about one-half as wide as head width; labrum strongly emarginated, elongate, distinctly longer than wide, deeply bilobed, lobes ciliated internally, and with few long bristles at their apex (Fig. 94); mandibles large, acute with two teeth on internal edge (Fig. 95); maxillary palp four palpomeres, pilose,

1st palpomere small, 2nd and 3rd clavate, terminal palpomere much smaller and tapered toward apex (Fig. 97); antennae 11-segmented, long, inserted before the eyes close to the base of the mandible, basal segment the longest, the 2nd shorter than the third one, the 3rd slightly longer than fourth one, the following clavate, of nearly equal length; terminal segment conical (Fig. 96); pronotum quadrangular, slightly longer than wide, slightly tapered toward base; with glabrous longitudinal strip in centre and unevenly distributed punctures either side leaving areas devoid of coarse punctures; elytra quadrate, confusedly punctured; shining between punctures; legs robust; femora very robust, especially the anterior one; anterior tibia slender, suddenly dilated towards the apex, ciliated and emarginated internally; mid and hind tibiae simple; tarsi 5-segmented; terminal segment the longest, nearly as long as the four basal segments; the four basal segments of anterior tarsus very much dilated in both sexes, ciliated beneath; claws simple; each of abdominal segments 1 – 5 with narrow transverse yellow band at apical margin; abdominal terga with dense punctures, directed backward.

Key to the species of genus *Achenium* Samouelle

1- Large species, length 8 – 12 mm.; head, pronotum and

abdomen blackish red-brown; elytra paler than head or pronotum; temple large, nearly 2.5 times diameter of eye; lateral sides of temples slightly rounded; smaller punctures of head more dense at apical half of head; lateral sides of pronotum nearly parallel. *A. aequatum* Erichson

- Smaller species < 8 mm.; head and pronotum reddish brown; elytra and abdomen yellowish brown; temple nearly 2 times as diameter of eye; lateral sides of temples parallel; head with very sparse small punctures; apical third of pronotum distinctly wider than basal two-third, with sinuation laterally *A. cribriceps* Fauvel

***Achenium aequatum* Erichson, 1839**

(PLATE: XXII, 81 & 82 and Figs. 94 – 97)

Achenium aequatum Erichson, Gen. Spec. Staph. 1839 – 1840, p. 583.

Diagnosis: This species can be recognized from *Achenium cribriceps* Fauvel as follows: head, pronotum and abdomen blackish brown; temple nearly 2.5 times as diameter of eyes; lateral sides of temple slightly rounded; smaller punctures of head denser, especially at apical half ; lateral sides of pronotum nearly parallel, slightly divergent.

Description: Length 8.25 – 12 mm; head and pronotum equal in maximum width, slightly narrower than elytra; head, pronotum and abdomen blackish reddish brown; elytra paler than pronotum; legs and antennae reddish brown; head and pronotum bipunctate, with two punctures diameters; coarse punctures and finer or smaller punctures; intervals smooth and shining; eyes very small; temple large, 2.5 times as diameter of eye; lateral sides of temple slightly rounded; neck broad, nearly 1/2 as wide as head width; antennae 11-segmented, long, inserted before the eyes close to the base of the mandible, basal segment the longest, the 2nd shorter than the third one, the 3rd slightly longer than fourth one, the following clavate, of nearly equal length; terminal segment conical (Fig. 96); pronotum quadrangular, slightly longer than wide; slightly tapered toward base, with glabrous longitudinal strip in center; and unevenly distributed punctures either side leaving areas devoid of coarse punctures; smaller punctures more evenly distributed; elytra quadrate, confusedly punctured with erect long pubescence; intervals smooth and shining; legs robust, femora very robust, especially the anterior femora; anterior tibiae slender, suddenly dilated towards the apex, ciliated and emarginated internally; tarsi 5-segmented, terminal segments the longest, nearly as long as the four basal segments; the four basal segments of

anterior tarsi very much dilated, ciliated beneath; claws simple; abdominal terga with two paratergites laterally; each of abdominal segments 1 – 5 with narrow transverse yellow band at apical margin; abdominal terga densely punctuate, with long pubescence arise from the punctures directed backward.

Distribution: Europe and Egypt.

Specimens examined: Fayoum 4/ 1907 (2), Luxor 7/ 7/ 1910 (4), Luxor 20/ 9/ 1912 (4), Tura 1/ 4/ 1906 (1), Tura 16/ 10/ 1916 (1), Talbiah 8 (2), Talbiah 9 (4), Talbiah 6/ 10/ 1907 (2), Egypt 1910 (3), Beni Mazar 27/ 5/ 1915 (1), Mazghona 29/ 5/ 1915 (4), Abu Rawash 1/ 1/ 1914 (3), Pyramids 25/ 11/ 1912 (1), Pyramids 6/ 12/ 1908 (12), Barrage 24/ 4/ 1905 (1) Cairo 9 (1), Giza 5 (49) **[EESC]**

Talbiah 4/ 1/ 1910 (2), Talbiah 8/ 1/ 1910 (2), Kafr Hakim 23/ 10/ 1932 (1), Kafr Hakim 2/ 10/ 1932 (1) **[ALFC]**

Maadi 12/ 5/ 1913 (23), Kafr Hakim 5/ 12/ 1925, Mansouria 17/ 9/ 1927, Abu Rawash 24/ 9/ 1930, Kirdasa 2/ 10/ 1930, Assiut 12/ 11/ 1930, Kafr Hakim 2/ 10/ 1932, Giza 15/ 1/ 1933, Badrashin 29/ 1/ 1933, Kirdasa 22/ 10/ 1933, Kafr Hakim 19/ 11/ 1933, Pyramids 7/ 10/ 1934 **[MAC]**

Achenium cribriceps Fauvel, 1886

(PLATE: XXII, 83 & 84)

Achenium cribriceps Fauvel, Rev. d'Ent. V, 1886, p. 45.

This species differs from *A. aequatum* Erich. By the following: head and pronotum reddish brown, abdomen and elytra yellowish brown; distances between punctures of head wider and with fewer smaller punctures; lateral sides of temples parallel; temple nearly 2 times as diameter of eye; lateral sides of pronotum more divergent toward base, with sinuation at end of apical third.

Specimens examined: Luxor 20/ 9/ 1912 (1) [EESC]
Tura 29/ 1/ 1911 (1), Kafr Hakim 2/ 10/ 1932 (2), Kafr Hakim
23/ 10/ 1932 (1) [ALFC]
(7) Fayoum, 21/ 7/ 2004 (1) L. T. [MAC]

Subtribe: Paederina

This subtribe can be recognized by the form of the last maxillary palpomere: narrower than the preceding palpomere, wider than long, compressed, pubescent, truncate at apex (Fig. 92); protarsi strongly dilated (Pl. XXIII, 85B and Fig. 93).

Genus: *Paederus* Fabricius, 1775

Paederus Fabricius, Synst. Entom. 1775, p. 268.

Poederomorphus Gautier, Ann. Soc. Ent. Fr. (4) II, 1862, p. 75.
Leuopaederus Casey, Trans. Ac. St. Louis XV, 2, 1905, p. 59,
67.

Paederillus Casey, Trans. Ac. St. Louis XV, 2, 1905, p. 59, 62.

Type species: *Paederus riparius* Linne.

Diagnosis: This genus can be recognized by the following: head and pronotum highly polished with a few scattered punctures; fourth tarsal segment bilobed (PL. XXIII, 85C); anterior tarsus distinctly dilated; eyes moderately large, somewhat protruding, and larger than the temple.

Description: moderately sized, with parallel sides; head round to quadrate; disc highly polished with a few scattered punctures; neck one half as wide as head width; eyes moderately large, somewhat protruding, larger than the temple length; antenna 11-segmented, pilose; 1st segment long and robust; 2nd short, 3rd as long as the first but more slender, the following segments shorter; terminal segment conical and obliquely truncated (PL. XXIII, 85 A); labrum transverse, emarginated at apical margin (Fig. 90); mandible large, curved, acute with bifid tooth on the internal edge (Fig. 91); maxillary palp four palpomeres, 1st palpomere small, 2nd long clavate, 3rd very large, widely dilated, truncated apically, pubescent; 4th segment very short, nearly concealed (Fig. 92); ocelli absent;

gular sutures separated, parallel from base to middle, divergent to apex; pronotum globular, disc highly polished, with a few coarse scattered punctures; lateral carina absent, middle coxae contiguous; elytra quadrate; scutellum small, impunctate; tibiae without spines on outer edge; tarsi five segmented, 4th segment bilobed; anterior tarsus dilated; posterior tarsus with the first segment longest, next three decreasing in length, last segment slightly longer than the preceding (PL.XXIII, 85 C); abdomen very sparsely punctuate; paratergites present (Coiffait, 1984).

Subgenus: *Paederidus* Muls. et Rey, 1877

Paederidus Muls. et Rey, Ann. Soc. Linn. Lyon XXIV, 1877, p. 245.

***Paederus (Paederidus) memmonius* Erichson, 1840**

(PLATE: XXIII, 86)

Paederus memmonius Erichson, Gen. Spec. Staph. 1839 – 1840, p. 664.

Diagnosis: This species can be recognized from other species of the genus *Paederus* by the polished black coloration of all parts of the body.

Description: Length 6 – 7 mm; body entirely black, highly polished; head trapezoidal with bulging eyes that stand out from the general outline of the head; temple as long as diameter of eye or slightly shorter, sloping toward neck; head slightly wider than pronotum; neck nearly one-half as wide as head width; disc of head coarsely, sparsely punctuate, denser posteriorly; first antennal segment elongate and stout; 2nd one-half the third in length; 3rd as long as the first but slim; 4th – 6th antennal segments nearly 0.75 length of third and are equal; 7th – 10th antennal segments slightly shorter; the terminal segment obliquely truncated; pronotum ovate, coarsely, sparsely punctuate; elytra more denser punctuate than pronotum; abdomen finely punctuate, with ground fine microsculptures; 7th abdominal segment much longer than the others; in female, terminal segment with 2 styli; tarsi 5-segmented; the basal segment longest nearly two times as the second segment, 3rd shorter than 2nd; 4th bilobed, terminal segment as long as the second; claws simple; the basal four segment of protarsi are dilated (Fig.. 93); body densely pubescent.

Specimens examined:

Aswan 30/ 1/ 1954 (12)

[ASUC]

Barrage 14/ 1/ 1909 (2), Barrage 24/ 4/ 1905 (1), Barrage 18/ 5/ 1913 (6), Barrage 5 (5), Egypt 1910 (4), Egypt 1927 (6), Tura

8/ 4/ 1906 (3), Massara 22/ 11/ 1902 (1), Boulak El-Dakroul (Giza) 25/ 5/ 1903 ([1), Giza 1908 (1), Giza 2/ 1908 (1), Oratyeeen 1 (3), Warrak 30/ 1/ 1910 (2), Maadi 7 (42)

[EESC]

Maadi 24/ 5/ 1912 (4), Aswan 28/ 1/ 1923 (4) [ALFC]

Tisfa 7/ 9/ 1945 (5) [CUC]

Sheiha 8/ 5/ 1929 (16), Kitchener Island 6/ 3/ 1931, Barrage 26/ 8/ 1933, Giza 27/ 6/ 1937; Manial Sheiha 8/5/1929; Kitchener Island 6/3/1931; Barrage 26/8/1933; Giza 27/6/1937 (16 specimens) [MAC]

***Paederus (Paederus) alfieri* Koch, 1934**

(PLATE: XXIII, 85 A,B,C)

Paederus (Paederus) alfieri Koch, Bull. Soc. Royal Ent. Egypt, 1934, p. 80- 82.

Diagnosis: This species can be recognized by the yellow and blue coloration; head and 7th – 8th abdominal segments black; neck, pronotum, 3rd to 6th abdominal segment reddish yellow; elytra metallic blue.

Description: Length 5 – 6 mm; head, metasternum and two terminal abdominal segments black; basal four segments of antennae, mouth parts, neck, prothorax, mesosternum and legs except tarsi are reddish yellow; 5th to 11th antennal segments,

apical half of tarsal segments and claws are brown; elytra metallic blue; head and pronotum with few coarse punctures; elytra coarsely, densely punctuate; abdominal terga finely, sparsely punctuate with microsculpture integument; head and pronotum with black, sparse long pubescence, abdominal terga and elytra densely pubescent; head somewhat quadrate, slightly wider than long, as wide as pronotum; diameter of eye distinctly longer than length of temple, temple broadly rounded posteriorly; antennae as in *P. memnonius* Er.; neck nearly one-half width of head or slightly more; pronotum distinctly longer than wide, narrower than the elytra, slightly divergent toward posterior margin; highly polished, with a few large scattered punctures; without lateral carina; elytra quadrate, densely, coarsely punctuate, very densely pubescent, without lateral carina; tibiae without spines on the outer edge; tarsi five segmented; fourth bilobed; the four basal segments of anterior tarsus dilated; posterior tarsus with the first segment longest, next three segments decreasing in length; last segment a little longer than the preceding.

Specimens examined:

Yvoytaza 25/ 6/ 1923 (4), Siouf (Alexandria) 30/ 7/ 1934 (1), Siouf 13/ 7/ 1939 (1), Fayoum 2/ 5/ 1952 (1), Khatatbeh 23/ 5/ 1952 (1), Cairo 11/ 7/ 1952 (1), Ain Shams 19/ 12/ 1952 (2),

Pyramids 12/ 10/ 1953 (1), Sheben El Kom (Minofiya) (1)

..... [ASUC]

Sidi Gaber (Alexandria) 1/ 1909 (1), Sidi Gaber 31/ 12/ 1909 (1), Mataria (Cairo) 6 (1), Marg 4 (1), Marg 20/ 12/ 1907 (1), Wadan 8/ 9/ 1907 (1), Mazghona (Giza) 23/ 9/ 1905 (3), Giza 19/ 7/ 1897 (1), Rod El Farag 2/ 2/ 1904 (1), Cairo 25/ 7/ 1914 (1), Cairo 18/ 9/ 1914 (1), Cairo 9 (1), Cairo 20/ 10/ 1914 (1), Tura 19/ 4/ 1909 (1), Pyramids 6/ 12/ 1908 (1), Fayoum 10/ 1906 (1), Beni Mazar 25/ 3/ 1916 (1), Beni Mazar 27/ 5/ 1915 (3), Boulak El-Dakrour 27/ 7/ 1905 (1), Egypt 1927 (10), Kirdasa 1 (3), Qubba (Cairo) 10 (2), Abu Zaabal 1 (9), Mataria 5 (1), Mataria 6 (1), Khanka 3 (1), Talbiah 9 (27)

[EESC]

Abu Rawash 20/ 3/ 1955 (5), Giza 24/ 4/ 1955 (7), Tifsa 7/ 9/ 1944 (1), Giza 8/ 5/ 1955 (4), Tifsa 7/ 9/ 1945 (2), Abu Rawash 6/ 3/ 1955 (1), Abu Rawash 20/ 2/ 1955 (1), Abu Rawash 2/ 2/ 1955 (1), Giza 7/ 2/ 1955 (1)

[CUC]

Cairo 3/ 10/ 1941 (1), Barrage 20/ 5/ 1913 (1), Ezbet El-Nakhl 7/ 1909 (1), Talbiah 4/ 1/ 1910 (1), Talbiah 8/ 1/ 1910 (2), Shoubra 4/ 6/ 1910 (1), Kirdasa 13/ 2/ 1921 (1), Baharia Oasis 7/ 11/ 1928 (1), Massara 22/ 10/ 1911 (1), Cairo 2/ 4/ 1912 (1)

[ALFC]

Zagazig 2/ 6/ 1913 (49), Maadi 4/ 6/ 1913, Ain Shams 21/ 3/ 1914, Ezbet El-Nakhl 5/ 4/ 1914, Beni suef 29/ 7/ 1914, Ghezeira 27/ 7/ 1917, Ghezeira 8/ 1917, Ghezeira 11/ 9/ 1917, Ghezeira 16/ 12/ 1917, Gimmeiza (Gharbiya) 17/ 8/ 1918, G. Asfar 29/ 4/ 1922, Giza 16/ 6/ 1923, Giza 4/ 8/ 1923, G. Abu Seer 26/ 2/ 1924, Maadi 12/ 9/ 1924, Kafr Hakim 1/ 11/ 1924, Giza 17/ 11/ 1924, G. Asfar 25/ 10/ 1925, Mansouriya 25/ 11/ 1925, Mansouriya 17/ 9/ 1927, Magadlah (Giza) 3/ 9/ 1929, Kafr Hakim 20/ 3/ 1930, Helwan 30/ 8/ 1930, Toukh (Qaliubiya) 13/ 12/ 1931, Helwan 13/ 9/ 1932, Giza 15/ 1/ 1933, Pyramids 18/ 5/ 1933, Abu Rawash 21/ 5/ 1933, Dokki 18/ 9/ 1933, Dakhla 15/ 3/ 1934, Tamiya (Fayoum) 6/ 5/ 1934, Tamiya 13/ 5/ 1934; El-Kharga Oasis 7/ 1997 (9) L. T., Helwan 26/ 11/ 1929 (1), Saft (Giza) 22/ 1/ 1930 (4), Helwan 4/ 1/ 1930 (11), Helwan 31/ 12/ 1929 (3), Saft 15/ 1/ 1930 (13), Giza 23/ 8/ 1930 (2), Helwan 30/ 8/ 1930 (1), Helwan 5/ 7/ 1930 (2), Giza 29/ 6/ 1930 (1), Nahia 23/ 7/ 1930 (2), Nahia 27/ 7/ 1930 (3), Helwan 7/ 12/ 1929 (6), Helwan 26/ 8/ 1930 (2), Helwan 23/ 8/ 1930 (1), Helwan 18/ 3/ 1930 (2), Helwan 16/ 8/ 1930 (2), El-Mansura 28/ 10/ 1964 (4), Shebin El-Kom 24/ 6/ 1963 (4), Zagazig 24/ 4/ 1965 (2), Armant 2/ 1963 (4), Nahia 3/ 8/ 1930 (1), Helwan 5/ 11/ 1929 (2), Helwan 6/ 7/ 1929 (1), Kafr Hakim 20/ 7/ 1930 (9), Abu Rawash 27/ 4/ 1934

(1), Ismailia 10/ 1964 (2), Embaba (Giza) 24/ 9/ 1964 (8), Sakha (Kafr El-Shekh) 29/ 6/ 1963 (1), Saft 29/ 12/ 1929 (1), Giza 26/ 8/ 1928 (1), Zagazig 8/ 6/ 1964 (1), Tanta (Gharbiya) 17/ 5/ 1965 (2), Pyramids 24/ 11/ 1929 (1), Giza 15/ 11/ 1930 (1), Sabahia (Alex.) 10/ 1958 (26), Helwan 10/ 12/ 1929 (1), Helwan 25/ 3/ 1930 (1), Kirdasa 15/ 9/ 1929 (1), Helwan 8/ 3/ 1930 (1), Helwan 24/ 12/ 1929 (1), Armant 8/ 4/ 1969 (6), Aslut 4/ 4/ 1969 (1), Magadlah (Giza) 5/ 9/ 1929 (1), Tebeen (Helwan) 7/ 4/ 1927 (1) [MAC]

Tribe: Pinophilini Erichson, 1839

Pinophilini Er. Gen. Spec. Staph. 1839 – 1840, p. 668.

Pinophilinae Sharp, Biol. Centr. Amer. I, 2, 1882 – 1887 (1886), p. 618.

This tribe can be recognized by having the fourth segment of the maxillary palp is large and very obliquely truncate (Fig. 102). The anterior tarsus is broadly dilated in both sexes (Fig. 113). The fourth segments of mid and hind tarsi are bilobed (Fig. 114).

There are twenty-six genera world-wide, primarily in subtropical and tropical areas, two of which occur in Egypt. Two subtribes are known from Egypt, Pinophilina and Procirrina.

I. Subtribe: *Pinophilina*

This subtribe can be separated from subtribe *Procirrina* by having the abdomen terga distinctly margined laterally with two pairs of paratergites per segment. Nineteen genera are worldwide, only one of which occurs in Egypt.

Genus: *Pinophilus* Gravenhorst, 1802

Pinophilus Gravenhorst, Col. Micr. Brunsv. 1802, p. 201.

Lathrobium Fam. I. Grav. Mon. Micr. 1806, p. 129.

Pityophilus Brulle, Hist. Nat. Ins. III, 1835, p. 75.

Lycidius Leach in Dej. Catal. Ed. 3, 1837, p. 73.

About two hundred species have been described in this genus. Four of these are recorded from Egypt. All species are attracted to light at night.

Type species: *Pinophilus latipes* Gravenhorst, Col. Micr. Brunsev. 1806, p. 202.

This genus can be recognized by the following:

Body elongate slender, parallel-sided, distinctly densely punctuate; head quadrate, narrowed behind eyes to form a broad neck; antennae 11-segmented, filiform, their fossae located at the outer anterior margin of the head under a ridge; the first two basal antennal segments glabrous, with a few setae, remaining segments pubescent; mandible large, falcate,

with a large inner median tooth (Fig. 101); clypeus with straight apical margin; labrum shallowly bilobed; ocelli absent; maxillary palp four palpomeres; first palpomere small; second and third palpomeres large, widest at apex; fourth-segment about as large as third, very obliquely truncate with the truncation of distinctive texture (Fig. 102); labial palp three palpomeres; first palpomere about as wide as long; second about as wide as first; third segment slightly narrower than second, very little longer than wide, narrowed to bluntly pointed apex; mentum transverse, trapezoidal; gular sutures separate, most approximate along the middle, divergent ahead and behind; pronotum quadrate, regularly punctured; lateral carina entire; prosternum moderate, longitudinally carinate; trochantin large, round; hypomera broad; prothoracic epimera present, not delimited from the hypomera by a carina; mesosternal process acute, extending about one-third of the distance between the coxae; mesosternum longitudinally carinate only along its process; middle coxae contiguous; metasternal process obtuse, hardly extending between coxae; elytra quadrate; elytral epipleural not delimited by a carina; scutellum small, punctuate; all the coxae large; tibiae without spines on the outer edge; tarsi five-segmented; anterior tarsus broadly dilated (Fig. 113); posterior tarsus with first segment

almost as long as the next four together; third segment somewhat bilobed; fourth segment strongly bilobed (Fig. 114); fifth segment about as long as the preceding together; abdominal terga not impressed at base; the 3rd to 7th abdominal terga with two pairs of paratergites laterally; first sternum with a keel between coxae (Coiffait, 1984).

Key to subgenera and the species of genus *Pinophilus*

Gravenhorst

- 1- Elytra distinctly shorter and narrower than pronotum, without shoulders (Fig. 110); antennae moderately long, antennal segments elongate, nearly 2 times as long as wide (Fig. 104); eyes small; temple as long as diameter of eye; smaller species (7 mm).

Subgenus: *Pinophilinus*

P. (Pinophilinus) schatzmayri Koch

- Elytra longer and wider than pronotum, shoulders well developed (Figs. 111 & 112); antennae short to very long; eyes large; temple well developed to absent.... **2**
- 2- Antennae short, antennal segments stout, slightly longer than wide; eyes very large; temple entirely absent (Fig. 111); head and pronotum with dense and regular punctures. Subgenus: *Heteroleucus* ...

P. (Heteroleucus) brevicollis Er.

- Antennae very long, antennal segments slender, more than 3 times as long as wide; eyes large; temple well developed nearly as long as diameter of eye; punctuation of head and pronotum variable.

Subgenus: *Pinophilus*

3

- 3- Large species (13 – 18 mm); black; head with very scattered, coarse punctures at apical half; disc with impunctuate area (Fig. 142); posterior half densely and coarsely punctuate; punctuation of pronotum finer and denser than punctuation of head; temple nearly 3/4 length of eye diameter; antennal segments elongate, nearly 3.75 times as long as wide, 3rd segment 1.2 times as long as 4th; 3rd antennal segment longer than 2nd one (Fig. 103) *P. (Pinophilus) aegyptius* Erichson

- Smaller species (9.5 – 12 mm); dark brown to reddish brown; head and pronotum very finely and densely punctuate, and with a few coarse, scattered punctures; temple 1/3 the diameter of eye; antennae very long, reaches to mid length of elytra; 2nd and 3rd antennal segments sub equal in length.

P. (Pinophilus) wittmeri Koch

***Pinophilus (Pinophilus) aegyptius* Erichson, 1839**

(PLATE: XXIV, 87 & 88-88A)

(Figs. 101- 103, and 113 -114)

Pinophilus aegyptius Erichson Gen. Spec. Staph. 1839 - 1840, p. 673.

Pinophilus rufipes Kraatz, Arch. Naturg. XXV, 1859, I, p. 155.

Pinophilus aegyptius var. *punctatulus* Fauvel, Rev. d'Ent. XXIV, 1905, p. 150.

Description: Length: 13.5 – 18 mm; blackish brown; antennae, maxillary palp and legs are reddish brown; head sub quadrate, wider than long, nearly 1.3 times as wide as long; sparsely and coarsely punctuate at apical half, somewhat denser at posterior half beside eyes; with black pubescence behind eyes; eyes large; temple well developed, with parallel sides, nearly 3/4 diameter of eye; ocelli absent; neck nearly one-half head width; antennae filiform; 1st and 2nd antennal segment with a few long setae, the remaining segments densely pubescent; antennal segments elongate, nearly 3.75 times as long as wide, 3rd segment 1.2 times as long as 4th; two times as long as the 2nd segment; 5th to 11th antennal segments decreased in length toward apex; labrum transverse, emarginated medially, with long, stout setae near anterior margin; mandible with large inner blunt tooth medially (Fig. 101); 2nd to 4th maxillary

palpomeres subequal, the fourth segment hatchet-shaped (Fig. 102); labial palp three palpomeres, terminal segment pointed apically; mentum trapezoidal; gular sutures sharply divergent at apex and base, confluent medially; pronotum slightly longer than wide, slightly widest at anterior margin; lateral carina present; covered with pale yellowish pubescence; densely punctuate, punctures finer than punctures of head; anterior coxae large and conical, contiguous; anterior femur huge (Fig. 113); anterior tibia dilated apically, inner and external edges with numerous spine-like setae and other stout setae; anterior tarsus broadly dilated, covered with long stout setae (Fig. 113); elytra slightly long than wide; without epipleural ridge; densely punctuate; covered with yellowish pubescence and without striae; 4th tarsal segment of mid and hind legs bilobed; abdominal terga densely punctuate, densely pubescent, each abdominal terga III – VII with two pairs of paratergites.

Specimens examined: 31 specimens

Kirdasa 10/11/1922 (1), Kirdasa 6/11/1932 (1), Kafr Hakim 23/10/1932 (1), Mansouriah 25/10/1932 (1), Kafr Hakim 7/10/1934 (1), El-Eksas (Fayoum) 15/9/1959 (1) [ALFC]
Kafr Hakim 2/10/1912, Abu Rawash 24/9/1930, Kirdasa 5/10/1930, Kafr Hakim 23/9/1931, Magadlah 23/9/1931, Nahya 19/12/1931, Mansouriah 23/10/1932, Kafr Hakim

3/11/1932, Abu Rawash 6/11/1932, Bergash 20/9/1933,
Pyramids 8/10/1933, Pyramids 15/10/1933, Kafr Hakim
22/10/1933, Kafr Hakim 7/10/1934 (25 specimens) [MAC]

***Pinophilus (Pinophilus) wittmeri* Koch, 1934**

(PLATE: XXIV, 89 – 90 & Fig. 112)

Pinophilus (Pinophilus) wittmeri Koch, Bull. Soc. Roy. Ent.
d'Egypt, 1934, XVIII, pp. 70 – 74.

This species is recorded for the first time from Egypt by Koch, 1934. It differs from *P. (Pinophilus) aegyptius* Erichson as follows: smaller species (9.5 – 12 mm.); head, elytra and abdomen reddish dark brown; pronotum reddish brown; antennae, palpi, legs and last abdominal segment paler than head; eyes larger; temple smaller, nearly 1/3 eye diameter; 2nd and 3rd antennal segments equal in length, shorter than the 4th segment, the 4th segment the longest, nearly 1.25 as long as third; the remaining segments decreased in length toward apex; head and pronotum finely and densely punctuate, punctures very fine; intervals smooth and shining.

Specimens examined:

King Mariout 10/6/1936 (1), Pyramids 8/10/1933 (1), Kafr Hakim 23/10/1933 (1), Kafr Hakim 7/10/1934 (1), Mansouriah 2/10/1932 (1),), Kafr Hakim 2/10/1932 (1) [ALFC]

Kafr Hakim 2/ 10/ 1932, Kafr Hakim 23/7/1934, Pyramids 8/10/1933, Kafr Hakim 22/10/1933, Kafr Hakim 7/10/1934.

10 specimens [MAC]

***Pinophilus (Heteroleucus) brevicollis* Erichson, 1940**

(PLATE : XXV, 91 , 92 & Figs. 105 & 111)

Pinophilus brevicollis Erichson, Gen Spec. Staph. 1939 – 1940, p. 679.

This species can be recognized from other species of *Pinophilus* by the following: Length 7.5 – 8 mm; head, pronotum, elytra and abdomen reddish dark brown; palpi antennae and legs paler than head; head, pronotum and elytra densely and regular punctuate; eyes larger and protruding; temple absent; head strongly divergent behind eyes, not parallel (Fig. 111); antennae very short, reaches to mid length of pronotum; 2nd and 3rd antennal segments equal in length, nearly 1.3 times as long as wide; 4th to 10th antennal segments shorter, as long as wide (Fig. 105); pronotum transverse, wider than long, nearly 1.2 times as wide as long.

Specimens examined: 4 specimens

Assiut 10/1959 (1) [ALFC]

Maadi 10/7/1912 (2), Giza 26/11/1932 (1) [MAC]

***Pinophilus (Pinophilinus) schatzmayri* Koch, 1934**

(PLATE: XXIV, 93, 94 & Figs. 104 & 110)

Pinophilus (Pinophilinus) schatzmayri Koch, Bull. Soc. Roy. Ent. Egypt, 1934, XVIII, pp. 75 – 76.

This species is recorded for the first time from Egypt by Koch, 1934. It differs from other species of *Pinophilus* as follows:

The smallest species of this genus (7 mm.); reddish brown; head as wide as pronotum, wider than elytra, nearly 1.25 times as wide as elytra, also, elytra distinctly shorter than pronotum, nearly 0.87 as long as pronotum; head and pronotum densely and finely punctuate; antennae filiform, 1st antennal segment dilated toward apex; 2nd and 3rd antennal segments slender, nearly 2 times as long as wide, 4th to 10th antennal segments slightly shorter than the third, but slightly wider than it (Fig. 104); eyes moderately large, its diameter longer than length of temple; abdominal segment distinctly wider than elytra, as wide as pronotum.

Specimens examined:

Gabal Elba, W. Aideb 28 – 29/ 2/ 1938

[MAC]

II. Subtribe: Procirrina Bernhauer and Schubert, 1912

This subtribe can be recognized from Pinophilina by having the abdominal segments cylindrical, tergum and sternum of each fused into a ring, lacking paratergites. Seven genera are placed here, only one of which occurs in Egypt.

Genus: *Procirrus* Latrielle

Procirrus Latrielle, Régne Anim. IV, 1829, p. 436.

Moderate sized, parallel; head, pronotum and elytra densely punctuate with similarly punctured; head: oval, disc convex; densely punctuate; gradually divergent behind eyes to a neck with is about one-third of the width of the head, neck as long as wide; eyes slightly protruding; temple well developed, slightly longer than the diameter of eye; antennae 11-segmented; filiform, the first segment about 1.5 times the second; 2nd longer than 3rd; 4th to 10th decreasing in length toward apex, shorter than the third segment; the terminal segment elongate, nearly 3 times as long as wide; clypeal margin straight; maxillary palp four palpomeres; first smaller than the remaining segments; 2nd to 4th distinctly longer than

wide, widest apically; pronotum distinctly longer than wide, equal to elytra to longer than it; anterior margin slightly wider than posterior margin; densely punctuate; lateral carina absent; elytra quadrate; elytral epipleural carina absent; anterior tarsus dilated; posterior tarsus with the first segment much longer than the next four together; 4th segment bilobed; abdominal terga without lateral paratergites, abdominal segments cylindrical, tergum and sternum of each fused into a ring (Coiffait, 1984).

Key to the species of genus *Procirrus* Latrielle

- 1- The third palpomere of maxillary palp elongate, three times as long as wide (Fig. 108); 8th antennal segment elongate, nearly 2 times as long as wide, longer than 7th or 9th antennal segments; elytra wider than pronotum, as long as pronotal length in female, shorter in male; lateral sides of temple immediately divergent behind eyes (Fig..109 arrow).

***P. lefevrei* Latreile**

- The third palpomere of maxillary palp wider, two times as long as wide (Fig. 106); 8th antennal segment 1.6 times as long as wide; 4th to 9th antennal segment equal in length and width; elytra distinctly shorter than pronotum, nearly

0.85 as long as pronotum in male, as long as in female; lateral sides of temple distinctly parallel behind eyes, then divergent with broad curve at posterior half toward neck (Fig. 107 arrow) *P. aristidis* Fauvel

***Procirrus (Procirrus) aristidis* Fauvel, 1886**

(PLATE : XXVI, 95 – 96 & Figs. 106 , 107)

Procirrus (Procirrus) aristidis Fauvel, Rev. d'Ent. V, 1886, p. 33.

Description: length 4.5 – 5.5 mm; body dark brown except palpi, antennae and legs yellowish; head and pronotum with umbilicate punctures; elytra and abdomen densely punctuate; abdomen with yellowish pubescence laterally; head oval; slightly longer than wide, 1.25 times as long as wide; apical margin of clypeus straight; eyes small, slightly protruding; temple 1.6 times as long as diameter of eye, with parallel sides at apical half, broadly rounded at posterior half (Fig. 107); antennae long, filiform, reaches to midline of pronotum; first antennal segment three times as long as wide; 1.5 times as long as the second segment; each of antennal segments 3 – 10 nearly one-half the length of second segment; 3rd to 10th segments are equal in length and width; the last segment very long, nearly 3.75 as long as wide; neck one-third as wide as head; pronotum

elongate, nearly 1.5 times as long as wide; narrower than head, nearly 0.85 as wide as head; anterior margin wider than posterior one; with dense umbilicate punctures; elytra distinctly shorter than pronotum in male, as long as in female; anterior tarsus broadly dilated; tibiae without spines at outer edges; the first segment of posterior tarsus very long, much longer than the next four segments; abdomen densely punctuate, abdominal terga without lateral paratergites, with yellowish pubescence laterally.

Specimens examined: 4 specimens

El-Wasta 25/3/1934 (1), Pyramids 17/10/1934 (1) [MAC]

Luxor 20/9/1912 (2) [EESC]

***Procirrus (Procirrus) aristidis* var. *hybridus* Koch, 1934**

Procirrus (Procirrus) aristidis var. *hybridus* Koch, Bull. Soc. Roy. Ent. Egypt, 1934, p. 78 - 79.

This variety is recorded by Koch, (1934) for the first time of Egypt. It differs from *P. aristidis* by the elytra are wider and longer than pronotum, also much wider than the head.

Procirrus (Procirrus) lefevrei Latriele, 1829

(PLATE : XXVI, 97– 98 & Figs. 108 , 109)

Procirrus lefebvrei Latriele, Règne Anim. IV, 1829, p. 436.

Remark: The specific name of this species changed by Herman (2003) from *lefebvrei* to *lefevrei*.

Description: length 6.5 – 8 mm; body dark brown except palpi, antennae and legs paler; each of abdominal terga III – V with narrow yellow band at apical margin; head and pronotum with dense umbilicate punctures; elytra with dense, coarse punctures; body with scattered pubescence; head oval; slightly longer than wide, 1.1 as long as wide; disc convex; eyes large; distance between eyes 1.6 times as diameter of eye; temple immediately divergent behind eyes toward neck, distinctly longer than eye diameter (1.2 times); neck slightly more one-third head width; antennae long, filiform, the first antennal segment is the longest; longer than the second, nearly 1.6 times as long as second; 3rd antennal segment slightly shorter than the second, the next three decreasing in length; 8th antennal segment longer than 7th or 9th antennal segment which are equal in length and width; 8th antennal segment slightly more two times as long as wide; the last antennal segment three times as long as wide ; pronotum 1.6 times as long as wide; narrower than the head, much narrower than elytra; lateral sides slightly

divergent toward posterior margin; elytra quadrate, as long as wide, as long as pronotal length; protarsi broadly dilated; the first segment of posterior tarsus distinctly longer than the next four segments; abdominal segments densely punctate, abdominal terga without lateral paratergites; tergites covered with silk pubescence laterally, scattered medially.

Specimens examined: 4 specimens

Kirdasa 1/10/1973 (1)

[ALFC]

Maadi 21/7/1912 (1), Pyramids 10/9/1932 (1), Kafr Hakim
22/10/1933 (1)

[MAC]

Mataria 15/10/1908 (2), Beni Mazar (1)

[EESC]

***Procirrus (Procirrus) lefevrei macrops* Koch, 1934**

Procirrus (Procirrus) lefevrei macrops Koch, Bull. Soc. Roy. Ent. Egypt, 1934, p. 77 – 79.

This subspecies differs from *P. lefevrei* by the larger eye and the distance between eyes is nearly 1.5 times as eye diameter. The 8th antennal segment is shorter, nearly 1.5 as long as wide, slightly longer than the 7th or 9th antennal segments. The elytra are much longer than the pronotum.

Specimen examined:

Kirdasa (Giza) 1/10/1973

[ALFC]

SUMMARY

The present work was planned to study the recent taxonomic status of the available species of subfamily Oxytelinae and subfamily Paederinae (Family: Staphylinidae) in Egypt. This study based on the following steps:

- 1- The examination of the old and recent literature about the rove beetles within the scope of the subfamily Oxytelinae and subfamily Paederinae.
- 2- The examination of the specimens which were collected from the field by light traps or other methods during this study or those preserved specimens in the different Egyptian Insect Collections in the general and the collection of Plant Protection Research Institute, Ministry of Agriculture particularly.

The Egyptian species of subfamily Oxytelinae and subfamily Paederinae are revised taxonomically. In the present work, seventy three species belonging to 26 subgenera, 17 genera and 4 tribes are identified. The diagnostic features of higher categories with some illustrations are provided.

The descriptions of all species under investigation based on the external morphological characters are given in detail with illustrations and photos of these species. Synonymies of genera and species are provided. Keys to subfamilies, tribes, genera

and species are constructed to facilitate identification of all these categories. Aedeagus and spermatheca of available species are illustrated to help in the determined the studied species. The present study contains 157 figures of taxonomic characters to help in the identification.

A special part is devoted to give an idea about the specimens examined for each studied species, with respect to localities and date of collection.

The present taxonomic study leads to the following changes:

- The tribes Omaliini, Osoriini, and Piestini of subfamily Oxytelinae (Alfieri, 1976) are elevated to the subfamily rank.
- The subfamily Oxytelinae includes four tribes, namely: Deleastrini, Coprophilini, Thinobiini and Oxytelini. The last two tribes are represented in Egypt.
- The tribe Thinobiini includes the following genera: *Bledius*, *Eppelsheimius*, *Thinibius*, *Thinodromus*, and *Carpelimus*.
- The tribe Oxytelini contains only three genera: *Oxytelus*, *Anotylus*, and *Platystethus*.
- The following subgenera are elevated to the generic level. These subgenera are: *Thinodromus* (subgenus of *Carpelimus*), *Anotylus* (subgenus of *Oxytelus*),

Chloécharis (subgenus of *Medon*), *Lithocharis* (subgenus of *Medon*), and *Pseudomedon* (subgenus of *Medon*).

- Genus *Trogophloeus* is a synonym of *Carpelimus*.
- The species *Trogophloeus (Trogophloeus) cooperi* is a synonym of *Carpelimus (Carpelimus) anthracinus* (Muls. & Rey) and the species *Bledius (Euceratobledius) haedus* is a synonym of *Bledius (Euceratobledius) furcatus* Olivieri.
- The species *Trogophloeus (Carpelimus) transversalis* Wollaston is transferred to *Thinodromus transversalis* (Wollaston).
- The following species are transferred from subgenus *Astenus* (Alfieri, 1976) to subgenus *Astenognathus*: *Astenus (Astenus) bimaculatus*, *A. (Astenus) filiform*, *A. (Astenus) melanurus*, and *A. (Astenus) nigromaculatus*.
- The species *Astenus (Astenognathus) aegyptiacus* Coiffait and *Scopaeus (Anomoscopaeus) sinaicus* Coiffait are added to the Egyptian fauna.
- The spelling of the species *Procirrus (Procirrus) lefebvrei* is changed to *P. (Procirrus) lefevrie*.
- The species *Scopaeus (scopaeus) debilis* is transferred to *Scopaeus (Hyposcopaeus) debilis*, while the species

Scopaeus (scopaeus) gracilis is transferred to *Scopaeus (Anomoscopaeus) gracilis* .

- Twelve species recorded from Egypt in the monograph of Alfieri (1976) but not available in the different collections of Egypt and not collected during the study: *Bledius (Elbidus) Kochi* Cameron; *Bledius (Hesperophilus) arenarius* Pay. *Bledius (Hesperophilus) debilis* Erichson; *Platystethus (Pycnocraerus)arenarius* Fourcroy; *Trogophloeus (Trogophloeus) robustulus* Koch; *Trogophloeus (Trogophloeus) rufipennis* Eppelsheim; *Astenus (Astenognathus) indicus* Kraatz; *Scopaeus (Heteroscopaeus) beieri* Scheerpeltz; *Scopaeus (Heteroscopaeus)schremmeri* Scheerpeltz; *Scopaeus (Scopaeus) crassipes* Wollaston; *Paederus (Paederus) sabaesus* Erichson; *Oedichirus terminatus* Erichson. All these species may be misidentification or have been wrongly recorded from Egypt.