SHORT COMUNICATION

First Record of the Long-Horned Beetle, Xylotrechus stebbingi Gahan 1906 (Cerambycidae: Coleoptera) Infesting Golden Shower Tree, Cassia fistula in Egypt

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Abstract: The long-horned beetle, Xylotrechus stebbingi, Cerambycidae; Coleoptera was recorded for the first time on the golden shower tree, Cassia fistula at Shebin El Kom, Menoufia Governorate, Egypt during June 2019. Hole of about half-centimeter diameter was noticed in a branch of Cassia fistula tree and expected as insect injury. After observation, two insect individuals were observed and classified as male on 28th of April 2020 and a female on the 1st of May 2020. Morphological characters (front, antenna, elytra, and legs) were described under a dissecting stereo microscopic with a 10x lens. Photographic pictures were also taken with a mobile camera without zoom. The individuals were identified as the long-horned beetle, Xylotrechus stebbingi, with the aid of the key created by (Gahan, 1906). Xylotrechus stebbingi length average as 2.2 cm in male and 1.9 cm in female. Corresponding figures for width is 0.6-0.5 cm. Head of hypognathous position front covered with minute hairs with a V-shaped red-brown protrusion, compound eyes look like commas or curved water droplet, antenna filiform of 10 segments. Pronotum has three black spots in an inverted triangle, looks like a rabbit face, pronotal base part has 2 white spots distributed above the scutellum. The elytra have three transverse white lines; the base and the tip have more fuzz. Pro-femurs reach the first transverse elytra line, pro-leg of the same length as meta-femur, the last one passes the body and elytra, meta-leg is as tall as the body approximately, meso-femurs reach the third transverse line.

Keywords: Purging cassia trees, Golden shower, Indian laburnum, pudding-pipe tree, Cerambycidae

INTRODUCTION

Golden shower tree, Cassia fistula L. is as tumning deciduous long tree has yellow flowers. Cassia fistula tree has medicinal importance which can be used to treat diarrhea, stomach pain, and hematemesis, by chewing and swallowing a small piece of its park for 2-3 days, also it used to treat nasal infection. Fruits and leaves of cassia are used as antifungal and antibacterial agents. In addition to its pharmacological uses, cassia extracts are used for pest and plant disease control (Kasuko and Nagayo, 1951; Patel et al., 1965; Biswas and Ghosh, 1973; Kirtikar and Basu, 1975; Jaipal et al., 1983; Satyavati and Sharma, 1989; Perumal Samy et al., 1998; Sharma and Basandrai, 1999; Raja et al., 2000; Rajan et al., 2001).

Cocquempot (2007) reported the long-horned beetle Xylotrechus stebbingi as an economic pest and scheduled it in the quarantine lists, it was not included in quarantine species and importation control lists. So, the lists should be preventive, not curative to do the most effective role. Larvae grow and feed on decaying wood and are transported with wood products and wooden industrial packages or stocks (Cocquempot and Lindelöw, 2010).

Gahan (1906) and, Stebbing (1914) described the body of Xylotrechus stebbingi, color brown, length 12-18 mm; head and prothorax are covered with grey pubescence, head with lateral oblique, curved and extending below to the lower margin of eyes level, front narrowed between eyes and furnished with two prominent convergent carinae made a V shape, antenna length less than half the length of body, third joint longer than the first. The prothorax widest between the middle and the base, narrowed in front and at the base with a median aspirate carinae, prothorax has two dorsal and two lateral small white spots. The base of elytra covered with grey pubescence, marked with transverse ashy lines, the first is near the base, the second is just before the middle of the elytra, the third is between the middle and the apex, the top border lined with grey pubescence. The meta-thoracic episterna has large posterior ashy white spot on each. Femurs strongly thickened, hind pair extending a little past the end of body and elytra. First joint length of Hind tarsus is twice to the second and the third joints together.

MATERIALS AND METHODS

Place:
At the garden of the Faculty of Agriculture, Menoufia University, there are two trees of purging cassia trees, Cassia fistula L. (golden shower tree) (Fig. 1).

Samples:
Pores of infested insects were discovered on the branches (Fig. 2) then some branches were cut with a saw and transported to the laboratory to be examined.

Classification and Identification:
Morphological characters (front, antenna, elytra, and legs) were identified under a dissecting stereoscopic microscope with 10x lens with the aid of the key created by Gahan, 1906.

Imaging:
Images taken under dissecting stereoscopic microscope with mobile camera, adjustments prepared by Adobe Photoshop CS6 (Alten, 2014).

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RESULTS AND DISCUSSION

1- Systematic position of *Xylotrechus stebbingi*, Gahan, 1906:

**Kingdom:** Animalia  
**Phylum:** Arthropoda  
**Subphylum:** Atelocerata  
**Class:** Insecta  
**Infraclass:** Neoptera  
**Subclass:** Pterygota  
**Order:** Coleoptera  
**Suborder:** Polyphaga  
**Infraorder:** Cucujiformia  
**Superfamily:** Chrysomeloidea  
**Family:** Cerambycidae  
**Subfamily:** Cerambycinae  
**Tribe:** Clytini  
**Genus:** Xylotrechus  
**Species:** *stebbingi*  
*Xylotrechus stebbingi* Gahan, 1906.

![Figure (1): Cassia fistula tree](image)

![Figure (2a, b): The pores of beetle adult male (0.7 cm diam.) and female (0.6 cm diam.)](image)

2- Description and measures of *Xylotrechus stebbingi* adult

| Table (1): Description and measures of the adult male *Xylotrechus stebbingi* |
|-------------------------------------------------|-------------------------------------------------|
| **Body** | Mocha-brown, cover with light grey fuzz. |
| **Length - Width** | 2.2 cm - 0.6 cm |
| **Head and front** | With a V shaped dark brown protrusion. |
| **Antenna** | 10 segments, 0.7 cm. |
| **Compound Eyes** | Curved water droplet including the base part of the antenna. |
| **Pronotum** | Look like a rabbit face. |
| **Pronotal markings** | 2 white spots. |
| **Elytra** | 3 white transverse lines. |
| **Legs and Tarsus** | Fore-femurs reach the first transverse line. |
| | Middle femurs reach the third transverse line. |
| | Hind femurs are long and pass the body and elytra. Tarsus with 2 claws. |
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### Table (2): Description and measures of the adult female *Xylotrechus stebbingi*

<table>
<thead>
<tr>
<th>Body</th>
<th>Mocha-brown, cover with light grey fuzz.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length - Width</td>
<td>1.9 cm - 0.5 cm</td>
</tr>
<tr>
<td>Head and front</td>
<td>With a V shaped dark brown protrusion.</td>
</tr>
<tr>
<td>Antenna</td>
<td>10 segments, 0.6 cm.</td>
</tr>
<tr>
<td>Compound Eyes</td>
<td>Curved water droplet including the base part of the antenna.</td>
</tr>
<tr>
<td>Pronotum</td>
<td>Look like a rabbit face, length 0.5 cm.</td>
</tr>
<tr>
<td>Pronotal markings</td>
<td>2 white spots.</td>
</tr>
<tr>
<td>Elytra</td>
<td>3 white transverse lines.</td>
</tr>
<tr>
<td>Legs and Tarsus</td>
<td>Fore-femurs reach the first transverse line. Meso-femurs reach the third transverse line. Meta-femurs are long and pass the body and elytra. Tarsus with 2 claws.</td>
</tr>
</tbody>
</table>

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**Figure (3):** a) *X. stebbingi* under stereotype, b) the front, c) tarsus and the claws, d) pronotum and antenna, e) pronotal and scutellum, f) *X. stebbingi* with 5 x camera, g) *X. stebbingi* actual size

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### 3-Classification and Identification

*Xylotrechus stebbingi*, a species of long-horned beetles, is mocha-brown in color covered with light grey fuzz, its length averages 2.2 cm in male and 1.9 cm in female (Fig. 3 a, f, g). Corresponding figures for width is 0.6–0.5cm (Tables 1 & 2). The head has a hypognathous position (makes a 90° angle with the axis of the body), the front of the head covered with minute hairs with a V-shaped red-brown protrusion (Fig. 3b), compound eyes look like commas or curved water droplet, including the 10 segmented filiform antenna. Pronotum (Fig. 3d, e) has three black spots in an inverted triangle, looks like a rabbit face, the widest part is 0.5-0.4 cm, pronotal base part has 2 white spots distributed above the scutellum. The elytra have three transverse white lines; the base and the tip have more fuzz. The tarsi have two claws (Fig. 3c). Fore-femurs reach the first transverse elytra line, the fore-leg is the same length as the meta-femur, the last one passes the body and elytra, the meta-leg is as tall as the body approximately, meso-femurs reach the third transverse line. The individuals were identified as the long-horned beetle, *Xylotrechus stebbingi* with the aid of the key created by Gahan, 1906. This record confirmed by the article conducted by Ali, 2015 in Syria.

### ACKNOWLEDGMENT

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تُسجِّلُ لأول مرة الحفارة ذو القرن الطويلة Xylotrechus stebbingi الكاسيا فستنوليا في مصر

نهال عمّام سولوم

قسم الحشرات الاقتصادية والحيوان الزراعي - كلية الزراعة - جامعة المنوفية - مصر

تم تسجيل حشرة الحفارة ذو القرن الطويلة Xylotrechus stebbingi في شهر يونيو 2019 على أشجار الكاسيا فستنوليا شبيهة بذين الكاسيا في محافظة المنوفية، الجمهورية العربية. لوحظ وجود ثقب قت 것 خارجية نصف طول شجرة الكاسيا، وتم نقل عينات من الفروع إلى المعمل ووضعها بأقلاع جنوبية. متواجدة ببطء من النشأة، ثم ظهر الخبرة حتى ظهر الذكر في 28 أبريل 2020 وظهرت الحشرة تحت درجة حرارة 19 درجة مئوية.

وجاءت الأشكال المورفولوجية للحشرة تحت مشرفة بالينول السينية وتم استخدام عينة شبيهة. 10.1186/s13007-016-0056-6

الرأس وضعها أصل الجزء بعدة لحبيبات، وجلب المغصوبة بثعيات دقيقة، وحليب تنسى على ظل حرف V ولون بني أحيى، العيون المرمية تشتد النقطة أو قطرة الدماء، ولكنها مفيدة، وقرون الاستشعار يكون من 4 حلقات ويدمج من تحريج بين العيون المرمية، والصدور الأمامية عينات على ثلاثة دفعت حاء في شكل مثلاً بطيض مظهر وجه النور، أسفل مصد الكاسيا عينات على تفتيت بين بيضاواتين، أنت من جنبي الصرف، النجاح العديدي على ثلاثة خطوط عرضية بضوء، وقادته وقعت ويرجع، النزف الأعلى عينات على جهة أطراف الأذن، وفج الخطي الآسيوية 3 طورًا، وفج الخطي الآسيوية 3 طورًا، وفج الخطي الآسيوية 3 طورًا، وفج الخطي الآسيوية 3 طورًا.