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A NEW SPECIES OF THE GENUS *EPURAEA* ERICHSON, 1843 FROM IRAQ (COLEOPTERA: NITIDULIDAE, EPURAEINAE)

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Abstract

A new species of *Epuraea erbilensis* sp. nov. is described from Iraq. Distinctive characters of the species were mentioned; Labrum dark yellow, deeply bilobed, Mandibles bidenticated. Antenna yellow-brown, consist of 11 antennomeres ending in three clubs shorter than the stem. Elytra unicolor, brown, two abdominal tergites are exposed. 5th tarsal segment of fore leg, long, tubular, slightly longer than 1st- 4th combined. Parameres in lateral view, sword shaped, gradually curved to a sharp tip, expanded as basal part, apical part with fine, short yellow setae. Median lobe sword shaped, slightly longer than parameres.

Key words **:** Coleoptera; Nitidulidae; *Epuraea erbilensis* sp. nov.; New species; Iraq.

Introduction

Sap beetles, family Nitidulidae Latreille, 1802 consist of more than 4500 in 350 genera worldwide (Slipinski, *et al.,* 2011). Many genera are saprophagous and mycetophagous, although some are anthophilous, carrion feeders, inquilines and even predators (Hinton,1945; Hayashi 1978; Jelínek *et al.,* 2010; Habeck 2002; Cline, 2005). Several species are known agricultural pests of field and stored products (Arbogast and Throne,1997). Others are stored product pests (Ewing and Cline, 2005).In addition to damage,these beetles have also been recognized as vectors of fungi (Dowd 1991; Dowd and Nelson, 1994). *Epuraea* Erichson, 1843 *is important genus of the family,* characterized by the body slender moderately convex and less oval, yellow testaceous; head with large eyes and temples not extending behind them; terminal labial palpomere truncate apically; antennal furrows straight, converging posteriad, with outer margin obsolete to indistinct, elytra short, two abdominal segments are expose (Parsons,1943; Dasgupta, *et al.,* 2016; Jelínek *et al.,* 2017). Sjöberg (1939) described several species of the genus from Palaeractic region and provided a key to identified the species. Parsons (1943) while dealing with the Nearctic Nitidulidae provided a key to the species of Nearctic Region. Hansen (1950) divided the genus into eight groups and keyed out 35 species. Jelínek and Audisio (2007) in Palaearctic catalogue mentioned seven subgenera under *Epuraea*. Hisamatsu and Kirejtshuk (2013) added a new species of *Epuraea* from the Palaearctic region. Since there is no definitive list of Iraqi Nitidulidae, except five species from the genus *Carpophilus* Stephens 1830 had been recorded by different authors (Derwesh, 1963; Al-Ali, 1977 and Mawlood *et al.,* 1989).

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Materials and Methods

1(B&) (Holotype) Iraq - Kurdistan region: Erbil; Kalic350km NW Baghdad, 5. May. 2018 from Dried fig, *Ficus carica* ; Gazan T. Omer; leg., Paratype (10 B&B& 15 @&@&): Same data of Holotype. All descriptions and measurements were made under an dissecting binocular microscope (Huma Scope sterer microscope), the measurements taken by using ocular micrometer. Photographing of the important parts were made using microscope digital camera (AmScope,18megapixel). The types are Deposited in the Insect Museum of Plant protection Department, College of Agricultural Engineering Science, Salahaddin University, Kurdistan region-Iraq.

Results and Discussion

Description

Body (Male) (Fig. 1a)

Ovate, moderately convex, yellow-brown, with moderately dense of golden, recumbent, fine setae. Body length 2.4 mm, width 1.1 mm.

Head

Semi-oval, pale brown, laterally expanded narrower than anterior margin of pronotum. Eyes black, prominent, nearly round shaped length 0.25 mm. Frons slightly convex with pair of shallow impressions at antennal insertions; surface with sparsely, golden fine short recumbent setae, and densely punctures nearly equal in size to eye facets. Clypeus brown, narrow without setae. Labrum (Fig. 1b) dark yellow, length 0.15 mm,2 times as wide as long, deeply bilobed, with median V-shaped excision reaching its middle surface, its lobes nearly oval, posterior margins with dense, yellow, fine and short setae with long spine on each lobe. Mandibles (Fig.1 c) symmetrical, brown –dark brown, 0.25 mm strongly arcuate, bidenticated and moderately sclerite, outer dentics 2 times as long as the inner, molar area with comb of fine, short yellow setae. Maxilla (Fig. 1d) yellow- dark yellow, length 0.25 mm moderately sclerotized, Lacinia yellow, elongated oval and oval at tip with densely yellow setae, maxillary palps yellow, 4th palpomere cylindrical, bare, straight apically, 3.7 times as long as the 3rd palpomere. Labium (Fig. 1e) yellow, length0.25 mm,3rd segment of labial palps cylindrical shaped, 2 times as long as 2nd. Antenna (Fig.1f) yellow-brown, length 0.55 mm, consist of 11 antennomeres ending in three clubs shorter than the stem, occupying more than one third of antenna length; the segments are sparsely yellow setose. 1st antennomere enlarged and often elongated oval 2 times as long as 2nd antennomere, 3rd – 6th antennomeres tubular shaped, 3rd antennomere 1.3 times as long as the 4th segment, 9th and 10th segments cup shaped, equal in length, 11 antenoomere semi-triangle as long as 9th segment. Antennal grooves broad, and converging posteriad.

Thorax

Pronotum brown, moderately convex, as broad as the elytra. Length 1.2-1.3 mm and much broader than the long, 0.5-0.8 mm., anterior margin slightly emarginated, nor bordered; anterior angles obtuse, almost rounded; lateral margins arcuate, posterior margin broadly truncate in middle; posterior angles obtuse, not projecting posteriad; surface with high dense of fine, short, recumbent brown setae, the punctures same coarse but slightly deeper than those of head. Scutellum large, brown, triangular, punctate like elytra. Fore legs (Fig.2a) pale brown, fore coxae elongated oval, profemur cylindrical, slightly expanded at the middle, protibiae, length 1.4 mm, straight, nearly triangle shaped, outer margin apparently smooth, only microscopically denticulate in distal portion, apical part contains two spurs and 4-5 short slightly acute spines. protarsal five segmented. Protarsomeres 1st -3rd bilobed and strongly dilated, strongly densely, yellow, long, fine setae ventrally. 4th protarsomere is the smallest; 5th segment long, tubular 3.3 times as long as the 3rd and slightly longer than 1st-4th combined. fore tarsal claws simple, long, weak and slightly arcuate. Middle legs are resemble to fore legs except, the mesocoxa, nearly conical shaped, mesotibiae slightly longer, outer margin with a row of fine, short and dense spines, apical part with 5-6 spines. Hind legs resemble to ore legs except, metacoxae, plate shaped, metafemur slightly arcuate and longer, metatibia tubular shaped, arcuate and slightly longer, metatarsus sparsely brown stetose. Elytra (Fig. 2b) short, unicolor, brown, nearly rectangular, moderately convex, 1.5 mm length and 0.7 mm width, two abdominal tergites are exposed. Humeral angles obtusely rounded, lateral margins arcuate. Dorsal surface of elytra with moderately dense of fine, recumbent, short brown setae. Punctures somewhat smaller and shallower than those on pronotum. Prosternum roof-shaped, finely sparsely punctate. Prosternal process tubular shaped and bordered between procoxae, posterior to procoxae depressed and broadly rounded. Mesoternite sub-trapzoidal shaped, anterior margin slightly concave, mesosternal process triangle shaped prominent, and reaching between mesocoxae. Metastenite in middle flattened, sub-rectungular shaped, metasternal line visible reaching middle of surface, punctures smaller than eye-facets, shallow, but well defined, separated by l–2 diameters.

Abdomen

Brown, with five visible sternites finely punctate, length 1.6 mm., 1st -4th abdominal sternites transverse, anterior and posterior edges slightly arcuate. The 4th sternite is long about 1.8 times as long as 3rd sternite,. 5th abdominal sternite nearly triangle, posterior margin oval. The sternites with dense, fine recumbent pale yellow setae. In ventral view, there are eight abdominal visible tergites, two of apical tergites (including pygidium) are exposed. Tergits 1st -6th are transverse, 1st - 4th tergites are subequal in length. The 6th tergite fully obscured by elytra and 1.2 as long as 5th. Pygidium (Fig. 2c) partly exposed nearly triangle, subtruncate apically, posterior margins nearly straight, surface densely finely punctate. Tergite 8th exposed, low sclerotized, subtruncate apically, ¼ of apical part sparsely dense of short yellow setae. Spiculum gastrale (Fig. 2d) length 0.25 mm basal part

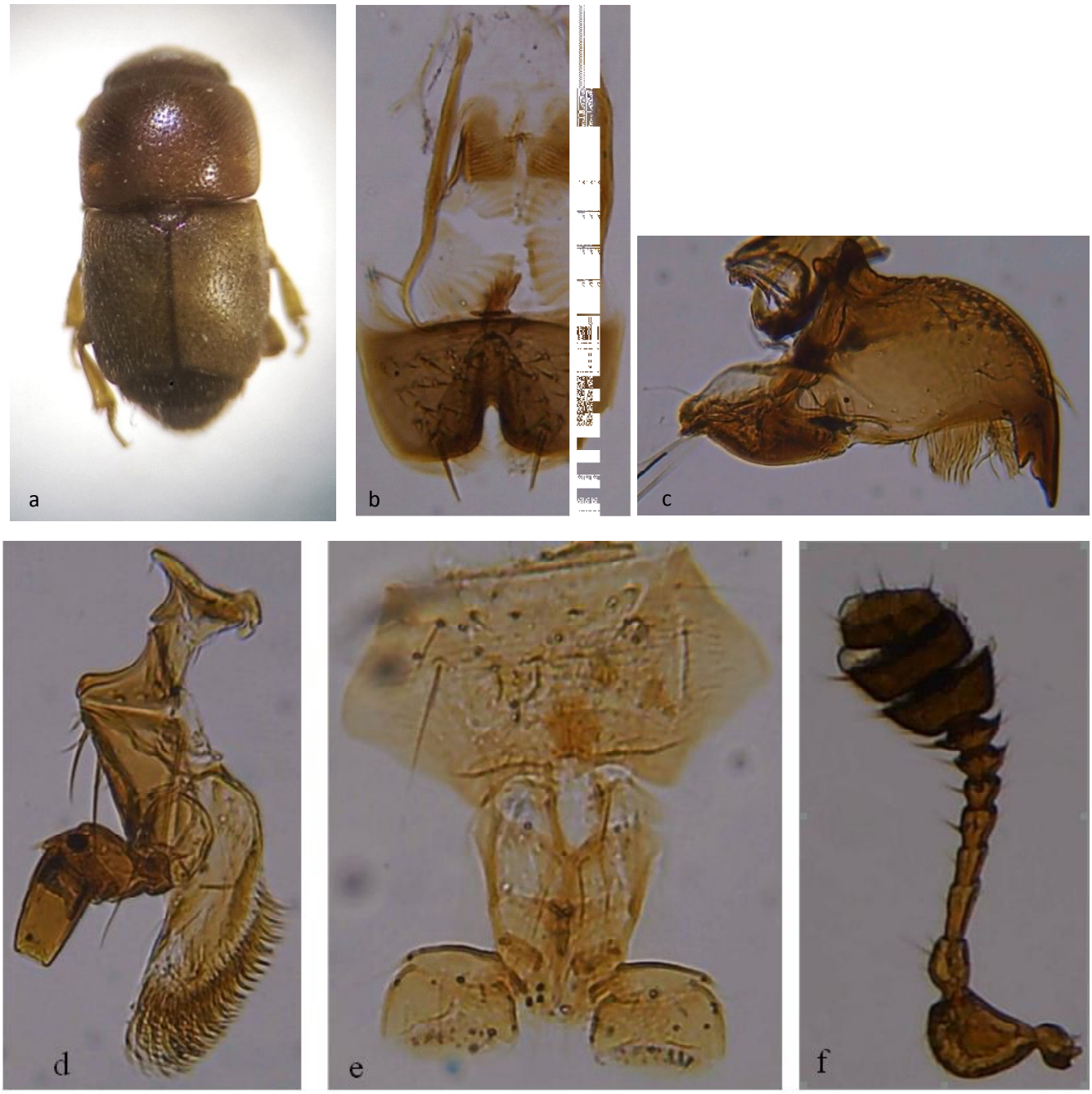

Fig. 1. *Epuraea erbilensis* sp. nov.
a. Dorsal habitus (Male = 25X), b. Labrum, c. Mandible, d.Maxilla, e. Labium,
f. Antenna (Scale bars; The figures b-f = 0.1mm)

dark yellow nearly inverted cup like, apical part light yellow sticky shaped, 3 times as long as basal part.

Male genitalia

Aedeagus (Figs. 2 e and f) moderately sclerotized, dark yellow. Length 0.6 mm; in dorsal view (Fig.2e), Parameres, parallel, elongate-oval shaped tapering towards apex, apical margin with low density of short dark brown setae and sparsely puncuteres. Phallobas nearly rectangular. Median lobe elongated oval, approximately 3 times as long as widest point, slightly longer than parameres, expanded at the base, gradually tapering apically, apical part acute. phalloapodeme short, slightly actuate**.** in lateral view (Fig. 2f) Parameres sword shaped, moderately sclerotized, gradually curved to a sharp tip, expanded as basal part, apical part with fine, short yellow setae. Median lobe sword shaped, slightly longer than parameres. Aedegal apophysis tubular shaped, wide at base and anterior, length 1.0 mm ; inner sac tubular,

Fig. 2: *Epuraea erbilensis* sp. nov.
a. Fore leg, b. Elytra, c. Pygidium, d. Spiculum gastrale, e. Aedeagus (Dorsal view), f. Aedeagus (Lateral view)
(Scale bars; All figures = 0.1 mm)

very long, 2.7 mm, curved, wavy on posterior half, and plate in inner sac is elongated oval.

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