

A REVIEW OF THE EGYPTIAN ANT FLOWER BEETLES (*AMBLYDERUS*, *HIRTICOLLIS*, *LEPTALEUS*, *PSEUDOLETEALEUS*) (COLEOPTERA, ANTHICIDAE, ANTHICINI)

Ali A. El-Gharbawy¹, Mahmoud S. Abdel-Dayem² & Ashraf M. El-Torkey³

¹ Plant Protection Dept., College of Food and Agriculture Sciences, King Saud University – aali@ksu.edu.sa

² Entomology Dept., Faculty of Science, Cairo University, Giza, Egypt. – msabdeldayem@cu.edu.eg

³ Plant Protection Dept., College of Food and Agriculture Sciences, King Saud University – aeltorkey@ksu.edu.sa

Abstract: This is the second paper of a series reviewing the Egyptian Anthicidae. The present paper deals with the eight species of ant beetles belonging to the four genera known to occur in Egypt: *Amblyderus* LaFerté-Sénectère, *Hirticollis* Marseul, *Leptaleus* LaFerté-Sénectère and *Pseudoleptaleus* Pic. Keys are provided to separate these species, and for each of them there is a diagnosis, detailed information about its distribution and some ecological notes.

Key words: Coleoptera, Anthicidae, taxonomy, distribution, keys, Palaearctic region, North Africa, Egypt.

Revisión de los anticinos (*Amblyderus*, *Hirticollis*, *Leptaleus*, *Pseudoleptaleus*) (Coleoptera, Anthicidae, Anthicini) de Egipto

Resumen: Este es el segundo de una serie de trabajos dedicados a una revisión de los Anthicidae egipcios. El presente artículo se ocupa de las ocho especies de anticinos encuadradas en los cuatro géneros conocidos de Egipto: *Amblyderus* LaFerté-Sénectère, *Hirticollis* Marseul, *Leptaleus* LaFerté-Sénectère y *Pseudoleptaleus* Pic. Se incluyen claves para la separación de dichas especies y se hace una diagnosis de las especies, acompañada de información detallada de su distribución y algunas notas sobre su ecología.

Palabras clave: Coleoptera, Anthicidae, taxonomía, distribución, claves, Paleártico, África septentrional, Egipto.

Introduction

Family Anthicidae, are moderate-sized; about 3000 species under 40 genera (Booth *et al.*, 1990). They are characteristically narrow-bodied beetles with a distinctive pronotum that is constricted posteriorly and are usually black or dark brown, sometimes with patches of dull red or yellow. Some species have an obvious horn on the anterior border of pronotum.

Member of the tribe Anthicini have the pronotal apex broadly and smoothly curved without any development into a large tubercle, lack pits on the pronotum posterior to the cervical articulations, and have a distinct rounded collar at the pronotal apex encircling the neck (Chandler, 2002).

In earlier list, Peyerimhoff (1907) listed two species from Sinai Peninsula under *Leptaleus* namely *L. glabellus* Truqui and *L. maximicollis* Pic. While, in 1933 Schatzmayr and Koch published the only taxonomic work so far on the ant beetles known from Egypt, they listed *Anthicus hispidus* Rossi (currently belonging to *Hirticollis*) with other species. Moreover, in 1935 Koch added 4 more species to the previous list belonging to *Amblyderus* and *Leptaleus*. In addition, Hanna (1970) recorded *Leptaleus unifasciatus* (currently *Pseudoleptaleus unifasciatus*) from Assiut on light trap and also Pic (1899); Koch (1935, 1937) and Sahlberg (1913). The most recent comprehensive list of Egyptian ant beetles is included in Alfieri's "Coleoptera of Egypt" (1976), but among Egyptian species this list includes several synonyms, so that the eight species and varieties, which belong to the four genera of this work, mean very little as a reliable total. All species known from Egypt are listed also by Chandler *et al.* (2008b).

The most important investigations about survey and zoogeographical distribution of the anthicids of old world were given by Bonadona (1958, 1969 & 1991); Bucciarelli (1980); Chandler (2000); Chandler *et al.* (2004, 2008a &

2008b); Chikatunov *et al.* (2005); Hille (1985 & 1989); Kejval (2002, 2003, 2006 & 2009); Koch (1937); Nardi & Mifsud (2003); Nardi (2004); Pic (1894, 1899 & 1911); Pic & Hawkins (1957); Sahlberg (1913); Schembri (1991); Telnov (1998, 2007 & 2008); Truqui (1855); Uhmamn (1985, 1988, 1989, 1990, 1992 & 1998) and Uhmamn *et al.* (2005).

Since 1933, when Schatzmayr and Koch work was published, there has been offered no comprehensive taxonomic study of Egyptian ant beetle genus *Anthicus* (sensu lato). The present paper and the first paper (El-Torkey *et al.*, 2005) of the designed series are intended to serve as a base of such a study. This study dealing with eight species belonging currently to four genera (*Amblyderus*, *Hirticollis*, *Leptaleus* and *Pseudoleptaleus*), which known to occur in Egypt. However, El-Torkey *et al.* (2005) reviewed 21 Egyptian species that belonging to 3 genera (*Anthicus*, *Omonadus*, and *Stricticollis*).

Material and methods

The present taxonomic work started by examination of the Egyptian Insect Reference Collections for materials regarded as anthicid beetles under investigation. These collections are: Collection of A. Alfieri, Al-Azhar University, Faculty of Agriculture (**ALFC**); Collection of Ain Shams University, Faculty of Science, Entomology Department (**ASUC**); Collection of Cairo University, Faculty of Science, Entomology Department (**CUC**); Collection of Egyptian Entomological Society (**EESC**) and Collection of Ministry of Agriculture, Plant Protection Research Institute (**MAC**). A field survey of anthicid beetles was carried out to cover practically different geographical localities of Egypt. From every species, dry

mounting is made for keeping in the authors' collection (MSAC) and to help in recording the general appearance and the external morphology. The examined material was identified recording to keys of Schatzmayr and Koch (1933), Koch (1935) and Uhmann (1992) also the original description of each species was consulted. Mounting specimens and slides preparation with drawing of some species was made in laboratory of insect research, Plant Protection Department, College of Food and Agriculture Sciences, King Saud University. The nomenclature and systematic adopted are according to Bonadona (1991) and Chandler *et al.* (2008b). Terminology used in species descriptions is mainly based on Marsuel (1879) Schatzmayr and Koch (1933), Koch (1935) and Uhmann (1992). Examination and illustrations of the external features of specimens were achieved using M6C-9 (made in USSR) stereo binocular microscope. All drawings were made by square eye-piece. Ocular micrometer was used in making measurements.

The male genitalia couldn't be examined during this study, due to the regulation implemented in the collection, which prevent the extracting the genitalia from any preserved specimen.

The source of local distribution for each species is based on the material examined and published data.

Result and discussion

I. *Amblyderus* LaFerté-Sénectère, 1847

Amblyderus LaFerté-Sénectère, 1847: 368.
Inamblyderus Pic, 1911, 27: 134

TYPE SPECIES: *Anthicus scabricollis* LaFerté-Sénectère, 1847

KEY TO SPECIES OF AMBLYDERUS:

- 1 The anterior margin of frons bilobed; disc of pronotum without longitudinal furrow (Fig. 6) *truncatus*
- The anterior margin of frons not bilobed; disc of pronotum with longitudinal furrow *sabulosus*

NOTE: *Amblyderus maculipennis* Pic, 1898 was recorded from Ethiopia by Pic 1898, and not from Egypt. Chandler *et al.* (2008b) listed Egypt as one of the global distribution of this species; and we have no evidence for its occurrence in Egypt. Accordingly this species not included in the current study.

1. *Amblyderus sabulosus* Pic, 1899

Amblyderus sabulosus Pic, 1899: 173.

TYPE LOCALITY: Palestine: Jaffa.

DIAGNOSIS: (After Pic, 1899)

Body length: 2.5-3 mm. Yellow testaceous blade, head and pronotum more or less darkened. Pubescence generally grey. Punctuation: head irregularly punctated; elytra with strong and slightly dense punctuation.

MATERIAL EXAMINED: no specimens available.

LOCAL DISTRIBUTION: Western part of the Mediterranean Coast. King Mariout, IV, (Alfieri, 1976).

GLOBAL DISTRIBUTION: distributed in Palestine and Egypt by Pic (1911).

2. *Amblyderus truncatus* LaFerté-Sénectère, 1849a

Fig. 3 & 6.

Amblyderus truncatus LaFerté-Sénectère, 1849a: 3.

TYPE LOCALITY: Egypt.

DIAGNOSIS: Body length: 1.6-1.8 mm, width of elytra: 0.5-0.7 mm. Head length: 0.3-0.35 mm, width: 0.3-0.35 mm; Pronotal length: 0.4-0.45 mm, width: 0.3-0.4 mm; Elytral length: 0.9-1.0 mm, width: 0.5-0.7 mm. Color: entirely brilliant pale yellow

testaceous, eyes black, pronotum sprinkled anteriorly with small blackish asperities. Anterior margin of pronotum with a small corn regularly dents (Fig. 3). Punctuation: rather coarsely on the head, not distinct on pronotum, finely on elytra. Pubescence: slightly on the head; pronotum nearly glabrous; elytra covered with short hairs.

MATERIAL EXAMINED: Abu Qir, 12.VIII.1934 (2), Ismailia, 17.IV.1933 (1), Kirdasa, VII (1), Sidi Bicher, 19.V.1922 (15) ALC; Abu Qir, 12.VIII.1934 (18), Abu Qir, 12.VIII.1934 (1) MAC; Abu Qir, 12.VIII.1934 (1) ASUC; Abu Qir, 12.VIII.1934 (1) EESC.

LOCAL DISTRIBUTION: Western part of the Mediterranean Coast, Suez Canal region, and Nile Delta & Lower Nile Valley; this distribution is based on Koch (1935), Alfieri (1976) and the examined specimens.

GLOBAL DISTRIBUTION: Egypt and Afrotropical region (Chandler *et al.*, 2008b).

II. *Hirticollis* Marseul, 1879

Anthicus (*Hirticollis*) Marseul, 1879: 67

TYPE SPECIES: *Notoxus quadriguttatus* Rossi, 1792: 1.

SYNONYM: *Hirticomus* Pic, 1894: 69.

KEY TO SPECIES OF HIRTICOLLIS:

- 1 Body covered with numerous brown very long bristles (Fig. 8) *hispidus*
- Body covered with little numerous grayish bristles (Fig. 7) *biplagiatus*

1. *Hirticollis biplagiatus* (LaFerté-Sénectère, 1849c)

Fig. 2 & 7.

Anthicus biplagiatus LaFerté-Sénectère, 1849c: 111.

TYPE LOCALITY: South Africa: The Cape of Good Hope.

SYNONYM:

Anthicus balteatus LaFerté-Sénectère, 1849c: 112.

Anthicus basalis LaFerté-Sénectère, 1849c: 113.

Anthicus basalis LaFerté-Sénectère, 1849d: 212.

Anthicus bisuniguttatus Pic, 1951: 15.

Anthicus chembanus Pic, 1932: 18.

Anthicus densatus Fairmaire, 1898: 241.

Anthicus floreus LaFerté-Sénectère, 1849c: 112.

Hirticomus fuscobrunneus Bonadona, 1969: 267

Anthicus prebasalis Pic, 1955: 130

DIAGNOSIS: Body length: 2.5-2.7 mm, width of elytra 0.8-0.9 mm. Head length: 0.4-0.45 mm, width: 0.4-0.45 mm; Pronotal length: 0.5-0.55 mm, width: 0.3-0.35 mm; Elytral length: 1.6-1.7 mm, width: 0.8-0.9 mm. Color: shining black pitch; pronotum dark brown; base of elytra yellow testaceous. Pubescence: grayish little numerous bristles (Fig. 2). Punctuation: fine and spread on front and sides of head, and pronotum; big and more compact on basal part of elytra and fine at rest.

MATERIAL EXAMINED: Edku, V (1), Wadi Degla, 28.X.1934 (1) ALC; Luxor, VI.1908 (1) EESC; Mansouriya, 21.V.1998 (1), Mansouriya, 25.VI.1998 (2), Mansouriya, 18.VI.1998 (2), Mansouriya, 16.VII.1998 (7), Mansouriya, 9.VII.1998 (1), Mansouriya, 1.X.1998 (2) MSAC.

LOCAL DISTRIBUTION: Lower and Upper Nile Valley and Eastern desert, the source of this information is based on material examined data.

GLOBAL DISTRIBUTION: Afrotropical species distributed in Egypt, Madagascar, Somalia, South Africa, Saudi Arabia, Camerun, Congo, Sudan, Madagascar, Swaziland (Uhmann, 1990, 1998 and Chandler *et al.*, 2008b).

2. *Hirticollis hispidus* (Rossi, 1792)

Fig. 8.

Anthicus hispidus Rossi, 1792: 46.

TYPE LOCALITY: Italy: Tuscany region.

SYNONYM: *Anthicus bicolor* Olivier, 1795: 51: 5.

Anthicus hirtellus Creutzer, 1796: 3.

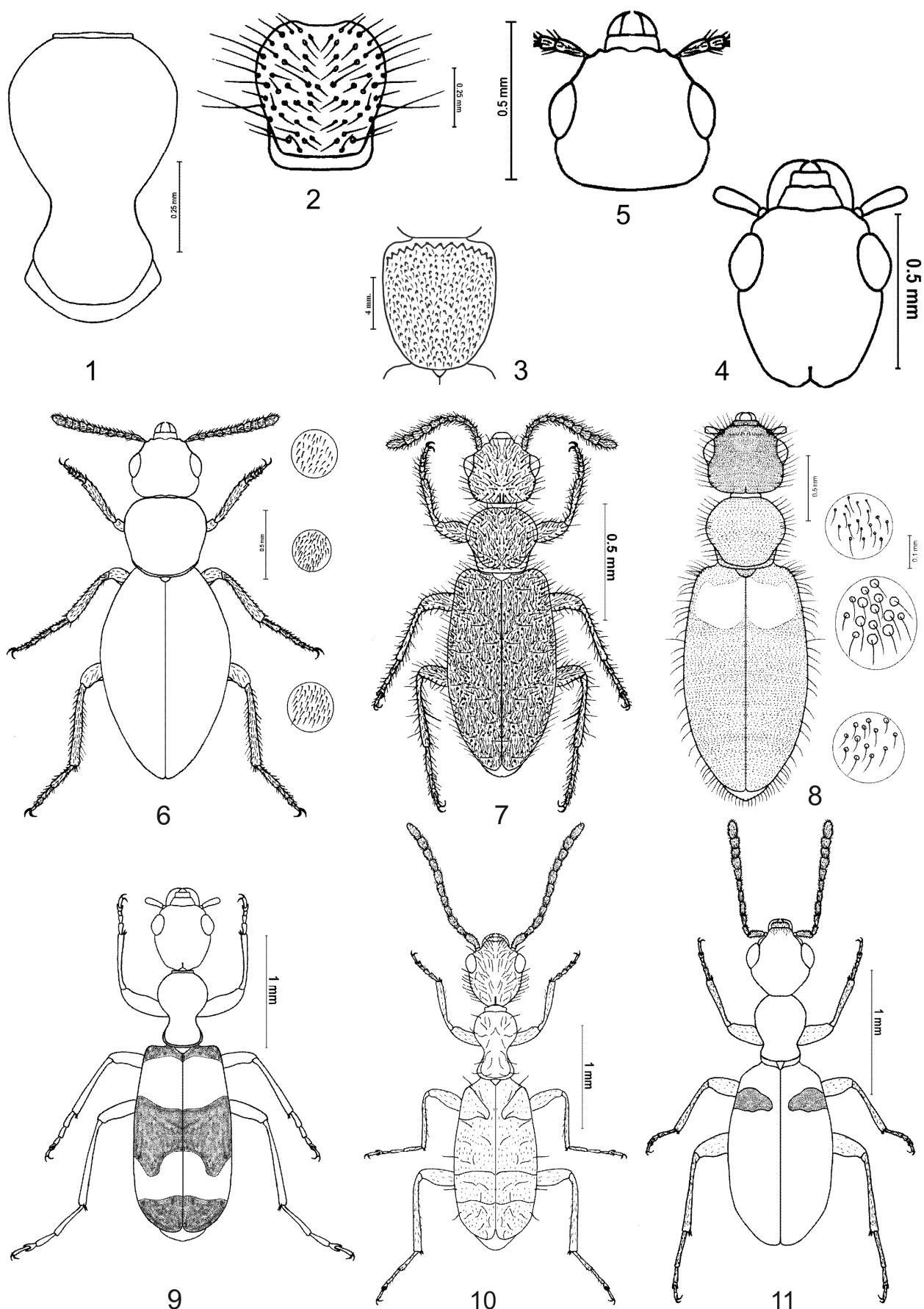


Fig. 1. Pronotum of *Leptaleus glabellus* (*). **Fig. 2.** Pronotum of *Hirticollis biplagiatus* (**). **Fig. 3.** Pronotum of *Amblyderus truncatus* (*). **Fig. 4.** Head of *Leptaleus klugii klugii* (*). **Fig. 5.** Head of *Pseudoleptaleus unifasciatus unifasciatus* (*). **Fig. 6.** *Amblyderus truncatus*. **Fig. 7.** *Hirticollis biplagiatus*. **Fig. 8.** *Hirticollis hispidus* (*). **Fig. 9.** *Leptaleus glabellus*. **Fig. 10.** *Leptaleus klugii klugii*. **Fig. 11.** *Pseudoleptaleus unifasciatus unifasciatus*. * specimens from ALC; ** specimens from EESC

DIAGNOSIS: Body length: 2.6-2.7 mm, width of elytra: 0.7-0.8 mm. Head length: 0.43 mm, width: 0.43 mm; Pronotal length: 0.46 mm, width: 0.43 mm; Elytral length: 1.5 mm, width: 0.8 mm. Color: black brown; elytra with 2 yellow brown macula at shoulders. Pubescence: yellowish long numerous bristles. Punctuation: strong and spread on head; little big and spread on pronotum; big and flat on anterior 2/3 of elytra, very fine on posterior 1/3.

MATERIAL EXAMINED: Alexandria, 23.VIII.1910 (5), Cairo, 1912 (1), Dahshour, 20.IV.1912 (1), Giza, X (1), Marg, 20.II.1903 (1), Shoubra, 23.VII.1914 (1) EESC; Cairo, XI (1), Ramleh, VII (1), Wadi Hoff, X (1) ALC; Kafr Hakim, 23.IX.1933 (1), Kafr Hakim, 22.X.1933 (1), Tamiya, 13.III.1934 (1) MAC; Mansouriya, 29.IX.1998 (1), Mansouriya, 7.V.1998 (1), Mansouriya, 14.V.1998 (1), Mansouriya, 18.VI.1998 (1), Mansouriya, 15.X.1998 (1), Qena, VI.2004 (1) MSAC.

LOCAL DISTRIBUTION: Western part of the Mediterranean Coast, Lower and Upper Nile Valley and Eastern desert, the source of this information is based on material examined data and published data of Schatzmayr and Koch (1933); Alfieri (1976).

GLOBAL DISTRIBUTION: Africa: Algeria, Canary Island, Egypt, Ethiopia, Mauritania, Madeira and Morocco. Asia: Afghanistan, Cyprus, Iran, Iraq, Israel, Jordan, Kyrgyzstan, Kazakhstan, Lebanon, Saudi Arabia, Syria, Tajikistan, Tibet, Turkmenistan, Turkey, Uzbekistan, West Siberia and Yemen. Europe: Albania, Armenia, Austria, Azerbaijan, Bosnia Herzegovina, Bulgaria, Croatia, Czech Republic, France, Georgia, Germany, Great Britain, Greece, Holland, Hungary, Italy, Kazakhstan, Latvia, Malta, Macedonia, Moldavia, Norway, Poland, Portugal, Romania, Russia, Serbia and Montenegro, Siberia, Slovakia, Spain, Sweden, Switzerland, Turkey and Ukraine. (Uhmann, 1992 and Chandler *et al.*, 2008b).

III. *Leptaleus* LaFerté-Sénectère, 1849b

Anthicus (*Leptaleus*) LaFerté-Sénectère, 1849b: 5.

TYPE SPECIES: *Notoxus rodriquesii* Latreille, 1804.

SYNONYM: *Ephippicollis* Marseul, 1879: 65.

KEY TO SPECIES OF *LEPTALEUS*

- 1 Elytron with one fascia *maximicollis*
 - Elytron with two fascias 2
 - 2 Body dark brown; each elytron ornated with 2 testaceous fascias, first behind shoulder and second at 2/3 (Fig. 10)
..... *klugii klugii*
 - Body yellow testaceous; each elytron ornated with 2 black fascia, first at middle and second at the apex (Fig. 9) .. 3
 - 3 Elytra strongly and densely punctated.... *punctatissimus*
– Elytra superficially and sparsely punctated..... *glabellus*
- NOTE:** *Leptaleus rodriquesii* (Latreille, 1804) was recorded from Asia minor and *Leptaleus punctatissimus* Fairmaire, 1893 from Badoumbé (Mali) and not from Egypt. Uhmann (1998) and Chandler *et al.* (2008b) listed Egypt as one of the global distribution of these species; and we have no evidence for its occurrence in Egypt. Accordingly these species not included in the current study.

1. *Leptaleus glabellus* (Truqui, 1855)

Fig. 1 & 9.

Anthicus glabellus Truqui, 1855: 346.

TYPE LOCALITY: Lebanon (Beirut).

DIAGNOSIS: Body length: 2.6-2.7 mm, width of elytra: 0.7-0.8 mm. Head length: 0.5-0.55 mm, width: 0.3-0.4 mm; Pronotal length: 0.6-0.65 mm, width: 0.3-0.35 mm; Elytral length: 1.4-1.5 mm, width: 0.7-0.8 mm. Color: brilliant yellow testaceous; anterior half of head and elytral macula red testaceous; legs yellowish. Pubescence: grayish, few and long pubescent. Punctuation: superficial and spread throughout all body.

MATERIAL EXAMINED: Bir Areyda, 28.I.1926 (1), Wadi Isla, 13.IV.1940 (8) ALC; Madina (Hedjaz), 7.II.1937 (1) MAC.

LOCAL DISTRIBUTION: Western Desert and South Sinai, the source of this information is based on material examined data.

GLOBAL DISTRIBUTION: Africa: Algeria, Egypt, Ethiopia, Kenya and Sudan. Asia: Iran, Israel, Jordan, Lebanon, Palestine, Saudi Arabia, Syria and Yemen. Europe: Greece. (Uhmann, 1998 and Chandler *et al.*, 2008b).

2. *Leptaleus klugii klugii* (LaFerté-Sénectère, 1849b)

Fig. 4 & 10.

Anthicus klugii LaFerté-Sénectère, 1849b: 6.

TYPE LOCALITY: Egypt.

SYNONYM: *Leptaleus truncatus* Fairmaire, 1892: 116.

DIAGNOSIS: Body length: 2.7-2.9 mm, width of elytra: 0.6-0.65 mm. Head length: 0.5-0.55 mm, width: 0.4-0.5 mm; Pronotal length: 0.7-0.75 mm, width: 0.3-0.4 mm; Elytral length: 1.5-1.6 mm, width: 0.6-0.65 mm. Color: dark brown; antennae, palpi, pronotum and tip of tibia brown; elytral macula testaceous, one behind shoulder and second subapical. Pubescence: few and rather long. Punctuation: big and spread on frons; superficial and spread on pronotum and elytra.

MATERIAL EXAMINED: Abu Qir, 11.VIII.1916 (5), Abu Rawash, 17.IX.1909 (1), Asiut, 12.XI.1930 (1), Belbien, 25.VIII.1914 (2), Cairo, VIII.1909 (1), Giza, 22.VII.1926 (1), Helwan, 11.III.1930 (1), Koubba, 20.X.1908 (1), Talbeyia, 29.XI.1915 (2), Toura, IX (1), Wadi Degla, 1.VIII.1924 (1), ALC; Abu Rawash, 5.X.1932 (14), Asiut, 2.XI.1930 (1), Giza, 12.I.1924 (1), Giza, 23.VII.1926 (1), Giza, 2.VIII.1926 (1), Helwan, 16.IX.1930 (1), Imbbaba, 2.XII.1931 (1), Kirdasa, 24.VIII.1940 (3), Maadi, 4.VI.1913 (1), Maadi, 4.VII.1918 (1), Maadi, 14.VI.1931 (1), Maadi, 27.III.1933 (1), Maadi, 17.V.1933 (1), Maadi, 13.VI.1933 (3), ? (2), MAC; Alexandria, 16.I.1917 (1), Asiut, 12.XI.1930 (1), Cairo, 1927 (1), El Roda, 2.V.1918 (3), El Roda, IX (1), Fakous, 13.XII.1931 (1), Giza, 23.VII.1926 (5), Helwan, 4.I.1930 (1), Helwan, 9.VI.1932 (1), Luxor, VI.1909 (2), Luxor, 7.VII.1910 (2), Marg, VIII (6), Massara, 4.X.1908 (1), Massara, 16.V.1909 (1), Massara, IX (1), Ramleh, 14.XI.1910 (1), Shoubra, 7.IX.1914 (1), Shoubra, 23.VII.1914 (1), Talbeyia, 23.VII.1914 (1), Toura, 18.VII.1909 (4), Toura, VII (1) ASUC; Alexandria, 16.I.1917 (1), Asiut, 12.XI.1930 (1), Giza, 23.VII.1926 (5), Helwan, 4.I.1930 (1), Helwan, 9.VI.1932 (1), Luxor, VI.1909 (2), Luxor, 7.VII.1910 (2), Marg, VIII (6), Massara, 4.X.1908 (1), Massara, 16.V.1909 (1), Massara, IX (1), Ramleh, 14.XI.1910 (1), Shoubra, 7.IX.1914 (1), Shoubra, 23.VII.1914 (1), Talbeyia, 23.VII.1914 (1), Toura, 18.VII.1909 (4), Toura, VII (1), Cairo, 1927 (1), El Roda, 2.V.1918 (3), El Roda, IX (1), Fakous, 13.XII.1931 (1) EESC; Bilbies, 10.IX.1998 (1), Bilbies, 18.VI.1998 (1), Bilbies, 19.VIII.1998 (1), Fayoum, V.2006 (1), Inshas, 11.IX.2003 (1), Khatara, 17.VII.1997 (1), Mansouriya, 17.IX.1998 (2), Mansouriya, 10.IX.1998 (1), Mansouriya, 30.VII.1998 (2), Mansouriya, 9.VII.1998 (1), Mansouriya, 19.VIII.1998 (2), Mansouriya, 13.VIII.1998 (2) MSAC.

LOCAL DISTRIBUTION: Upper and Lower Nile Valley and its Delta, Western part of the Mediterranean Coast, Eastern Desert, the source of this information is based on material examined data, and Sinai Peninsula (Uhmann *et al.*, 2005), Sids (Upper Nile Valley) (Uhmann, 1985).

GLOBAL DISTRIBUTION: This species is Afrotropical element and widely distributed in North Africa (from Egypt to Morocco) and Senegal (Bonadona, 1969). Asia: Arab Emirates, Afghanistan, Israel, Saudi Arabia and Yemen (Chandler *et al.*, 2008b).

3. *Leptaleus maximicollis* Pic, 1893

Leptaleus maximicollis Pic, 1893: 111.

TYPE LOCALITY: Algeria: Biskra.

DIAGNOSIS: (After Pic, 1893)

Body length: 2.7 mm, width: 0.8 mm. Color: shiny yellowish brown; back of elytra bluish black; abdomen black; one large yellowish macula on posterior part of elytra; shoulders largely reddish. Pubescence: clear and long. Punctuation: nearly absent.

MATERIAL EXAMINED: no specimens available.

LOCAL DISTRIBUTION: Sinai Peninsula (Wadi El Ain) (Peyerimhoff, 1907); Sinai (Alfieri, 1976 and Pic, 1902).

GLOBAL DISTRIBUTION: Africa: Algeria, Egypt, Mauritania, Morocco and Sudan. Asia: Iran, Israel, Oman and Saudi Arabia (Uhmann, 1998) and (Chandler *et al.*, 2008b).

IV. *Pseudoleptaleus* Pic, 1900

Anthicus (Pseudoleptaleus) Pic, 1900: 603.

TYPE SPECIES: *Anthicus (Pseudoleptaleus) gibbipennis* Pic, 1900.

1. *Pseudoleptaleus unifasciatus unifasciatus* (Desbrochers des Loges, 1875)

Fig. 5 & 11.

Leptaleus unifasciatus Desbrochers des Loges, 1875: 43.

TYPE LOCALITY: Egypt: Cairo.

SYNONYM: *Leptaleus sublatus* Pic, 1914: 181.

DIAGNOSIS: Body length: 2.4-2.6 mm, width of elytra: 0.7-0.8 mm. Head (Fig. 5) length: 0.5-0.55 mm, width: 0.4-0.45 mm; Pronotal length: 0.5-0.55 mm, width: 0.4-0.45 mm; Elytral length: 1.4-1.5 mm, width: 0.7-0.8 mm. Color: dark brown; antennal base, tarsi, and macula at shoulders testaceous. Pubescence: very rare and short. Punctuation: superficial and very spread.

MATERIAL EXAMINED: Abu Rawash, 31.VII.1932 (1), Cairo, XII.1915 (1), Fayoum, IV.1909 (1), Giza, 10.XI.1913 (3), Giza, IX (1), Giza, X (2), Helwan, 10.VII.1897 (1), Katta, 1.XI.1910 (1), Katta, 19.XI.1910 (6), Koubba, X.1927 (1), Matariya, 2.IX.1896 (1), Matariya, XI.1907 (1), Matariya, XI (1), Pyramids, 25.X.1903 (2), Pyramids, 25.X.1904 (1), Pyramids, 3.XI.1912 (5), Pyramids, 3.XI.1912 (1), Pyramids, 20.VII.1917 (1), Road El Farag, 2.II.1904 (5), Shoubra, 18.IX.1912 (2), Shoubra, VII (1), Shoubra, VIII (1), Talbeyia, IX.1907 (3), Talbeyia, 12.X.1913 (2), Talbeyia, IX (2), Toura, 3.VI.1908 (1), 1927 (2), 1935 (2) ASUC; Abu Rawash, 31.VII.1932 (1), Cairo, XII.1915 (1), Fayoum, IV.1909 (1), Giza, 10.XI.1913 (3), Giza, IX (1), Giza, X (2), Helwan, 10.VII.1897 (1), Katta, 1.XI.1910 (1), Katta, 19.XI.1910 (6), Koubba, X.1927 (1), Matariya, 2.IX.1896 (1), Matariya, XI.1907 (1), Matariya, XI (1), Pyramids, 25.X.1903 (2), Pyramids, 25.X.1904 (1), Pyramids, 3.XI.1912 (6), Pyramids, 20.VII.1917 (1), Road El Farag, 2.II.1904 (5), Shoubra, 18.IX.1912 (2), Shoubra, VII (1), Shoubra, VIII (1), Talbeyia, IX.1907 (3), Talbeyia, 12.X.1913 (2), Talbeyia, IX (2), Toura, 3.VI.1908 (1), 1927 (2), 1935 (2) EESC; Abu Rawash, 25.VI.1933 (8), Abu Rawash, 25.VI.1933 (2), Fakus, 17.XI.1931 (1), Kaf Hakim, 10.X.1938 (1), Nagaa Hammadi, 17.VIII.1917 (1), Nahia, 1.IX.1933 (1), Pyramids, 28.XII.1913 (2) MAC; Mahmoudia, 16.VI.1909 (4), Pyramids, 3.XI.1912 (1), Tamiya, 30.IX.1934 (1), Wadi Isla (Sinai), 10.IV.1940 (1) ALC.

LOCAL DISTRIBUTION: Nile Valley and its Delta, Western part of the Mediterranean Coast, Eastern Desert and Sinai Peninsula (Koch, 1935; Hanna, 1970 and Alfieri, 1976).

GLOBAL DISTRIBUTION: Afrotropical element sporadically distributed in Africa and Asia in Iran (Chandler *et al.*, 2008b).

References

- ALFIERI, A. 1976. The Coleoptera of Egypt. *Memoires de la Societe Entomologique d' Egypte*, **5**, XVI + 362 pp.
- BONADONA, P. 1958. *Faune de Madagascar. VI. Insectes Coléoptères Anthicidae*. Inst. Reach. sc. Tananarive-Tsimbaraza; 153 pp.
- BONADONA, P. 1969. Le Parc National du Niokolo-Koba (Sénégal). XIII. Coleoptera Anthicidae. *Mémoires de l'Institut Fondamental d'Afrique Noire*, **84**: 263-277.
- BONADONA, P. 1991. *Les Anthicides de la faune de France (Coleoptera)*. Société Linnéenne de Lyon, Lyon, 155 pp.
- BOOTH, R. G., M.L. COX & R.B. MADGE 1990. *IIE Guides to Insects of Importance to Man. 3. Coleoptera*. CAB International, Wallingford, UK, 134-159.
- BUCCIARELLI, I. 1980. *Fauna d'Italia XVII. Coleoptera Anthicidae*. Calderini, Bologna, I-VIII + 240 pp.
- CHANDLER, D.S. 2000. Publication dates of papers on the Anthicidae (Coleoptera) by the Marquis F. T. de LaFerté-Sénectère. *Transaction of the American Entomological Society*, **125**: 433-439 (1999).
- CHANDLER, D.S. 2002. Anthicidae Latreille 1819. pp. 549-558. In: Arnett R. H. Jr. (†), M. C. Thomas, P. E. Skelly & J. H. Frank (eds), *American Beetles Polyphaga: Scarabaeoidea through Curculionoidea*. CRC Press, Boca Raton London New York Washington, 2: XIV + 861 pp. + 4 pls.
- CHANDLER, D.S., G. NARDI & D. TELNOV 2004. Nomenclatural notes on the Palaearctic Anthicidae (Coleoptera). *Mitteilungen des Internationalen Entomologischen Vereins Frankfurt a. M.*, **29**(4): 109-173.
- CHANDLER, D.S., G. NARDI & D. TELNOV 2008a. New acts and comments, Anthicidae. In: Löbl, I & Smetana, A (Eds), *Catalogue of Palaearctic Coleoptera Volume 5 Tenebrionoidea*. Apollo Books, Stenstrup, p. 49.
- CHANDLER, D.S., G. UHMANN(†), G. NARDI & D. TELNOV 2008b. Anthicidae. In: Löbl, I & Smetana, A (Eds), *Catalogue of Palaearctic Coleoptera Volume 5 Tenebrionoidea*. Apollo Books, Stenstrup, pp. 421-455.
- CHIKATUNOV, V., V. KRAVCHENKO & G. MÜLLER 2005. The Tenebrionoidea beetles (Mycetophagidae, Oedemeridae, Aderidae, Scraptiidae, Mordellidae, Ripiphoridae, Meloidae, Anthicidae, Tenebrionidae) collected in the Israeli light trap survey and their association with the major phyto-geographical zones of Israel. *Esperiana Buchreiche zur Entomologie*, **12**: 297-305.
- CREUTZER, C. 1796. [new taxa]. In: Panzer G. W. F. 1796b: *Faunae Insectorum Germanicae initia oder Deutschlands Insecten*. Ed. 2. XXXVI. Nürnberg: Felsecker, 24 pp. + 24 pls.
- EL-TORKEY, A.M., H.H. FADL, A.A. EL-GHARBAWY & M.S. ABDEL-DAYEM 2005. A review of the Egyptian Ant Flower beetles (Anthicidae, Coleoptera) I- Tribe Anthicinae. *Bulletin of the Entomological Society of Egypt*, **82**: 115-141.
- FAIRMAIRE, L. 1892. Coléoptères d'Obock. Troisième partie. *Revue d'Entomologie*, **11**: 77-127.
- FAIRMAIRE, L. 1898. Matériaux pour la faune coléoptérique de la région malgache. 5 e note. *Annales de la société Entomologique de Belgique*, **42**: 222-260.
- HANNA, H.M. 1970. Studies on catches of Coleoptera in a light trap at Assiut. *Bulletin of the Entomological Society of Egypt*, **53**: 591-613.
- HILLE J.C. VAN 1985. Anthicidae (Coleoptera Heteromera) collected in Botswana, 1982-83. *Botswana Notes and Records*, **17**: 149-162.
- HILLE J.C. VAN 1989. Anthicidae from the Zoological Museum in Lund. I. (Coleoptera, Anthicidae). *Entomofauna*, **10**(21): 317-329.
- KEJVAL, Z. 2002. Contribution to the knowledge of *Stenidius* (Coleoptera; Anthicidae). *Klapalekiana*, **38**: 185-212.
- KEJVAL, Z. 2003. The genus *Anthelephila* Hope, 1833 (Coleoptera: Anthicidae). *European Journal of Entomology*, **100**: 381-392.
- KEJVAL, Z. 2006. The Afrotropical species of *Stenidius* (Coleoptera: Anthicidae). *Entomological Problems*, **36**: 33-42.
- KEJVAL, Z. 2009. Taxonomic revision of the genus *Chileanthicus* Werner (Coleoptera: Anthicidae). *Zootaxa*, **2180**: 1-82.
- KOCH, C. 1935. Wissenschaftliche Ergebnisse der entomologischen expedition seiner Durchlaucht des Fürsten Alessandro C. Della Torre e Tasso nach Aegypten und auf Halbinsel Sinai. VIII. Anthicidae. *Bulletin of the Entomological Society of Egypt*, **19**: 132-144.
- KOCH, C. 1937. Catalogo ragionato degli Anticidi libici (Col.). *Bollettino della Società veneziana di Storia naturale*, **1** (9-10): 185-196.

- LAFERTE-SENECTERE, F.T. DE 1847. [new taxa of Anthicidae, pp. 365- 381, pl. 32]. In : Lucas P. H. : *Exploration scientifique de l'Algérie pendant les années 1840, 1841, 1842 publiée par ordre du gouvernement et avec le concours d'une Commission Académique. Sciences physiques Zoologie. Vol. II. Histoire naturelle des animaux articulés. Cinquième classe. Insectes. Premier ordre. Les coléoptères.* Paris : Imprimerie Nationale [1849], 590 pp., 47 pls.
- LAFERTE-SENECTERE, F.T. DE 1849a. [new taxa]. In : Guérin-Méneville F.-E. (ed.): *Species et iconographie générérique des animaux articulés ou représentation des genres, avec leur description et celle de toutes les espèces de cette grande division du règne animal. Première Partie : Insectes Coléoptères (1846-1847).* Paris : de Fain et Thunot. *Amblyderus*, Livraison 6, No. 23, 3 pp., 1 pl.
- LAFERTE-SENECTERE, F.T. DE 1849b. [new taxa]. In : Guérin-Méneville F.-E. (ed.): *Species et iconographie générérique des animaux articulés ou représentation des genres, avec leur description et celle de toutes les espèces de cette grande division du règne animal. Première Partie : Insectes Coléoptères (1846-1847).* Paris : de Fain et Thunot. *Anthicus* (Première division), Livraison 7, No. 27, pp. 1-45, 1 pl.
- LAFERTE-SENECTERE, F.T. DE 1849c. [new taxa]. In : Guérin-Méneville F.-E. (ed.): *Species et iconographie générérique des animaux articulés ou représentation des genres, avec leur description et celle de toutes les espèces de cette grande division du règne animal. Première Partie : Insectes Coléoptères (1846-1847).* Paris : de Fain et Thunot. *Anthicus* (Troisième Division), Livraison 8, No. 29, pp. 85-132, 1 pl.
- LAFERTE-SENECTERE, F.T. DE 1849d. *Monographie des Anthicus et genres voisins, coléoptères hétéromères de la tribu des Trachélides [1848].* Paris: De Sapia, xxii + 340 pp., pls. 17-32.
- LATREILLE, P.A. 1804. *Histoire naturelle, générale et particulière, des crustacés et des insectes. Ouvrage faisant suite aux œuvres de Leclerc de Buffon, et partie du cours complet d'histoire naturelle rédigé par C. S. Sonnini, membre de plusieurs Sociétés savants.* T. dixième. Paris: F. Dufart, xii + 13-467 + [1] pp.
- MARSEUL, S. DE 1879. Monographie des Anthicidae de l'Ancien Monde. *L'Abeille*, 17: 1-268, 2 pls.
- NARDI, G. 2004. Fauna Europaea: Anthicidae. In: P. Audisio (ed.), *Fauna Europaea: Coleoptera 2, Beetles.* Fauna Europaea version 1.1, Available from: <http://www.fauna-eur.org> [accessed February 2010 as version 2.1 of December 22th 2009].
- NARDI, G. & D. MIFSUD 2003. A review of the Anthicidae of the Maltese Islands (Central Mediterranean). *Fragmenta entomologica*, 35(2): 77-127.
- OLIVIER, A.G. 1795. *Entomologie, ou histoire naturelle des insectes, avec leurs caractères générériques et spécifiques, leur description, leur synonymie, et leur figure enluminée. Coléoptères.* Tome troisième. Paris: de Lanneau, 557 + xxviii pp., 65 pls.[Note: genera 35-65, each genus with separate pagination].
- PEYERIMHOFF, P. 1907. Liste de Coléoptères du Sinaï. *L'Abeille*, 31: 1-55.
- PIC, M. 1893. Coléoptères nouveaux de la faune circa-européenne. *Feuille des Jeunes Naturalistes* (3)23: 111.
- PIC, M. 1894. Catalogue géographique des anthicidae de France, Corse, Algérie et Tunisie (Suite). *Revue Scientifique du Bourbonnaise et du Centre de la France*, 7: 69-79.
- PIC, M. 1898. Un *Amblyderus* (Col. Hétéromères) nouveau d'Abyssinie. *Bulletin du Muséum d'Histoire Naturelle*, Paris: 181.
- PIC, M. 1899. Xylophilidae et Anthicidae recueillis en Orient, en mars, avril et mai 1899. *Revue Scientifique du Bourbonnaise et du Centre de la France*, 12: 170-178.
- PIC, M. 1900. Diagnoses d'Anthicidae de la Nouvelle Guinée. *Annales del Museo Civico di Storia Naturale di Genova*, 20: 602-608.
- PIC, M. 1911. Anthicidae, Pars 36. In: Schenkling, S. (ed.): *Coleopterorum Catalogus*. Berlin: W. Junk, 102 pp.
- PIC, M. 1914. Anthicidae exotiques nouveaux ou peu connus (Col.). *Bulletin de la Société Zoologique de France*, 39: 181-184.
- PIC, M. 1932. Contributions à l'étude de la faune du Mozambique. Voyage de M. P. Lesne (1928-1929). 9. note. – Coléoptères, Anthicidae, Hylophilidae, Pedilidae, Scriptiidae. *Memórias e Estudos do Museu Zoológico da Universidade de Coimbra* (1)60: 5-26.
- PIC, M. 1951. Notes et descriptions. *Diversités Entomologiques*, 9: 4-16.
- PIC, M. 1955. Contributions à l'étude de la faune du Ruanda-Urundi (Mission P. Basilewsky 1953)XII. Coleoptera Rhipiphoridae, Oedemeridae, Scriptiidae, Pedilidae, Aderidae, Anthicidae, Dermestidae, Byrrhidae, Anobiidae, Ptinidae, Cleridae, Lyctoxylonidae et Helodidae. *Annales du Musée Royal du Congo Belge*. Tervuren (Série 8° Sciences Zoologiques), 34: 125-135.
- PIC, M. & C.N. HAWKINS 1957. *Expedition to South-West Arabia 1937-8, 29. Coleoptera: Anthicidae.* London Brit. Mus. (Nat. Hist.), 1: 435-450.
- ROSSI, P. 1792. *Mantissa insectorum exhibens species nuper in Etruria collectae a Petro Rossio adiectis faunae Etruscae illustrationibus ac emendationibus.* [Tomus primus]. Pisis: Pollo-mi, 148 pp.
- SAHLBERG, J.R. 1913. Coleoptera mediterranea orientalis quae in Aegypto, Palestina, Syria, Caramania collegunt John Sahlberg et Unio Saalas. *Öfversigt af Finska Vetenskaps-Societetens Förhandlingar*, 55 [1912-1913] A(19): 1-282.
- SCHATZMAYR, A. & C. KOCH 1933. Wissenschaftliche Ergebnisse der Entomologischen Expeditionen Senier Durchlaucht des Fürsten Alexander C. Della Torre e Tasso nach Aegypten und auf die Halbinsel Sinai. II *Anthicus* (Anthicidae- Coleoptera). *Bulletin of the Entomological Society of Egypt*, 17: 204-242, 1 pl.
- SCHEMBRI, S. 1991. The Anthicidae of the Maltese Islands (Coleoptera). *Bollettino della Società entomologica italiana*, 123(1): 32-38.
- TELNOV, D. 2007. Redefinition of *Pseudoleptaleus* Pic, 1900 (Coleoptera: Anthicidae, Anthicinae). *Entomologische Zeitschrift*, Stuttgart, 117: 71-82.
- TELNOV, D. 2008. Order Coleoptera, family Anthicidae. *Arthropod fauna of the UAE*, 1: 270-292.
- TRUQUI, E. 1855. Anthicini Insulae Cypri et Syriæ. *Memorie dell'Accademia delle Scienze di Torino*, (2)16: 339-371, pl. 1.
- UHMANN, G. 1985. Paläarktische Anthiciden (Coleoptera) des Ungarischen Naturwissenschaftlichen Museums Budapest. *Folia entomologica Hungarica*, XLVI(1): 177-203.
- UHMANN, G. 1988. Die von Hans Mühlé 1987 im Yemen gesammelten Anthicidae (Coleoptera). *Acta Coleopterologica*, 4: 1-4.
- UHMANN, G. 1989. Anthicidae (Coleoptera) der orientalischen Region aus dem Naturhistorischen Museum in Genf, II. *Revue Suisse de Zoologie*, 96: 243-252.
- UHMANN, G. 1990. Afrikanische Anthicidae aus der Biogeographischen Sammlung der Universität Saarbrücken. *Entomologische Blätter*, 86(1-2): 93-102.
- UHMANN, G. 1992. Die Anthicidae der Iberischen Halbinsel. 22. Beitrag zur Kenntnis der Anthicidae (Coleoptera, Anthicidae). *Mitteilungen der Münchner Entomologischen Gesellschaft*, 82: 87-180.
- UHMANN, G. 1998. Anthicidae (Insecta: Coleoptera) from Saudi Arabia with the description of a new species. *Fauna of Arabia*, 17: 93-105.
- UHMANN, G., V. CHIKATUNOV & T. PAVLICEK 2005. Catalogue of the beetles (Coleoptera) in Israel and adjacent areas: 4. Anthicidae. *Biocosme Mésogén*, 22(1): 1-64.