



## Review of Tribe Scaurini (Coleoptera: Tenebrionidae: Tenebrioninae) From Egypt

Neven, E. Elmetwally

*Insect classification and survey Dept., Plant Protection Res. Inst., Agric. Res. Center*

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**ABSTRACT:** Tribe Scaurini comprises four genera in the world, these are: *Scaurus*, *Cephalostenus*, *Carchares*, and *Herpiscius*; only one genus is represented in Egypt (*Scaurus*). The genus *Scaurus* contains 44 species and subspecies, of which 6 species are found in the Egyptian fauna. Adults of Scaurini are robust, mid-sized beetles with elytra that have some sort of corrugation on the upper side. They are typically black, dark brown or grey, and often have a satiny sheen. The body is shaped like a medication capsule or like a bullet, and the legs can be short and stout or long and spindly. The larvae are hard-bodied, cylindrical, and have 6 short legs behind the head. They are scavengers that live on the ground amid leaf litter, rotting logs, or under and around rocks. Diagnosis of the tribe, genus, and species, together with a key to the species are presented. Illustrations and drawings of the taxonomic characters of species are also given.

**Keywords:** Coleoptera, Tenebrionidae, Tenebrioninae, Scaurini ground-dwelling darkling beetles, Classification, key, Egypt.

### INTRODUCTION

The biology of the genus *Scaurus* is practically unknown. Most species are xerophilous and lapidicolous and seems to be crepuscular, frequently itinerant. Some species are myrmecophilous, others simulating rigor mortis when disturbed. A matter of future investigation is to explain why the presence of *Scaurus* in anthills is tolerated by ants. Some species are troglodophilous (Antoine, 1953), living in the entrance of caves or in sub-rock shelters (Julio Ferrer *et al* 2014; Maxim Nabozhenko, 2020). Taravati & Ferrer 2007, described *Scaurus puncticollis* in Iranian fauna for the first time.

### MATERIAL AND METHOD

The present work is based on the examination of all the specimens preserved in the four main insect collections in Egypt (Cairo university Collection, Entomology Department, Faculty of Science [CUC]; Ain Shams university Collection, Entomology Department, Faculty of Science [ASUC]; Alfieri collection, Entomology Department, Faculty of Science, Al-Azhar Univ. [ALFC]; Plant Protection Research Institute Ministry of Agriculture collection [MAC]) and the specimens obtained during survey in different regions of Egypt.

Diagnosis of the tribe, genus, and species, together with a key to the species are presented. Illustrations and drawings of the taxonomic characters of species are also given. The taxonomic hierarchy, synonyms, and distribution, obtained from Löbl *et al.* 2008.

### RESULTS

#### Tribe Scaurini Billberg, 1820

Head free, often prominent and thick at rear to form collar; submentum stalked; ligula passing mentum; labial palp inserted laterally at basis; last segment of maxillary palp slightly triangular and rarely scuriform; epistom almost stretched out trapeze, cover mandible and great part of labrum; antennae eleven segmented, with free last segment. Elytra big, varied in shape; epipleura of elytra with fold; posterior coxae more or less greatly separated and oval; spurs robust and distinct; tarsus almost canalculated and spiny underneath; intercoxal protrusion short, subparallel, wide, and rounded at apex; mesothoracic epimers oblique; metathoracic episternum narrow, parallel, The taxonomic hierarchy, synonyms, and distribution, obtained from Löbl *et al.* 2008. or slightly rounded at apex.

#### Genus *Scaurus* Fabricius, 1775

*Scaurus* Fabricius 1775: 253.

Type species: *Scaurus atratus* Fabricius 1775: 253.

#### Diagnosis:

Body glabrous; head stretched out enough with collar at rear, carinated above eyes (fig.1); epistome more or less separated from frons by arched furrow, indifferently shrunk and emarginated forward; eyes very narrow and lanulate-shape; antennae enough robust; second segment very short; third segment stretched out, segments 4<sup>th</sup> -10<sup>th</sup> obconic and attenuated at tip, short and thick, segment 11<sup>th</sup> as long as segments 9<sup>th</sup> and 10<sup>th</sup> together, cylindrical and attenuated at tip (fig.2). Pronotum plan, truncated forward, rounded laterally, weakly emarginated at basis, with rounded angles, marginated at all sides. Scutellum transverse trigone. Elytra oblong-oval, slightly convex, greatly decline at rear; epipleura

of elytra with narrow fold; legs long, particularly the previous; femur bulged. The genus *Scaurus* has a small secondary bursa copulatrix, separated glandular, moderately short, spermatheca and a relatively short accessory gland.

#### Key to species of genus *Scaurus*

- 1-Humeral rib of elytra not complete or appears entirely flat at the basis..... 2  
 - Humeral rib of elytra sharp, carinated, and completely developed.....3  
 2- lateral side of pronotum with wide furrow, elytra with finely punctated sterial intervals.....*atratus*  
 - lateral side of pronotum with narrow furrow, elytra with strong punctated sterial intervals..... *bougonii*  
 3-Inner dorsal rib of elytra mostly reaches the basis of elytra; elytra at basis weakly retired. *carinatus*  
 - Inner dorsal rib of elytra never reach to basis of elytra; elytra at basis suddenly and strongly retired.....4  
 4-Pronotum at the middle of the disk with very fine punctation, very flat and finer than punctation of lateral sides. .... *egyptiacus*  
 - Pronotum with very big and dense punctation, disk often with punctation bigger than punctation of lateral sides and sometimes wrinkles. .... 5  
 5-Pronotum at disc with wrinkled punctation (fig.3); elytra with very fine punctated striae, punctation often entirely exist (fig.5).... *puncticollis syriacus*  
 - Pronotum at disk indeed densely punctated (fig.4); elytra is clearly punctated rows (fig.6). ....*puncticollis puncticollis*

#### *Scaurus aegyptiacus* Solier, 1838 (Fig. 7-10)

*Scaurus aegyptiacus* Solier, 1838: 170.

*Scaurus giganteus* Kuster, 1848: 54.

**Type locality:** Egypt.

#### **Description:**

Body about 18 – 19 mm. in length, black and bald. Head stretched out, necked at rear, carinated above eyes; epistome separated from frons by arched furrow, slightly emarginated forward, finely punctated, finer than punctation of frons; eyes very narrow and lanulate-shape; antennae enough robust, long, nearly reach to pronotal basis, second segment very short, third segment stretched out, segments 4<sup>th</sup> -10<sup>th</sup> obconic, short and thick, segment 11<sup>th</sup> as long as segments 9<sup>th</sup> and 10<sup>th</sup> together, cylindrical and attenuated at tip. Pronotum plan, truncated forward, rounded laterally, weakly emarginated at basis, with rounded angles, marginated at all sides, Pronotum at middle of disc with very fine punctation, very flat and finer than punctation of lateral sides.

Scutellum transverse trigone. Elytra oblong-oval, convex, greatly decline at rear, rounded at shoulders, with fine, flat punctated striae and three elevated ribs, inner dorsal rib not reaching to elytral basis; epipleura of elytra with narrow fold; legs long, particularly the previous; femur bulged.

#### **Distribution:**

World: Greece, Italy, Malta, Algeria, Egypt, Libya, Morocco, Tunisia, Cyprus, Iraq, Lebanon, Syria.

Local: This species is distributed in the Lower Nile Valley, Upper Nile Valley, and Coastal strip and Sinai.

#### **Material examined:**

Burg 2.5.1955, Shafiq (1); Burg 6.5.1955, Shafiq (1); Abu Rawash 9.2.1955 (1) ..... (CUC)  
 Saint Catherin 10.1.1948, Alfieri (1); Mansouriya 13.8.1925, Alfieri (1); El-Katta (Alex)12.9.1925, Alfieri (1). .... (ALFC)  
 Kafr El-Dawwar (Behara).5.1915; Ballah .7.1916; Imbaba .3.1928..... (MAC)

#### *Scaurus atratus* Fabricius, 1775 (Fig. 11)

*Scaurus atratus* F., 1775: 253.

*Scaurus breviatus* Desb., 1881: 81.

*Helops morio* Fab., 1777: 241.

*Scaurus planidorsis* Fairm., 1879: 190.

*Scaurus quadraticollis* Fairm., 1875: 189.

*Scaurus vagecostatus* Fairm., 1879: 165.

**Description:** after Reitter, 1914.

Body about 12.5 – 16 mm. in length, black and dull, oblong, short, and wide; length of the third antennal segment not double as long as its apical width; basis of pronotum simply marginated with very obtuse or rounded posterior angles, lateral margin with wide furrow; elytra oblong, subparallel, shoulders weakly indicated and obtuse, without elevated dorsal ribs, with finely punctated striae, intervals of elytra with finer punctation; femur without posterior teeth; anterior tibia of male before middle of upper margin with angled swelling

#### **Distribution:**

World: France, Italy, Algeria, Tunisia, Egypt.

Local: Not represented in the Egyptian collections and not collected during the survey.

#### *Scaurus bougonii* Fairmaire, 1883 (Fig. 12)

*Scaurus bougonii* Fairm., 1883: CXXV.

**Description:** after Reitter, 1914.

Body about 11-15 mm. in length, black and opaque; length of third antennal segment double as long as its apical wide; basis of pronotum finely and slightly dense punctated, posterior angles not marginated and appear truncated obliquely; lateral side of pronotum with

narrow furrow; elytra elliptical, entirely rounded at shoulders, with strong punctated striae, intervals hardly observed punctated; fore femur of male with small posterior teeth; anterior tibia of male with small swelling.

**Distribution:**

World: Egypt, Libya, Tunisia.

Local: Not represented in the Egyptian collections and not collected during the survey.

***Scaurus carinatus* Solier, 1838**

(Fig. 13&15)

*Scaurus carinatus* Solier, 1838: 176.

**Description:**

Body about 18 – 19 mm. in length, black; epistome separated from frons by an arched furrow, slightly emarginated forward and finely punctated; punctuation of frons strong and wrinkled; Pronotum at the middle of disc with strong and dense punctuation more than punctuation of lateral sides. The inner dorsal rib of elytra mostly reaches the basis of elytra

**Distribution:**

World: Egypt, Libya.

Local: This species is distributed in the Lower Nile Valley, coastal strip and western desert.

**Material examined:**

Burg 6. 5. 1955, Shafiq (3); Burg 2. 5. 1955, Shafiq (2); Burg Abu Sir 6. 5. 1955, Shafiq (1); Burg 14. 4. 1953 (1) .....(CUC)  
King Mariout 21. 4. 1925, Alfieri (1); Balteem 10. 7. 1926, Alfieri (1); Burg 16. 2. 1925, Alfieri (1); El-Hammam 2. 1. 1917, Alfieri (1); Boulak 10. 11. 1913, Alfieri (1); Amriya 4. 9. 1913, Alfieri (1); Mergheb 17. 5. 1912, Alfieri (1) ....  
.....(ALFC)  
Mariout 18. 3. 1927, Carneri (1); B.El Arab 7. 4. 1945, Aly (9); Abu Qir 21. 4. 1952, P.O.R. (2).  
..... (ASUC)  
Mariout. 3. 1914; Marg .1. 1928; Alexandria. 7. 1931; Mersa Matrouh . 3. 1933; Burg El-Arab. 8. 1967. .... (MAC)

***Scaurus puncticollis puncticollis* Solier, 1838**

(Fig. 16&22)

*Scaurus puncticollis* Solier, 1838: 172.

*Scaurus parvicollis* Fairm., 1875: 525.

*Scaurus rugicollis* Reitt., 1914: 374.

**Description:**

Body about 11 – 16 mm. in length, black; punctuation of epistome more smooth than punctuation of frons; pronotum narrow and weakly

rounded and narrow towards basis laterally pronotum at disk densely and strongly punctated; elytra clearly with deep and well-marked punctated rows.

**Distribution:**

World: Egypt, Algeria, Libya, Tunisia Israel, Saudi Arabia, Syria.

Local: This species is distributed in Lower Nile Valley, Upper Nile Valley, coastal strip, western desert and Sinai.

**Material examined:**

Marakia. 2. 1926, Andres (1); Egypt 1931, Andres (3); Sinai 10. 1. 1930, Andres (1); Toura. 11., Chakour (1); Dekheila 5. 6. 1926, Andres (2); Heliopolis. 2. 1915, Andres (1); Baltim 10. 2. 1926, Andres (2); W. Rashid 18. 2. 1929, Andres (1); Abu Rawash 3. 2. 1946, Andres (1); Kirdasa 17. 4. 1926, Andres (1); Abu Rawash 15. 8. 1925, Andres (1); Abu Kir. 5. Chakour (1); Cairo 1925, Alfieri (16); Abu Kir 30. 10. 1916 (8); Mariout. 4., Ferrante (2); Dabaa 15. 6. 1930, Andres (1); Alexandria 21. 3. 1909, Ferrante (1); Mariout 5. 11. 1910, Ferrante (1); Hammam. 5. 1908, Ferrante (2); Mariout 20. 12. 1907, Ferrante (1); Mex 11. 1. 1907, Ferrante (2); Hammam. 1. 1909, Ferrante (1); Zeitoun. 9. 1909, Ferrante (2); Shubra 13. 4. 1908, Ferrante (1); Helwan 20. 9. 1891, Ferrante (1); Mokatam 12. 12. 1909, Ferrante (1); Helwan 18. 7. 1895, Ferrante Kharga Oasis. 2. 1912; Alexandria. 6. 1914; King Mariout. 8. 1923; Mansouriya. 10. 1925; W. Um Elek (Helwan). 11. 1925; Kafr Hakim Giza. 6. 1926. .... (MAC)

***Scaurus puncticollis syriacus* Reitter, 1914**

(Fig. 23&26)

*Scaurus puncticollis syriacus* Reitter, 1914b: 374.

**Description:**

Body big, about 16 – 19 mm. in length, black; pronotum wide and strongly rounded, strongly narrow at lateral sides basally, pronotum at disk with dense and wrinkled punctuation; elytra with very fine punctated striae, punctuation often entirely exists.

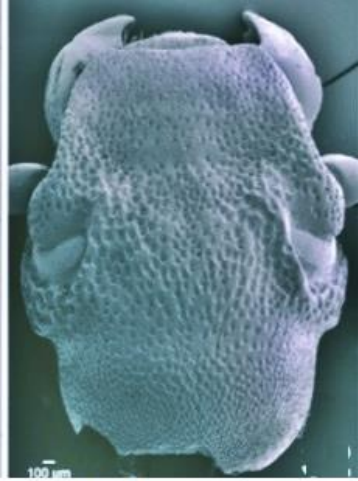
**Distribution:**

World: Egypt, Syria, Turkey, Cyprus.

Local: this species is distributed in Coastal strip.

**Material examined:**

Burg 14. 4. 1953 (1).



**fig.1**



**fig.2**



**fig.3**



**fig.4**

**Fig.1:** Head of *Scaurus* sp.

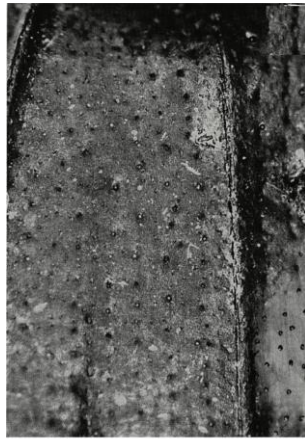
**Fig.2:** Antennae of *Scaurus* sp.

**Fig.3:** Pronotum sculpture of *Scaurus puncticollis syriacus*.

**Fig.4:** Pronotum sculpture of *Scaurus puncticollis puncticollis*.



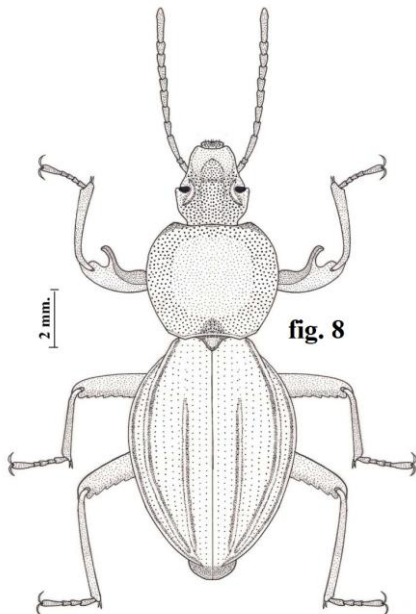
**fig.5**



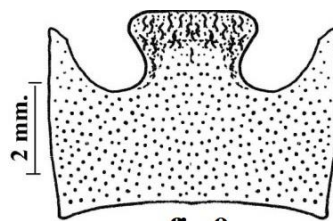
**fig.6**



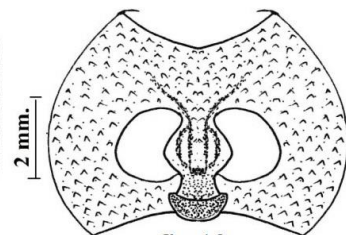
**fig. 7**



**fig. 8**



**fig.9**



**fig.10**



- Fig.5: Elytra sculpture of *Scaurus puncticollis syriacus*.
- Fig.6: Elytra sculpture of *Scaurus puncticollis puncticollis*.
- Fig.7: Habitus of *Scaurus aegyptiacus*.
- Fig.8: Habitus of *Scaurus aegyptiacus*.(drawing)
- Fig.9: First abdominal strnite of *Scaurus aegyptiacus*.
- Fig.10: Prosternal process of *Scaurus aegyptiacus*.

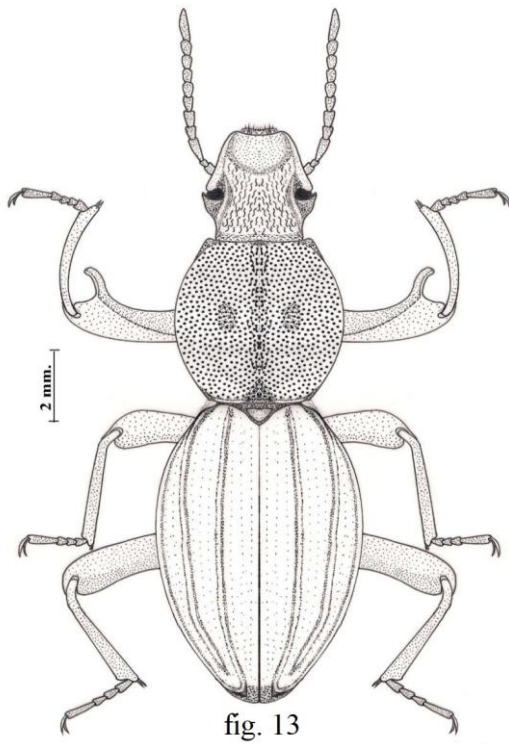
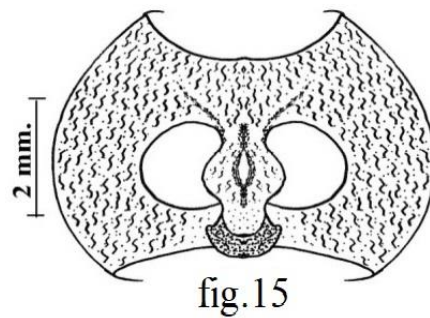
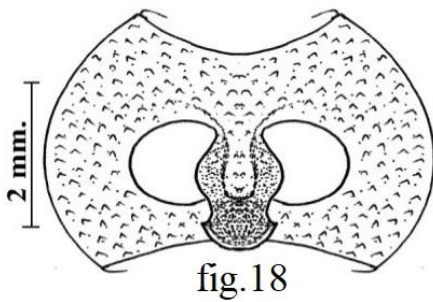
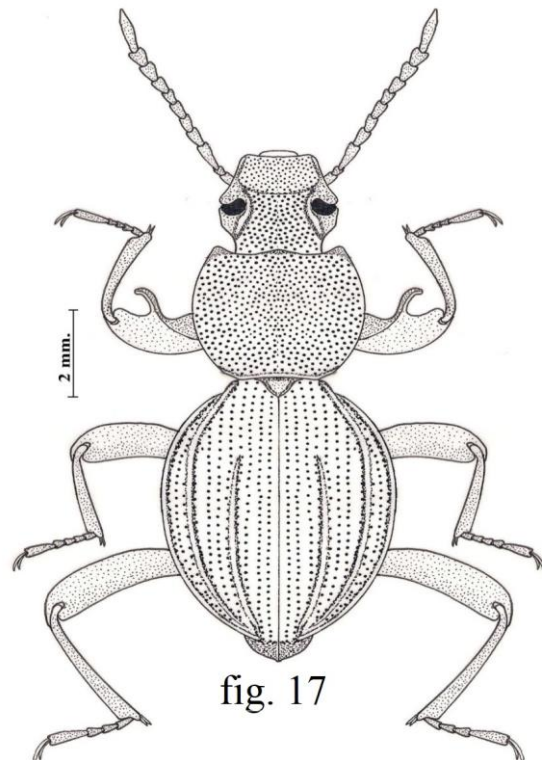


fig. 14



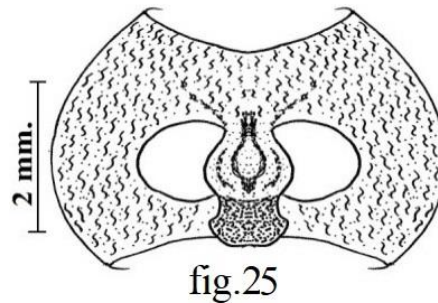
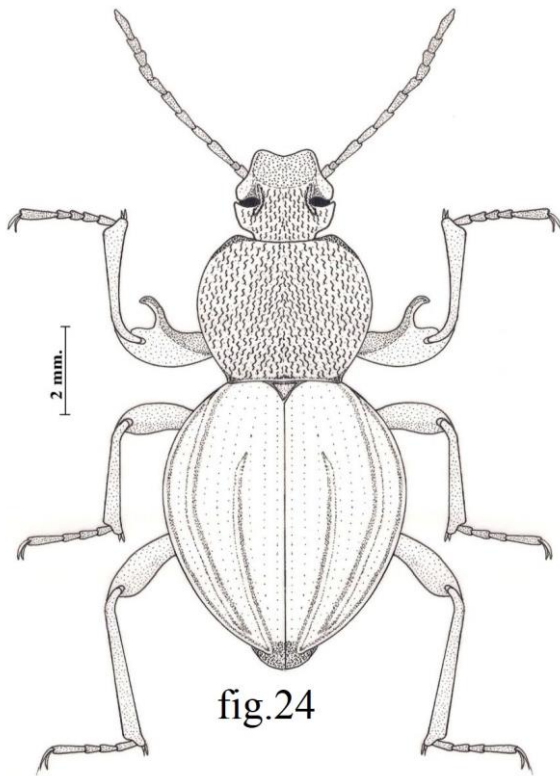
**Fig.11:** Habitus of *Scaurus atratus*.  
**Fig.13:** Habitus of *Scaurus carinatus*  
**Fig.15:** Prosternal process of *Scaurus carinatus*.

**Fig.12:** Habitus of *Scaurus bougonii*.  
**Fig.14:** Pronotum sculpture of *Scaurus carinatus*.



**Fig.16:** Habitus of *Scaurus puncticollis puncticollis*.  
**Fig.17:** Habitus of *Scaurus puncticollis puncticollis*.(drawing)  
**Fig.18:** Prosternal process of *Scaurus p. puncticollis*.  
**Fig.19:** Posterior end of elytra of *Scaurus p. puncticollis*.  
**Fig.20:** Aedeagus (ventral view) of *Scaurus p. puncticollis*.  
**Fig.21:** Aedeagus (lateral view) of *Scaurus p. puncticollis*





- Fig.22:** Fore legs of *Scaurus p. puncticollis*.  
**Fig.23:** Habitus of *Scaurus puncticollis syriacus*. (drawing)  
**Fig.24:** Habitus of *Scaurus puncticollis syriacus*.  
**Fig.25:** Prosternal process of *Scaurus p. syriacus*.  
**Fig.26:** Aedeagus (ventral view) of *Scaurus p. syriacus*.

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## الملخص العربي

مراجعة علي قبيلة سكوريني (غمدية الأجنحة):  
Tenebrionidae: من مصر (Tenebrioninae)

نيفين عصام المتولي

قسم تصنيف وحصر الحشرات، معهد بحوث وقاية النبات. مركز البحوث الزراعية. الدقى. الجيزة مصر

تتمثل قبيلة Scaurini بأربعة أجناس: Scaurus، Cephalostenus، Carchares، و Herpiscius في العالم؛ ويوجد منها جنس واحد فقط ممثل في مصر وهو (Scaurus). يحتوي جنس Scaurus على 44 نوعًا وسلالة، وممثل منها 6 أنواع في الفونة المصرية. الحشرة البالغة من Scaurini قوية ومتوسطة الحجم ويوجد في الجانب العلوي من ظهرها تموجات، وهي تكون سوداء أو بنية داكنة أو رمادية، وغالبًا ما يكون لها لمعان حريري. يأخذ الجسم شكل كبسولة الدواء (اسطوانية). ويمكن أن تكون الأرجل قصيرة وقوية أو طويلة ونحيلة. اليرقات صلبة الجسم، أسطوانية، ولها 6 أرجل قصيرة خلف الرأس؛ وتعيش على الفضلات الموجودة على الأرض وسط أوراق الشجر، وجذوع الأشجار المتعفنة، أو تحت الصخور وحولها. وتم عمل مفتاح تصنيفي للأنواع ووصف القبيلة والجنس والأنواع. وعمل رسم توضيحي للصفات التصنيفية للأنواع.