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ABSTRACT

In the present study, fourteen species of tribe Aleocharini belonging to two genera and five subgenera are recognized from Egypt. The first genus (Aleochara) includes twelve species belonging to five subgenera while the second one (Piochardia) contains only two species. Key to genera, subgenera and species accompanied with illustrations of taxonomic features and photos of available species are provided. Synonyms, diagnosis, bionomics and distribution of species are present.

INTRODUCTION

Family Staphylinidae is one of the largest families of beetles with over 46,200 known species placed in more than 3,200 genera. Nearly 400 species are added each year (Newton et al. 2005). Alfieri in his monograph (1976) listed about 255 species of family Staphylinidae from Egypt. According to Smetana (2004), 15 species of tribe Aleocharini are listed from Egypt, 13 species of the genus Aleochara Gravenhorst and 2 species of the genus Piochardia Heyden. According to Assing (2007) the species Aleochara ebneri Scheerpeltz, 1929 which drop under the species A. moesta Grav. So the list becomes 14 species recorded in Egypt.

Adult and larvae of the genus Aleochara may be found in fly-infested habitats such as carrion, animal droppings, and decay organic matter. Adults are mainly predacious on eggs, larvae, and pupae of cyclorrhaphous Diptera (Klimaszewski & Crosby, 1997). The species of the genus Piochardia are associated with the ants of Cataglyphis bicolor (F.) (Assing, 1999).

Gravenhorst (1802) was the first who erected the aleocharine genera Aleochara and Callicrus, and separated them as distinct subfamily. Bernhauer (1901 & 1902) presented a diagnostic key to the genera of the tribe Aleocharini, separating Piochardia and Aleochara from all other Palaeartctic genera by the number of joints of the maxillary and labial palpi. The taxonomic status of tribe Aleocharini was discussed by Fauvel (1886 & 1902), Reitter (1909), Fenyes (1920), Bernhauer and Scheerpeltz (1926), Scheerpeltz (1929), Koch (1934 & 1936), Sawada (1972), Seevers (1978), Klimaszewski (1984), Klimaszewski, and Jansen (1993 & 1994), Assing (1999 & 2007), Smetana (2004), Newton et al. (2005), and Park and Ahn (2010). The purpose of the present study is to clarify the taxonomic status of...
Egyptian species of the tribe Aleocharini and also to assist in the identification of these species.

MATERIALS AND METHODS

The practical part of the present study was carried out by the examination of the available specimens of tribe Aleocharini in the main Egyptian reference insect collections, in addition to the fresh materials that are collected during the study from different localities of Egypt. Microscopic preparations were used to illustrate and drawing the taxonomic characters of related species. All drawings were made by square eyepiece. Photographs were taken with Olympus E-330 digital camera joining stereomicroscope. The digital images were then imported into Adobe Photoshop CS5 for labeling and plate composition. The main Egyptian insect collections are: Collection of Ain Shams Univ., Faculty of Science. (ASUC); Collection of Al-Azhar Univ., Faculty of Agriculture (ALFC); Collection of Cairo Univ., Faculty of Science (CUC); Collection of Egyptian Entomology Society (EESC) and Collection of Ministry of Agriculture, Plant Protection Research Institute (MAC).

RESULTS AND DISCUSSION

Subfamily: Aleocharinae Fleming, 1821

The Aleocharinae are a widespread and rather large subfamily of Staphylinidae, comprising more than 12,000 species worldwide out of 1740 genera (Herman, 2001).

Tribe: Aleocharini Fleming, 1821

Diagnosis: Tarsi 5-5-5 segmented; each of maxillary and labial palpi with a minute apical pseudosegment (Fig.1). This tribe contains at least fifteen genera worldwide, placed in three subtribes. Only one subtribe, two genera and fourteen species occur in Egypt (Smetana, 2004).

Key to genera, subgenera and species of tribe Aleocharini Fleming of Egypt

<table>
<thead>
<tr>
<th>Key</th>
<th>Description</th>
<th>Genus/Subgenus</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Maxillary and labial palpi 5- and 4 segmented, respectively, both with terminal pseudosegment (Fig.1); antennomeres 1-3 elongate, 4-10 usually transverse, basal constrictions visible (Figs.2 &amp; 36); body usually with parallel sides, more or less narrowed backwards, but never wedged – shaped (Figs. 29 - 30)……………………………………………Genus: <strong>Aleochara</strong> Gravenhorst</td>
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<tr>
<td>2</td>
<td>- Maxillary and labial palpi 4- and 3 segmented, respectively, both with terminal pseudosegment; antennae rather short and compact; somewhat flattened; antennomeres contiguous, basal constrictions invisible; body very wide at the front; pronotum very wide, at least as wide as the elytra; elytra short; abdomen continuously tapering from base to apex, wedged-shaped (Fig. 34)…………………………………………………..Genus: <strong>Piochardia</strong> Heyden</td>
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<tr>
<td>3</td>
<td>Pronotum with smooth and impunctate median longitudinal area bounded by two longitudinal parallel or subparallel rows of impressed punctures (Fig. 3); mesosternum with longitudinal carina (Fig. 4)……….……………………………………………Subgenus: <strong>Coprochara</strong> Muls. &amp; Rey</td>
<td></td>
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<tr>
<td>4</td>
<td>- Pronotum uniformly punctate (Fig. 36), smooth and impunctate longitudinal median area absent; mesosternum with or without carina…</td>
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</tr>
<tr>
<td>5</td>
<td>Elytra with a pair of large yellowish red spots extending from suture to latero -</td>
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...
posterior margins (Fig. 29); pronotum with two smooth, regular longitudinal rows of dense punctures, sparsely punctate at sides (Fig. 3); basal impressions of abdominal terga densely punctate, punctures appearing elongated; aedeagus as in figure 9; spermatheca with 3-4 coils (Fig. 11); length 1.5 - 4.5 mm. ................................. A. (Coprochara) bipustulatus L.

- Elytra with a pair of small reddish to yellowish spots near posterior margin and suture (Fig. 30); pronotum with punctures of longitudinal rows stronger and deeper, coarsely punctate at sides; basal impressions of abdominal terga sparsely punctate, punctures appearing rounded; aedeagus as in figure 8 spermatheca with 8-12 coils (Fig. 12); length 2.8 - 4.5 mm. ................................. A. (Coprochara) verna Say

- Pronotum very slightly transverse, at most one-fifth wider than long; head very large, almost as wide as pronotum; eyes of normal size, not protruding and moderately arched; legs very slender, metatarsi very long, as long as or longer than metatibiae (Fig. 31); antennae very slender, antennomeres 6-10 at most weakly transverse; 1st to 4th abdominal terga with basal transversal impressions; body reddish brown to black................................. Subgenus: Rheochara Muls. & Rey

- Pronotum distinctly transverse; head smaller; Legs normal; metatarsi moderately slim, more or less short, distinctly much shorter than metatibiae; 1st to 3rd abdominal terga with basal transversal impressions...

- Mesosternum without longitudinal carina; Mesosternal process narrow, sharply pointed apically; antennae mostly strongly thickened towards apical end; antennomeres 6 - 10 three times as wide as long (Fig. 2 & 36); pronotum narrower than elytra; abdomen more or less narrowed apically (Fig. 35); smaller species from 2 – 4 mm................................. Subgenus: Heterochara Muls. & Rey

- Mesosternum usually carinate (Fig. 4); Mesosternal process blunt or almost truncated apically; antennomeres 6-10 less than 3 times as wide as long...

- The third antennomere distinctly shorter than the second, the fourth antennomere strongly transverse and very short, the fifth antennomere nearly twice as wide as the fourth, three times as wide as long, antennomeres 6 – 10 clearly equal in width, narrower than the fifth antennomere; the elytra monochrome red, much longer than the pronotum and longer than the related species; the 7th abdominal tergum of male with strong longitudinal median carina, protruding posteriorly; length 3.2 mm................................. A. (Heterochara) lamellate Fauvel

- The third antennomere equal in length with the second or shorter, fifth antennomere slightly wider than the fourth, two times as wide as long, distinctly narrower than antennomeres 6 – 10................................. Subgenus: Heterochara Muls. & Rey

- Head wider than half of the pronotum; the third antennomere distinctly shorter than the second; pronotum dull, little shiny, 1.5 times as wide as long, and coarsely punctate; elytra more yellowish than A. clavicornis, body length 2mm or less; dorsal surface of 7th abdominal tergum of male with small granules ................................................................. A. (Heterochara) bonnairei Fauvel

- Head narrower than half of the pronotum (Fig. 33); 2nd and 3rd antennomeres elongated and with the same length; pronotum strongly glossy, two times as wide as long, sides of pronotum reddish translucent, finer punctate; elytra reddish to yellowish red, with blackish base; body larger, black (2.5 - 3.5 mm); base of antennae, palpi, legs and apex of abdomen yellowish-red; 7th abdominal terga of
<table>
<thead>
<tr>
<th>8</th>
<th>Elytra densely punctate, intervals between punctures as long as puncture diameter; abdominal terga distinctly narrowed apically, more or less pointed (Fig. 33) …………………………………………</th>
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<tbody>
<tr>
<td>8</td>
<td>Elytra sparsely punctate, intervals between punctures larger than puncture diameter; abdominal terga with parallel sides or slightly narrowed backwards (Figs. 29, 32 &amp; 37) …………………………………………</td>
</tr>
<tr>
<td>9</td>
<td>Latero-posterior margins of elytra rounded; pronotum as broad as elytra, twice as wide as long, finer punctate than elytra; frontal abdominal terga densely and evenly punctate; body small (1.5 – 3.0 mm); fore-body brilliant, abdomen dull; antennomeres 6-10 about 1.3 times as wide as long; latero - posterior margin rounded; abdomen constricted backwards, finely and densely punctate; Length 1.5 - 3.0 mm………………………………………</td>
</tr>
<tr>
<td>10</td>
<td>Elytra sparsely punctate, intervals between punctures larger than puncture diameter; abdominal terga with parallel sides or slightly narrowed backwards (Figs. 29, 32 &amp; 37) …………………………………………</td>
</tr>
<tr>
<td>11</td>
<td>Latero-posterior margins of elytra clearly emarginated (Fig. 5); pronotum transverse, nearly 1.6 times as wide as long; elytra distinctly transverse, nearly 2.5 times as wide as long; pronotum and elytra finely punctuate and densely pubescent; antennomeres 6 -10 slightly transverse, each at most 1.5 times as wide as long; body brown to reddish brown, elytra bicolorred, often with 2 transverse paler spots extending from shoulder to outer posterior angle; legs, basal antennal segments, palpi, pronotal margin, and tip of abdomen reddish brown; tergal impressions glabrous or with fine punctuation; length 3 - 5 mm(Fig. 33) ………………………………………………………………………………………………………</td>
</tr>
<tr>
<td>12</td>
<td>Latero-posterior margins of elytra slightly emarginated; Frontal abdominal terga sparsely punctate; 4th palpomere short, very narrower than 3rd palpomere basally; apical antennomere as long as the two preceding segments combined; abdomen somewhat narrowed backwards</td>
</tr>
<tr>
<td>13</td>
<td>Frontal abdominal terga much denser punctuate than posterior terga; black; elytra at posterior margin near suture with irregular red to yellowish-red spots (Fig. 32), this spot sometimes occupy a large area of elytra; legs pitch-brown, tarsi brighter; Length 4.5 – 6 mm …………………………………………</td>
</tr>
<tr>
<td>14</td>
<td>Frontal and basal abdominal terga with the same punctures, dense and fine punctures; black; elytra reddish yellow to brown – yellow, darkened to blackish at its base and around suture, sides of elytra brown, sometimes monochrome; base of antennae, palpi and legs brown-red; tarsi brighter; Length 3- 5 mm (Fig. 37)……………………………………………………………………………………………………</td>
</tr>
<tr>
<td>15</td>
<td>Body black; Elytra with two small to large yellowish-red spots; 3rd antennomere as long as the second, antennomeres 6-10 nealy twice as wide as long; pronotum as wide as elytra, 1.5 times as wide as long, very sparsely punctate; elytra as long as pronotum; abdomen slightly densely punctate; aedeagus as in figure 10; spermatheca (fig. 13); Length 2.5 – 5.5 mm………………………………………</td>
</tr>
<tr>
<td>16</td>
<td>Fore body yellowish red to brick-red, abdomen deep black; 3rd antennomere</td>
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</table>
Tribe Aleocharini of Egypt (Coleoptera: Staphylinidae: Aleocharinae)

longer than the second; antennomeres 6-10 nearly 1.5 times as wide as long; pronotum slightly narrower than elytra, nearly 1.3 times as wide as long, densely punctate; elytra scarcely longer than pronotum; abdomen impunctate; Length 3.5 mm. .................................................. A. (Xenochara) rutilipennes Kraatz

1 Pronotum on average more transverse, more than 1.5 times as wide as long, dorsal surface less convex and the sides somewhat flatter; abdominal terga finely and densely punctate; hind margin of abdominal tergum VIII in both sexes with semicircular concavity (Fig. 23); male sternite VIII truncated at apical margin (Fig. 24); aedeagus as in Figure 23; spermathecal as in figure 2.5 ................. .......................................................... Piochardia bedeli (Fauvel)

- Pronotum on average less transverse, less than 1.5 times as wide as long; dorsal surface more convex, lateral margins more strongly bent downwards; posterior halves of the abdominal terga (transversal impressions) sparser and coarser punctate; concavity of abdominal tergum VIII less pronounced; male sternite VIII as in figure 20; aedeagus as in Figure 27 ................. Piochadia schaumi (Kraatz)

(1) Genus: Aleochara Gravenhorst, 1802


Diagnosis: This diagnosis is modified from Klimaszewski (1984)

Body spindle shaped, narrowly oval or subparallel medially; pronotum large and transverse, hypomera not visible in lateral view; mesocoxae narrowly separated; abdominal terga 3-5 impressed basally with fine to coarse punctate; maxillary palp 4-segmented with an apical pseudosegment; labial palp 3-segmented with an apical pseudosegment; ligula small, bilobed apically; 9th tergum divided by 10th tergum into 2 symmetrical parts.

The genus Aleochara is a large group in subfamily Aleocharinae, comprising more than 450 species in 19 subgenera (Park & Ahn, 2010). According to Smetana (2004), only five subgenera occur in Egypt as follow: Barydoma Thomson, Coprochara Mulsant & Rey., Heterochara Mulsant & Rey., Rheochara Mulsant & Rey., and Xenochara Mulsant & Rey.

Subgenus: Barydoma Thomson

Barydoma Thomson Öfversigt af Kongl. Vetenskaps - Akademiens Förhandlingar, 1858, 15: 31 [Type species: Aleochara intricate Mannerheim, 1830]

(1) Aleochara (Barydoma) crassa Baudi di Selve, 1848

Aleochara crassa Baudi di Selve, Studi Entomologici, 1848, 1: 120.
Aleochara pulicaria Rosenhauer, Thiere Andal., 1856: 66.
Aleochara eurynota Mulsant & Rey, Opusc. Entom., XII, 1861: 98.

Diagnosis: This species can be recognized by the following characters: black, elytra usually brown or reddish brown, base of antennae, maxillary palpi and legs brownish red; abdomen slightly shiny, strongly constricted with fine and dense punctures.

Materials examined: Alexandria, 9/1906; Egypt, 1910 (2 specimens); Abu Rawash, 1912 (4 specimens). .................................................. {7 specimens from: EESC}

Distribution: Croatia, France, Greece, Hungary, Italy, Syria, Yemen and Afrotropical Region (Smetana, 2004)
Subgenus: *Coprochara* Mulsant & Rey

*Coprochara* Mulsant & Rey, 1874: 146 [Type species: *Aleochara bilineata* Gyllenhal, Ins. Suec, 1810, II, 436].

= *Baryodma* Thomson, 1858.

**Diagnosis:** The subgenus *Coprochara* can be distinguished from the other subgenera of *Aleochara* by the following characters (see details in Klimaszewski, 1984; Klimaszewski & Jansen, 1994; Maus, 1998): antennae thick, antennomeres 5-10 clearly transverse; pronotum with two longitudinal, parallel or subparallel rows of more or less impressed punctures on midline (Fig. 3); elytra in some species with a pair of orange or yellow spots near posterior margin and suture; mesosternum with complete longitudinal carina (Fig. 4); spermatheca usually multiply coiled posteriorly, varying from 1 to more than 100 coils (Figs. 11–12).

The subgenus *Coprochara* includes 37 species worldwide and 18 species from the Palearctic region (Maus, 1998; Smetana, 2004). This subgenus is widely distributed in all zoogeographical regions (Klimaszewski, 1984). Only two species recorded from Egypt as follow:

(2) *Aleochara (Coprochara) bipustulatus* Linnaeus, 1760


*Homalola biguttula* Kolenati, Petropoli: Typis Imperialis Academiae Scientiarum, 1848: 8.

*Staphylinus bipunctata* Olivier, Coleopteres, 1795: [42]: 31.


*Aleochara nitida* Gravenhorst, Brunsuigae: Carolus Reichard,1802: 97.


*Aleochara unicolor* Schilsky, Deutsche Enlamolagische Zeitschrift, 1908: 600.

**Diagnosis:** This species differs from *A. (Coprochara) verna* by the following character states: spots of elytra larger; transversal impressions of terga with dense, elongated punctures; aedeagus as in figure 9; spermatheca with 3-4 thin coils (Fig. 11).

**Materials examined:** Zeiton, 18/3/1906; Abu Rawash, 1912 (2 specimens); 25/12/1910 (3 specimens); Tura, 12/12/1908; 11/4/1909; 9/2/1909; Egypt, 1910; Helwan, 9/2/1913; 11/4/1915; Beni Mazar, 3/1915; Mazghuna, 10/3/1907 (7 specimens); 27/9/1908; Marazig, 2/1908; Hammam, 4/5/1908; 10/5/1908; 2/1909; Khanka, 26/2/1911; Ismailia, without date; 4/10/1912; Pyramids, 2/11/1911; 12/1915; 10/3/1916; Heliopois, 15/2/1917 (2 specimens); Alexandria, 27/4/1914 (4 specimens); 3/1916; Marg, without date; Massara, without date (6 specimens) ………………………………………………………………………………….{47 specimens from: EESC}

Ezbet El-Nakhal, 2/3/1917; Geuit El-Quseb, 17/3/1916 (3 specimens); Helwan, 23/2/1917 (3 specimens); W. Isla, 10/4/1940; Pyramids, 22/3/1912; W. Ghadeirat, 24/5/1935; El-Arish, 22/5/1935; W. hoff, 1/4/1915; El- Kosseima, 25/5/1935; Ismailia, 17/4/1933 …………………………………………………………….{14 specimens from: ALFC}


Cairo, 4/7/1936………………………………………………………….{One specimen from: CUC}

Cairo, without date (3 specimens); Smouha, 17/5/1932 (2 specimens)
Aleocharini of Egypt (Coleoptera: Staphylinidae: Aleocharinae)

**Distribution:** Europe; North Africa (Algeria, Canary Islands, Egypt, Morocco, Tunisia and Madeira); Asia (Egypt: Sinai) [Smetana, 2004].

(3) *Aleochara* (Coprochara) verna Say, 1833

*Aleochara verna* Say, untitled continuation of Say, 1830, 1833: 58.
*Aleochara languida* Sachse, Entomologische Zeitung (Stettin), 13:1852: 117.
*Baryodma pauxilla* Mulsant & Rey, Paris: Deyrolle, 1874: 159.

**Diagnosis:** This species can be distinguished from *A. (Coprochara) bipustilatus* by the following character states: elytra with small yellow spots; transversal impressions of apical terga with sparse and rounded punctates; male and female sternites VIII as in figures 6 and 7 respectively; aedeagus as in figure 8; spermatheca with 8-12 thin coils (Fig. 12)

**Materials examined:**
- Egypt, 1910: One specimen from: EESC
- Maadi, 27/3/1933 and 9/5/1933: Two specimens from: MAC
- without any data from: One specimen from ASUC

**Distribution:** Europe, North Africa (Algeria, Canary Islands, Egypt, Libya, Morocco and Madeira); Asia (Smetana 2004).

Subgenus: *Heterochara* Mulsant & Rey

*Heterochara Mulsant & Rey, 1874: 15* [Type species *Aleochara clavicornis* L. Redtenbacher, Fn. Austr., 1849 (1): 822].

(4) *Aleochara* (Heterochara) bonnairei Fauvel, 1898

*Aleochara bonnairei* Fauvel, Revue d'Entomologie 17, 1898:112.

**Diagnosis:** This species closely related to *A. clavicornis* and can be recognized by the head wider in proportion to the pronotum; 3rd antennomere much shorter than second; pronotum much narrower than elytra with dense hairs; elytra finer and much denser than *A. clavicornis*; 7th tergum in male with small granules.

**Distribution:** North Africa (Algeria, Egypt, Tunisia)

**Note:** this species is not represented in the Egyptian collections.

(5) *Aleochara* (Heterochara) clavicornis Redtenbacher, 1849

*Aleochara crassicornis* Mulsant & Rey, Paris: Deyrolle, 1874: 36.

**Diagnosis:** This species can be recognized by the following characters: shiny deep black with red elytra, abdominal apical end brownish red, basal segments of antennae, palpi, legs yellowish red; latero-posterior margin of elytra not emarginated; second and third antennomeres equal in length; 5th antennomere wider than 4th and
narrower than 6th – 10th antennomeres; pronotum twice as wide as long, narrower
than elytra, strongly polished and finely and densely punctate; 7th abdominal tergum
of male with small longitudinal median carina, protruding posteriorly.

**Material examined:** El-Arish, 22/5/1935………….. {One specimen from: MAC}

**Distribution:** Europe; North Africa (Algeria, Canary Islands, Egypt, Morocco and
Madeira); Asia (Egypt: Sinai; Israel; Syria and Yemen) [Smetana, 2004]

(6) *Aleochara (Heterochara) lamellate* Fauvel, 1886


**Diagnosis:** This species differs from the other species of subgenus *Heterochara* by
the formation of antennae and the comparatively long elytra; antennae suddenly thick
from 5th antennomere; 3rd antennomere distinctly shorter than the second; 4th
antennomere strongly transverse, more than twice as wide as long; 5th antennomere
more than three times as wide as long, twice as wide as 4th and wider than
antennomeres 6 – 10; elytra much longer than pronotum, monochrome red, coarser
and sparser punctate than other species; 7th abdominal tergum of male with strong
longitudinal median carina, protruding posteriorly.

**Distribution:** Europe (Spain); North Africa (Algeria, Egypt) [Smetana, 2004].

**Notes:** This species is not represented in the Egyptian collections.

Subgenus: *Rheochara* Mulsant & Rey

*Rheochara* Mulsant & Rey, 1875: 163 [Type species: *Ocalea spadicea*
Erichson, 1837]

(7) *Aleochara (Rheochara) renatae* Koch, 1936

*Aleochara renatae* Koch, Pubblicazioni del MuseoEntomologico ”Pietro Rossî”
(Duino) I, 1936: 230.

**Diagnosis:** This species easily recognized by the following characters: metatarsi
slender and very long, distinctly longer than metatibia; head very large, almost as
wide as pronotum; the later very weakly transverse, nearly 1.2 as wide as long.

**Distribution:** North Africa (Egypt).

**Notes:** This species is not represented in the Egyptian collections.

Subgenus: *Xenochara* Mulsant & Rey

*Xenochara* Mulsant & Rey, 1874: 60 [Type species: *Aleochara decorate* Aubé, 1850]

*Xenochara* Mulsant & Rey, 1874: 60.

*Polychara* Mulsant & Rey, 1874: 64.

*Isochara* Bernhauer, 1901: 440, 461.

**Diagnosis:** The subgenus *Xenochara* can be distinguished by the following
characters: body small to medium sized (length 1.5 - 7 mm); body uniformly
pubescent, on elytra usually directed straight posteriorly; 4th antennomere usually
longer than wide (except *A. tristis*, transverse); 4th maxillary palpomere usually long
(1/3 to 3/4 length of the third palpomere); mandibular internal tooth absent or weakly
present; mesosternum completely carinate or occasionally partially carinate; spines
of lateral margins of fore and mesotibia present, absent on metatibia.

(8) *Aleochara (Xenochara) laevigata* Gyllenhal, 1810


*Aleochara apicalis* Menetries, Catalogue raisonne, 1832: 147


**Tribe Aleocharini of Egypt (Coleoptera: Staphylinidae: Aleocharinae)**

*Aleochara bisignata* Erichson, Die Kafer der Mark Brandenburg, 1837: 357

*Aleochara lonae* Gridelli, Bollettino della Societa Enlomologica Italiana 56, 1924b: 41

**Diagnosis:** This species can be recognized by the following characters: body 3-5 mm; shining black; elytra with a pair of small to large yellowish red spots; pronotum and elytra equal in width and length; pronotum glossy and very sparsely punctate; abdomen narrowed backwards, very densely punctate.

**Distribution:** Europe; North Africa (Algeria, Egypt, Morocco); Asia. [Smetana, 2004]

**Material examined:** Fayoum .................. {5 specimens from: MAC}

(9) *Aleochara (Xenochara) moesta* Gravenhorst, 1802

*Aleochara moesta* Gravenhorst, Coleoptera Microptera, 1802: 96.


*Aleochara (Isochara) ebneri* Scheerpeltz, 1929: 246. Assing (2007: 204) proposed that *A. ebneri* is a new synonym of *Aleochara moesta*.

**Diagnosis:** This species closely related to *A. tristis* and distinguished from it by absence of long, protruding hairs; pronotum somewhat finely punctate, with fine and not dense, yellowish hairs; elytra somewhat less strong and denser punctate than *A. tristis*; abdomen uniformly and extremely densely punctate.

**Materials examined:** Alexandria, 5/1906; 1/1909 (7 specimens); 7/5/1909 (6 specimens); 6/3/1917 (3 specimens); 2/6/1910 (2 specimens); 6/7/1915; 9/1909 (2 specimens); Egypt, 1910 (2 specimens); Mataria, 20/12/1903 (12 specimens); Mariut, 2/5/1911 (3 specimens); Hammam, 2/1909 (2 specimens); Abu Rawash, 1912 (11 specimens); 13/8/1910; 25/12/1910 (2 specimens); Cairo, 7/4/1908; 15/4/1915; 3/11/1903; Heliopolis, 15/2/1917; Shoubra, 3/3/1915; 30/3/1915 (2 specimens); Misr without data (2 specimens); Ramleh, 10/7/1927; Alag, 7/1/1917…………………………...{72 specimens from: EESC} Kasr El-Nil 15/10/1908 (2 specimens); Fauna, 4/1910; Sakkara, 27/11/1932; 4/12/1932; Cairo, 4/1910; Kirdasa, 5/12/1920 (2 specimens); 10/4/1910; Exbet El Nakhl, 2/3/1917 (2 specimens); Helwan, 23/2/1917………………………………..………...{12 specimens from: ALFC} W. Hoff, 10/3/1916; Giza, 26/11/1932; 14/1/1933; Sakkara, 4/12/1932; Cairo, 1/1933………………………………. {6 specimens from: MAC} Cairo, 11/1/1936; 25/1/1936; 20/4/1936; 20/5/1936 (2 specimens); 23/5/1936; 1/6/1936; 4/7/1936 (6 specimens); 27/12/1936; 16/1/1937; 20/1/1937 (8 specimens); 27/12/1937………………………………. {24 specimens from: CUC} Montazah, 4/5/1922; 11/2/1923; Smouha, 16/4/1939………{3 specimens from: ASUC} **Distribution:** Europe, North Africa (Algeria, Canary Islands, Egypt, Morocco, Madeira and Tunisia); Asia.

(10) *Aleochara (Xenochara) puberula* Klug, 1832


*Aleochara armilagei* Wollaston, Insecta Maderensia, 1854: 559.

*Aleochara badia* Motschulsky, Bulletin de la Societe Imperiale des Naturalistes de Moscou 31(3) , 1858: 237.


*Oxypoda brunnescens* Motschulsky, Bulletin de la Societe Imperiale des Naturalistes
Aleochara decorata Aube, Annales de la Societe Entomologique de France (2) 8, 1850: 311.
Aleochara deserta Erichson, Ersler Band, 1839: 173.
Aleochara dubia Fauvel, Annales de la Societe Entomologique de France (4) 3, 1863c: 428.
Aleochara major Eichelbaum, Berliner Entomologische Zeitschrift 56, 1912: 176.
Aleochara vaga Erichson, Ersler Band, 1839: 172.

**Diagnosis:** This species differs from other species by the following characters: latero-posterior margins of elytra emarginated; apical margin of sternum VIII of male rounded (Fig. 14) and slightly emarginated on female (Fig. 15); body brown to reddish brown, elytra bicolored, often with 2 transverse paler spots extending from shoulder to outer posterior angle; legs, basal antennal segments, palpi, pronotal margin, and tip of abdomen reddish brown; 4th antennomere longer than wide; 5th antennomere transverse; aedeagus as in figure 28 and spermatheca as in figure 16.

**Materials examined:** Luxor, 7/7/1909 (5 specimens); Alexandria, 1910; 8/3/1917; 5/7/1909; 7/7/1908; 16/7/1911 (3 specimens); Warrak, 25/7/1909; Egypt, 1910; Kouba, 15/10/1906(2 specimens); Abu Rawash, 25/12/1910 (4 specimens); Sidi Gaber, 29/7/1917 (2 specimens); Shoubra, 5/4/1915…………. \(29\) specimens from: EESC
Marg, 28/2/1913; Sherbeen, 23/4/1913; W. Rashid, 21/2/1914; Ain Shams, 6/3/1914; Massara, 3/4/1914; Maadi, 10/4/1914; Suez Road, 20/4/1914; Kirdasa, 31/7/1932; 1/10/1933; Giza, 4/11/1932; 15/1/1933; 26/11/1934; Abu Rawash, 29/10/1933; Abu Zabal, 24/6/1934………………………………. \{16 specimens from: MAC\} w. Hoff, 22/1/1933…………………………………\{One specimen from: ALFC\}

**Distribution:** Europe, North Africa (Algeria, Canary Islands, Egypt, Morocco, Madeira and Tunsia); Asia [Smetana, 2004]

(11) *Aleochara (Xenochara) rutilipennis* Kraatz, 1859

*Aleochara semirubra* Fauvel, Annali del Musea Civico di Storia Naturaledi Genova, 1877, 10: 293.

**Diagnosis:** In addition to the characters of the key, this species can be recognized by the following characters: basal antennomeres 1-3 brown; palpi and legs yellowish red; apical antennomere as long as the two previous segments combined; head wider than half width of pronotum; elytra moderately strong and moderately dense punctate.

**Distribution:** Russia, Egypt, India, Kazakhstan, Uzbekistan [Smetana, 2004]

**Note:** this species is not represented in the Egyptian collection.

(12) *Aleochara (Xenochara) tristis* Gravenhorst, 1806

*Aleochara (Xenochara) tristis* Gravenhorst, Monographia Coleopterorum Micropterorum., 1806: 170.
*Aleochara bimaculata* Stephens, In: Illustrations of British entomology;1832: 158.
*Staphylinus bipunculala* Olivier, Entomologie, 1795: [42]: 31.
*Aleochara erecreselosa* Jekel, Coleoptera Jekeliana, 1873: 41.
*Aleochara flavomaculala* Menetries, Catalogue raisonne, 1832: 147.
*Staphylinus geometrica* Schrank, Fauna Boica, 1798: 642.
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*Baryodma nigripennis* Mulsant & Rey, In: Histoire naturelle des coteolopes de France, 1874b:76.

*Aleochara nigripes* Miller, Verhandlungen des Zoologisch-Bolanischen Verein'in Wien 2[1852], 1853:27.

**Diagnosis:** This species differs from other species of *Aleochara* by the equal width of abdominal terga; pronotum and elytra with dense protruding pubescence; apical abdominal terga with coarse and dense punctures, the posterior half of these terga less coarsely and less densely punctate; head narrower than half width of pronotum; antennomeres 6-10 distinctly transverse, almost twice as wide as long; pronotum slightly narrower than elytra, nearly 1.5 times as wide as long, glossy and moderately densely punctate; length 4.5 – 6.0 mm.

**Materials examined:** Egypt, 1910; Alag, 7/1/1917 (2 specimens)………………………... {3 specimens from: EESC}

Giza, 15/1/1933……………………………….………………..{5 specimens from: ALFC}

Giza, 20/11/1932; 26/11/1932; Sakkara, 15/1/1933………{7 specimens from: MAC}

**Distribution:** Europe, North Africa (Algeria, Canary Egypt, Morocco and Tunisia); Asia [Smetana, 2004]

(2) Genus: *Piochardia* Heyden, 1870

*Piochardia* Heyden, 1870:75 [Type species: *Piochardia lepismiformis* Heyden, 1870]

*Oxysoma* Kraatz, 1857: 17 [Type species *Oxysoma schaumii* Kraatz, 1857]

**Diagnosis:** this diagnosis is modified from Assing (1999).

Body shape characteristic, wedged-like, with very wide pronotum, short elytra, and abdomen continuously tapering from base to apex (Fig. 34); head transverse and with large eyes; antennae rather short and compact; somewhat flattened, in cross-section more or less ellipsoid; basal constrictions of antennomeres invisible; maxillary and labial palpi 4- and 3-segmented, respectively, both with terminal pseudosegment; ligula broadly bifid; pronotum strongly transverse, much wider posteriorly than anteriorly with maximal width in posterior half; hind angles rounded; hind margin sinuate; hypomera obsolete; elytra clearly shorter than pronotum; hind wings fully developed; longitudinal carina of mesosternum absent; mesosternal process acute and reaching between mesocoxae; legs very long and slender, hind tarsi almost as long as hind tibiae; first joint of metatarsus elongate, at least as long as the combined length of the two following joints; tibiae without spines; abdominal terga without anterior transversal impressions; sexual dimorphism of segment VIII indistinct or absent.

**Male:** median lobe of aedeagus very long and slender, internal sac with weakly sclerotized apical structures and short flagellum (Figs. 26 & 27)

**Female:** spermatheca with large round capsule and short duct (Figs. 22 & 25)

**Bionomics:** Species of *Piochardia* are associated with the genus *Cataglyphis* Foerster (Family: Formicidae: Hymenoptera) most of them have been found with ants of the *Cataglyphis bicolor* species group. Two species recorded from Egypt as follow:

(13) *Piochardia schaumi* (Kraatz, 1857)


**Diagnosis:** Body bicolour; head, pronotum and abdomen blackish brown; elytra, margins of pronotum, hind margins of abdominal terga, antennomeres 3-10,
maxillary palpi and legs ferruginous; antennomeres 1-2 and apical half of antennomere 11 yellowish; pubescence of pronotum, elytra and abdomen less dense than *P. bedeli*; head and pronotum transverse; elytra much shorter than pronotum, finely punctate; metasternum shorter than metatibia; hind margin of tergum VIII distinctly concave (Fig. 21); hind margin of sternum VIII weakly pointed in both sexes (Fig. 20); aedeagus and spermatheca (Figs. 22 & 27).

**Materials examined:** Kirdasa, 5/12/1920…………….{One specimen from: ALFC}
Kirdasa, 1/10/1933; Abu Rawash, 29/10/1933; Barrage, 31/8/1935
…………………………………………..…..{5 specimens from: MAC}

**Distribution:** See Smetana (2004): North Africa (Algeria, Egypt, Libya, Morocco and Tunisia); Asia (Jordon).

(14) *Piochardia bedeli* (Fauvel, 1886)


*Piochardia bedeli* (Fauvel): Bernhauer (1902) - Bernhauer & Scheerpeltz (1926) and Fenyes 1920).

**Diagnosis:** Similar to *P. schaumii* but differs as follow: sides of pronotum usually more widely ferruginous, sometimes most of the pronotum brownish; pubescence of pronotum and elytra denser than in *P. schaumii*; antenna somewhat stouter; antennomere 4 subquadrate to weakly transverse (in *P. schaumii* usually at least slightly oblong) and antennomere 6 more distinctly transverse, approximately two times longer than wide; pronotum more transverse, dorsal surface less convex and the sides somewhat flatter, distinct denser punctate; first segment of metatarsi on average relatively longer; abdominal terga finer and denser punctate; hind margin of tergum VIII almost semicircular concavity (Fig. 23), hind margin of male sternum VIII truncated (Fig. 24); aedeagus fig 26.; spermatheca as in fig. 25

**Distribution:** North Africa (Algeria, Tunisia and Egypt).

**Material examined:** Kirdasa, 12/10/1965; (2) Abu Rawash, 20/10/1994…………………………………………..…………{3 specimens from: MAC}
Tribe Aleocharini of Egypt (Coleoptera: Staphylinidae: Aleocharinae)

Figs. 1, 4, 5: *A (Xenochara) puberula*: Fig. 1: Maxillary and labial palpi; Fig. 4: Meso and metasternum; Fig 5: left elytron; Fig. 2: Antenna of *A. (Heterochara) clavicornis*; Figs. 3, 9, 12: *A. (Coprochara) bipustulatus*: Fig. 3: Pronotum; Fig. 9: Aedeagus; Fig. 12: Spermatheca; Figs. 6-8 & 11: *A. ((Coprochara) verna*: Fig. 6: Male sternite VIII; Fig. 7: Female sternite VIII; Fig. 8: Aedeagus; Fig. 11: Spermatheca; Figs. 10 & 13: *A. (Xenochara) laevigata*; Fig. 10: Aedeagus; Fig. 13: Spermatheca.
Figs. 14 - 16 & 28: *A. (Xenochara) puberula*: Fig. 14: male sternite VIII; Fig. 15: male tergite VIII; Fig. 16: spermatheca; Fig. 28: aedeagus; Figs. 17 - 19: *A. (Xenochara) tristis*: Fig. 17: male sternite VIII; Fig. 18: female sternite VIII; Fig. 19: spermatheca; Figs. 20 - 22 & 27: *Piochardia schaumii*: Fig. 20: male sternite VIII; Fig. 21: female sternite VIII; Fig. 22: spermatheca; Fig. 27: aedeagus; Figs. 23 - 25 & 26: *Piochardia bedeli*: Fig. 23: male sternite VIII; Fig. 24: female sternite VIII; Fig. 25: spermatheca; Fig. 26: aedeagus.
Fig. 29: *A. (Coprochara) bipustulatus*; Fig. 30: *A. (Coprochara) verna*; Fig. 31: *A. (Rheochara) renatae*; Fig. 32: *A. Xenochara) tristis*; Fig. 33: *A. (xenochara) puberula*; Fig. 34: *Piochardia schaumii*. Scale = 1 mm.
Figs. 35 - 36: *A. (Heterochara) clavicornis*; Fig. 37: *A. (Xenochara) moesta*. Scale = 1mm
REFERENCES


