

REDESCRIPTION OF CHECKERED BEETLE, *Trichodes ephippiger* Chevrolate, 1874 (Coleoptera: Cleridae)

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ABSTRACT

Redescription of checkered beetles, *Trichodes ephippiger* Chevrolate, 1874 is reviewed from Iraq. The species was collected from the flowers of some weeds during the period of March until July- 2014. Some important taxonomic parts, labrum, mandibles, antenna and male genitalia have been drawn. Localities, plant hosts and date of the collection have been mentioned.

Key words: (Coleoptera;Cleridae), New record, *Trichodes ephippiger* Chevrolate, Iraq.

INTRODUCTION

The family Cleridae of the superfamily Cleroidea comprises approximately 4000 species and just over 300 genera worldwide (Gerstmeier, 2000). They are commonly known as checkered beetles. The family has a worldwide distribution, and a variety of habitats and feeding preferences. Ninety-one species have been described, of which 70 are from the Palearctic (Corporal, 1950), 11 from Nearctic (Foster, 1976) and 10 from the Afrotropical regions (Corporal, 1950). Most genera of the family are predaceous and feed on other beetles and larvae; however, other genera are scavengers .some feed upon pollen as adults, whereas larvae are predaceous, as is the general life history for the genus *Trichodes* (Opitz, 2002).While, a few are considered pests of stored animal products, dry carrion, or stored meat products (Furniss and Carolin, 1977 ; Majka, 2006). Some species consisting predominately of predators of hymenopteran larvae and orthopteran egg pods (Foster, 1976). Another species are occasionally found on carrion in the later dry stages of decay. Some species also are stored pest and are found infesting, many of the species are known as "flower visitors", which prey on other flower visiting insects and also feed on pollen. These species are found in moist, sunny environments, where flowering plants are found in abundance (Ronald, 1998). *Trichodes* Herbst, 1792 is one of the very important genus belonging to the family, first appeared in the literature when Herbst (1792) used it in place of *Clerus* Fabricius (1775). Fabricius (1801) split *Clerus* and used the junior synonym *Trichodes* as a generic name for Old World species. Latreille (1804) incorrectly used *Clerus*

for species Fabricius placed under *Trichodes*. Generally, are elongated and oval in shape. Their entire bodies are covered with bristly hairs, and many display an ornate body color pattern. These often brightly color patterns can be red, yellow, orange, or blue. The antennae are clubbed at the tip for most species, but others can be “clubbed, saw-tooth, or thread-like. (White, 1998 ; Johnson and Triplehorn, 2004). In Iraq there are not any taxonomic study of the family species except; Derwesh (1965) indicated 10 species in six genera and Al-Ali (1977) recorded six species.

MATERIALS AND METHODS

The specimens were collected from the period of March till July/ 2014 from the flowers of some weeds and plants in different localities of Kurdistan region - Iraq. The specimens were placed in boiling water for 10-15 minutes to soften their parts. Then the parts were separated and put in 10% KOH, placed on fire with shaking for about (4-5) minutes for dissolving of lipids materials of the body and destroying the muscles. After that placed in distilled water for 2-3 minutes in order to neutralize the alkali. The parts were placed in ethyl alcohol 25% and dissected under microscope, then transferred to ethyl alcohol 50%, 75% and 100%, respectively for two minutes of each concentrations to dehydration of water, then placed in xylol for two minutes, for translucency, finely placed in Canada balsam to support slides for subsequent examination under microscope. The species identified by using taxonomic key of (Foster, 1976 ; West, 2014).

RESULTS AND DISCUSSION

Trichodes ephippiger Chevrolate, 1874

Body: Subcylindrical shaped, brightly reddish, length 0.6-1 mm, width 0.3-0.4mm.

Head: Oval, with narrow black suture edge. Vertex shine black, low concave, with sparsely of fine punctures. Coronal suture present. Eyes dark brown, oval. Frons shine black, convex, with sparsely of fine punctures. Clypeus triangular slightly concave, laterally with dense of fine punctures and pale yellow setae. Antennae (Fig.1e) clavate, dark brown, 2.8-3.4 mm .1st segment cup shaped, 2.2 times as long as 2nd segment, 2nd segment nearly rounded, segment 11th oval shaped 2.4 times as long as 10th segment. Labrum (Fig.1b) brown, nearly oval, length 0.3 – 0.4 mm, anterior margin moderately emarginated at middle with row of pale yellow setae. Mandibles (Fig.1a) black, high sclerotized, apical part

with two denticle, inner denticle shorter than the outer, scrobe with 7-9 of pale yellow setae. Maxilla (Fig.1c) pale brown, 1st segment of maxillary palp small nearly rectangular shaped, 2nd segment nearly cup shaped, 1.2 times as long as 1st segment, 4th segment nearly oval elongated shaped 2.6 times as long as 3rd segment, distal lacinia nearly rectangular, pale brown, apical part bearrow of high pale yellow setae. Labium (Fig.1d) brown, prementum nearly spherical shaped, 3rd segment of labial palp nearly triangular 1.1 times as long as 2nd segment.

Thorax: Pronotum brightly black color, nearly cylindrical shaped, surface with moderate dense of puncture, anterior margin slightly straight, posterior margin nearly rounded at middle, anterior and posterior angle nearly round. Procoxal cavity open, anterior margin of prosternal straight, prosternal process rounded at the middle. Scutellum shine black, triangular shaped. Elytra (Fig.1f) shine reddish, lateral margin dark brown reddish, quarter part of elytra shine black randomly moderate pale black hair on surface. Legs shine black, fore and hind femur nearly oval, one-fourth of apical part with row of short pale yellow spines, spures present, hind tibia cylindrical shaped.

Abdomen: Shine black, nearly oval shaped, speculum gaster (Fig.1g) pale yellow, Y-shaped, strongly jointed at $\frac{1}{4}$ of apical part.

Male genitalia: Aedeagus (Fig.1h) pale brown, length 2.0– 2.4mm, nearly bulb shaped, and apical part acute. Basal hood pale yellow, slightly sclerotized, nearly tubular shaped.

Specimens examined: The specimens were collected from of the flowers of some weeds, Erbil (Salahhaden , Shaqlawa,Girdarasha and Ankawa, mustard, *Brassica rapa*, Haory cress, *Lepidium draba*; and Dwarf rocket, *Diplotaxis* sp.22.3.2014, 30.4.2014, 20.5.2014 and 4.6.2014 respectively; Kasnazan, *Brassica rapa*, 4.5.2014). Sulaimani (wild mint, *Mentha* sp., 18.4.2014). Duhok (Semil, malva, *Malva sylvestris*, 22.6.2014).

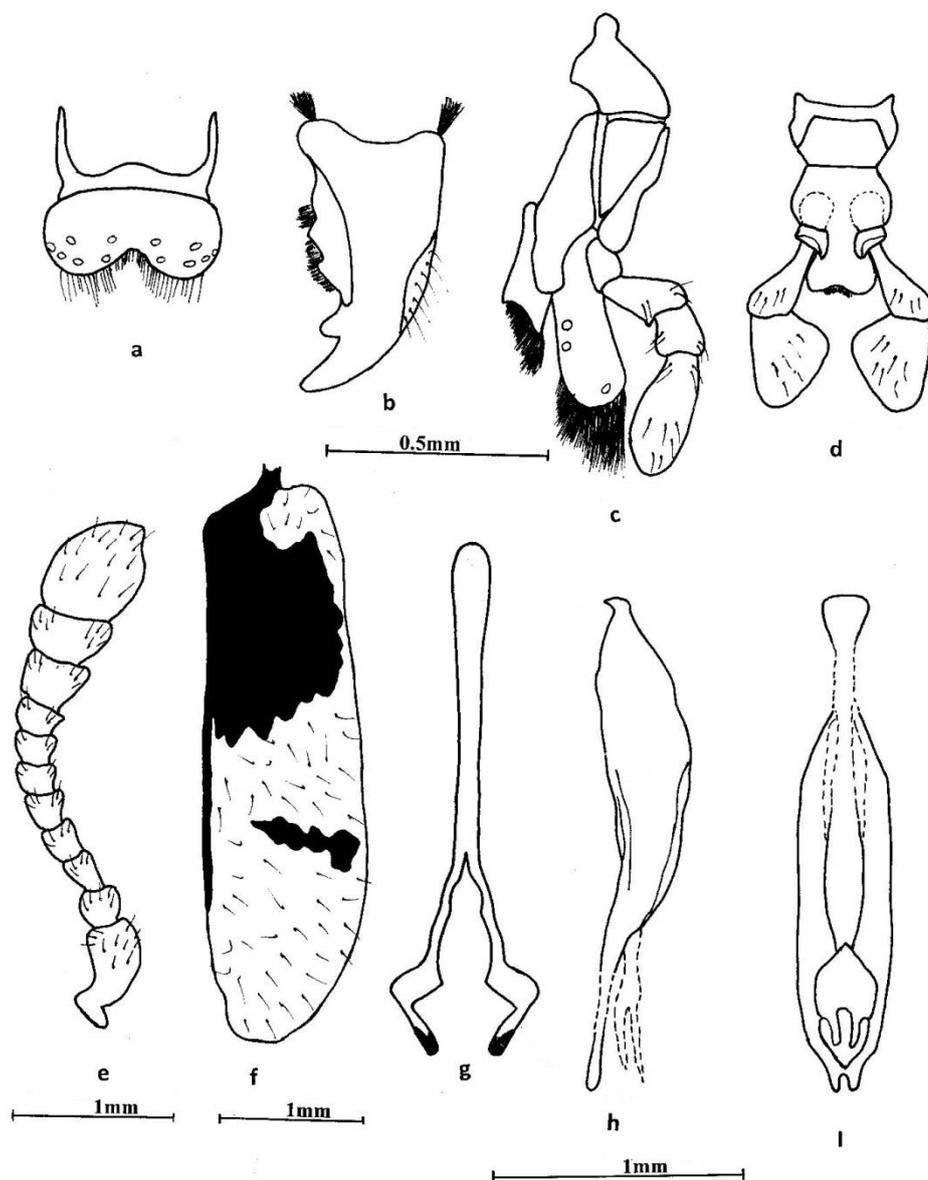


Figure 1. *Trichodes ephippiger* Chevrolate,
 a. Labrum, b. Mandible, c. Maxilla , d. Labial palp, e. Antenna, f. Elytra
 g. Spiculum h. Male genitalia (Lateral view) i. Male genitalia (Dorsal view)

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أعادة وصف الخنفساء شطرنجية اللون 1874 *Trichodes ephippiger* Chevrolate (Coleoptera: Cleridae)

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المستخلص

تم إعادة وصف الخنفساء شطرنجية اللون *Trichodes ephippiger* Chevrolate, 1874 في العراق. جمعت العينات من على ازهار بعض الأدغال خلال الفترة من آذار - تموز / 2014. رسمت بعض الأجزاء المهمة تصنيفيا منها الشفة العليا، والفكوك العليا، واللامس، والسوءة الذكرية. ذكرت مناطق إنتشار النوع، وتاريخ جمعه وعائله النباتي.

الكلمات المفتاحية: (عائلة خنافس شطرنجية اللون: رتبة غمدية الأجنحة) تسجيل جديد، النوع *Trichodes ephippiger* Chevrolate, 1874، العراق.