

DESCRIPTION OF SOME LONG HORNED BEETLE SPECIES OF SUBFAMILY PRIONINAE AND LEPTURINAE (CERAMBYCIDAE) IN AL-JABLE AL-AKHDAR AREA, LIBYA.

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ABSTRACT

*Adults of long- horned beetles of both Subfamilies Prioninae and Lepturinae, from cerambycidae were hand collected from variable hosts, including forest and fruit trees, from different areas in green mountine Eastern region of Libya. Result indicated the presence of two species of Prioninae: *Macrotoma palmate* Fabricius, 1792 of *Rhesus serricollis* Motschulsky, 1838 and one species of Subfamily Lepturinae: *Stictoleptura cordigera* Fuesslins, 1775. The three species were described.*

Keywords: Long horned beetles, Prioninae & Lepturinae (Cerambycidae), Al-jable Al-akhdar area, Libya.

INTRODUCTION

Long-horned beetles(Family Cerambycidae) considered as one of the largest and most important families in Order Coleoptera, either from number of species or the amount of damage it cause to the forest or fruit trees (Hong *et al.*, 2000; Sato, 2005; Hajek et al 2006, Eckehard *et al.*, 2006; Monne *et al.*, 2007). However this family consist many species which varies in size, from few to 160 mm, their body elongate or somewhat flattend. Cerambycid beetles found wherever forest planed. Therefore, it has been well documented in different parts of the world. Studies in last century decoumented many species and hosts as *Trichoferus griseus*, *Hesperophanes sericeus* on *Ficus carica* trees, *Niphona picticornis* on *Punica gsanatum* (Boyd, 1917and Peyerimhoff ,1919).

In Egypt many studies were conducted, in which 10 species documented, *Macrotoma palmata*, *Xystrocera globosa*, *Hesperophanes griseus*, *Stromatium fulvum*, *Hylotrupes bajulus*, *Cartallum ebulinum*, *Chlorophorus varius* and *Tamarix articulate* on different forest hosts (Petroff, 1919; Willcocks, 1924; Barbier, 1943; Villiers 1946 and Alfieri, 1976). In United Kingdom, Duffy (1952) made notice on the family characters and construct keys for subfamilies, genera and species. In United States, Linsley (1962) construct keys for subfamilies and tribes. In Africa keys for genera belonging to

African Prioninae were made in addition to their distributions (Quentin & Villiers, 1978). In Libya few studies were conducted in which 35 species were found, 6 were first recorded (Sama et al, 2005). In damage assessment study in Japan, declared that broad leaf forest trees were more susceptible compared with thin leaf (Ohsawa, 2003). Since the amount of damage it can be made on a wide range of hostes by these beetles is very high, extensive survey and taxonomic studies must be made.

The present study aimed to document species characters and host range in the most important forest and fruit trees area Eastren Libya.

MATERIALS AND METHODS

The field survey conducted at different sites of the green mountain included Darna, El-beida, Shahat, Al-hania, Al-kofe and El-weseta, Libya. Samples were hand collected throughtout 2006 and 2007 from life and dead trees from different hostes including forests. Hosts were *Cupressus* sp. , *Juniperus* sp., *Acacia* sp., *Pinus* sp., *Quercus* sp., *Eucalyptus* sp., *Pistacic* sp., *Ceratonia siligua*, *Populus alba*, *Arbutvs pavarii* , fruit trees *Prunus armeica*, *Prunus amygdals*, *Prunus sallcina*, *Prunus sp*, *Prunus prsica*, *Quslans regia*, *Punica gsanatum* and *Ficus carica*. Vegetables and cereal fields were also inspected. Specimens were identified and confirmed in Department of Entomology Faculty of Science, University of Aien-Shams, Cairo, Egypt. Description of species made flowed Ball, 1973.

RESULTS

Data showed the presence of two species belonging to subfamily Prioninae, *Macrotoma palmate* (Fabricius, 1792) of *Rhesus serricollis* (Motschlsky 1838) and one species of subfamily Lepturinae, *Stictoleptura cordigera* (Fuesslins 1775).

Macrotoma palmata Fabricius, 1792(Figure 1)

Description

Color. Dorsal and venteral dark brown or pale. Appendages: dark brown or pale. **Head:** Clypeus: anterior margin slightly concave, beset with dence almate. Epistomal suture: distinct, straight. Subgenal suture: distict, straight. Frontal fovae: small, deeply impressed, not prolonged toward eyes. Microsculpture: clypeus, frons, and vertex absent. Mentum: apex of lobes rounded; tooth distinct, shorter than lateral lobes. Antennae: dark brown or pale. **Thorax.** Pronotum: microsculpture absent, impunctate; lateral margins oval shape beset with spurs; anterior margin concave beset with row of hairs narrower than posterior margin; posterior margin straight; frontal angles

rounded; hind angles acute; anterior marginal sulcus distinct, entire; median sulcus distinct, reaching anterior margin; raised lateral bead of prothorax well defined; basal impressions absent, four deeply impressed at the middle isodiametric, impunctate. Scutellum: microsculpture absent; apex rounded; basal angles rounded. Prosternum: microsculpture absent; punctuate; intercoxal process, impunctate. Proepisternum: microsculpture distinct; impunctate. Proepimeron: microsculpture absent; impunctate. Mesosternum: microsculpture absent; impunctate. Mesepisternum: microsculpture absent; impunctate. Mesepimeron: microsculpture absent, impunctate. *Metasternum*: microsculpture absent; impunctate, with dense pubescent especially in posterior one third. Metepisternum: microsculpture absent ; impunctate. Metepimeron: microsculpture distinct; punctuate. **Legs:** Dark brown or pale; femur large and rough; protibiae and metatibiae beak with spurs; articles of tarsi pubescent, article 1 longer than 2,3. **Elytra:** Microsculpture distinct, isodiametric; humeri obtuse; stria deeply impressed, punctuate. **Abdomen:** Ventral: microsculpture absent; punctuate.

Measurements of 5 specimens

LH 3mm, WH 7mm, LP 8mm, WP 10mm, LE 10mm, TL 40.2mm

Hostes: *Acacia sp* and *Ficus carica*

Distribution: Gernada, Alweseta, Omalsfsaf, El-bieda, Libya as shown in Figure 1.



Figure 1. *Macrotoma palmata*

Serricollis Rhesus* Motschulsky, 1838 (Figure 2)*Description**

Color: Dorsal and Venteral: dark brown. Appendages: dark brown. **Head:** Clypeus: anterior margin straight, beset with setigerous. Epistomal suture: distinct, straight. Subgenal suture: distinct, straight. Frontal fovae: small, deeply impressed, not prolonged toward eyes. Microsculpture: clypeus, frons, and vertex absent. Mentum: apex of lobes rounded; tooth distinct, shorter than lateral lobes. Antennae: dark brown or pale, in females shorter than males. **Thorax:** Pronotum: microsculpture absent, impunctate; lateral margins oval shape; anterior margin concave, beset with row of cilia, prothorax wide, hinde and frontal angles acute, median sulcus distinct; basal impressions, small, impunctate. Scutellum: microsculpture distinct; apex of lobes rounded; basal angles rounded. Prosternum: microsculpture absent, punctuate. Proepisternum: microsculpture distinct, punctuate. Proepimeron: microsculpture distinct, punctuate. Mesosternum: microsculpture distinct, impunctate. Mesepisternum: microsculpture distinct, almate. Mesepimeron: microsculpture absent, impunctate. Metasternum: microsculpture absent, beset with setigerous. Metaepisternum: microsculpture absent, almate. Metaepimeron: microsculpture absent, punctuate. Legs. Dark brown or pale; relatively slender, beset with spurs, tarsi article beset with golden short hairs. Elytra. Microsculpture distinct, punctuate; isodiametric; humeri obtuse; stria deeply impressed. **Abdomen:** Venteral: microsculpture absent, almate, segment 4 and 5 beset with setigerous.

Measurements of 1 specimen:

LH 2mm; WH 4mm; LP 6mm; WP 7mm; LE 23mm; WE 7mm; TL 31mm
(Figure 2)

Hosts: *Populus alba* **Distrbution:** Ainstowa, Libya.



Figure 2. *Rhesus serricollis*

Stictoleptura cordigera* Fuesslins,1775 (Figure 3)*Description**

Color: Dorsal: head and pronotum black, elytra light orange. **Ventral:** black. Appendages: black. **Head:** Clypeus anterior margin straight, beset with setigerous. Epistomal suture: distinct straight. Subgenal suture distinct. Frontal fovae: small, deeply impressed, not prolonged toward eyes. Microsculpture: clypeus, frons, and vertex absent. Mentum: apex of lobes pointed; tooth distinct. Antennae: metallic black, serreate, segment 3 equal 4 times segment 2. Thorax. Pronotum: microsculpture absent, almate, narrow inferiorly and wide posteriorly; interior margin rounded; posterior margin sinuate; anterior angle rounded; posterior angle acute; marginal and median sulcus indistinct; basal impression absent, impunctate. Scutellum: small, microsculpture absent; apex of lobes rounded; basal angle rounded. Prosternum: microsculpture absent, almate, beset with scattered setigerous. Proepisternum: microsculpture absent, impunctate. Proepimeron: microsculpture absent, impunctate. Mesosternum: microsculpture absent, punctuate, beset with setigerous. Mesepisternum: microsculpture absent, impunctate. Mesepimeron: microsculpture absent, impunctate. Metasternum: microsculpture absent, impunctate, beset with setigerous. Metepisternum: microsculpture absent, impunctate. Metepimeron: microsculpture absent, impunctate. Legs. Black, hind legs elongate; tibia with long apical spur; tarsi article 1 double the 2 in length. Elytra. Microsculpture absent, almate, color orange, with black round spots at the middle; stria indistinct; humeri obtuse, short in females. **Abdomen.** Ventral: microsculpture absent, punctuate, isodiametric, beset with golden hairs in rows.

Measurements of 3 specimens:

LH 1mm; WH 2mm; LP 2mm; WP 3mm; LA 13mm; WA 4mm; TL 16mm

Figure 3

Hosts: Unknown

Distribution: Ras Al-helal, Libya.



Figure 3. *Stictoleptura cordigera*

Sub family: Prioninae**Key to species:**

- 1- Prothorax very wide, smooth laterally, with little spines; 3rd antennal segment about 6-7 mm; body not flatten*Resus serricollis*.
 2 - Prothorax narrow, rough laterally, with numerous spines; 3rd antennal segment about 13mm; body cylinder..... *Macrotoma palmata*.

DISCUSSION

The result of the current study was a part of major survey on species of Cerambycidae collected from different hosts including forest and fruit trees in Al-jabal Al-akhdar area, Libya, in which 19 species were present. Results were in accordance with many studies conducted in the adjacent countries, since these area had nearly the same environmental conditions and vegetation covers (Petroff, 1919; Willcocks, 1924; Barbier, 1943; Villiers, 1946, Alfieri, 1976). These species were reported in different parts of Libya, which indicate wide tolerance and host range (Sama and Martin, 2005). The morphological characters of these species were adapted to harsh conditions, since there bodies were elongate or cylindrical, mainly covered with spines, that in accordance with almost all taxonomic results in different parts of the world (Boyd, 1917; Peyerimhoff, 1919; Duffy, 1952; Linsley, 1962 and Quentin & Villiers, 1978). Taxonomic characters represented in this study was firstly documented.

Further studies must be made concerning damage assessment, host preferences and life cycles.

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الوصف العلمى لبعض انواع من الخنافس ذات القرون الطويلة التابعة لكل
من تحت فصيلة Prioninae و Lepturinae
(Cerambycidae) فى منطقة الجبل الاخضر لىبيا

مقدم من

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بالغات من انواع الخنافس ذات القرون الطويلة التابعة لكل من تحت فصيلة
Subfamily Prioninae و Subfamily Lepturinae (Cerambycidae) ،
جمعت باليد من على عوائل مختلفة شملت اشجار غابات و فاكهة من مناطق مختلفة من
الجبل الاخضر شرق ليبيا . اوضحت النتائج وجود نوعين يتبعان تحت فصيلة
Prioninae هما *Rhesus* و *Macrotoma palmate* Fabricius, 1792
Subfamily *serricollis* Motschulsky, 1838 و نوع واحد يتبع تحت فصيلة
Lepturinae هو *Stictoleptura cordigera* (Fuesslins, 1775) . تم وصف هذه
الانواع باتباع القواعد العلمية .
الكلمات المفتاحية:

الخنافس ذات القرون الطويلة، Prioninae و Lepturinae (Cerambycidae) ،
منطقة الجبل الاخضر ، ليبيا.