

## On four Mexican Euaesthetinae (Coleoptera: Staphylinidae) (85<sup>th</sup>. Contribution to the knowledge of Euaesthetinae)

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### ABSTRACT

Descriptions of *Edaphus axayacatl* sp. nov., *E. izcoatl* sp. nov. and *Euaesthetus navarretei* sp. nov. from México are provided. Also sexual characters of *Octavius mexicanus* Puthz are included.

### RESUMEN

En este trabajo se describe a las especies *Edaphus axayacatl* sp. nov., *E. izcoatl* sp. nov. and *Euaesthetus navarretei* sp. nov. de México, además de proporcionar los caracteres sexuales del macho de *Octavius mexicanus* Puthz.

Amongst various Euaesthetinae which I got for study there were found three new species from México and the first males of *Octavius mexicanus* Puthz, which are described below.

Abbreviations (see Fig. 1, Puthz, 2001b): alF = anterolateral furrows of frons; alpF = anterolateral portions of frons; ampF = anteromedial portion of frons; dE = distance between eyes; dlbc = distance between laterobasal carinae of pronotum; lbc = laterobasal carina at pronotum; lEl = greatest length of elytra; lE = length of eyes; lG = length of genae; lP = length of pronotum; lS = length of suture; lT = length of temples; mbc = mediobasal carina of pronotum; mbf = mediobasal foveae of pronotum; ptFF = posterotransverse furrow of frons; shC = special humeral characters; SpP = sperm pump; vs = vesica seminalis; wEl = greatest width of elytra; wH = width of head; wP = width of pronotum. – Measurements of the parts of the body are proportional measurements (1 unit = 0.085 mm).

### *Euaesthetus navarretei* sp. nov.

Figs. 1,2

**Description.** Fully winged, light brown, shining, head and pronotum moderately coarsely, densely punctate, elytra moderately finely and very densely punctate, slightly iridescent, abdomen very finely and densely microsculptured, moderately shining. Pubescence short, recumbent. Antennae, maxillary palpi and legs yellowish (-brown).

**Length:** 1.2-1.4 mm (fore parts: 0.75 mm).

**Proportional measurements:** wH: 37.5; dE: 28.5; wP: 39; lP: 33; wEl: 52; lEl: 37; lS: 27.

Head with moderately strongly faceted eyes, frons moderately coarsely, densely punctate, punctures about as large as basal cross section of 3<sup>rd</sup> antennal segment, interstices mostly smaller than half diameter of punctures. Antennae short, club 2-segmented, penultimate segments distinctly broader than long. Pronotum distinctly narrowed but not constricted behind, with two short and narrow posterolateral furrows (about as broad as one puncture and as long as 2-3 punctures combined); with no lateral carinae nor basal foveolae; punctation as on head, interstices smooth. Elytra slightly trapezium-like, shoulders prominent with a minute denticle; punctation slightly finer, distinctly denser than on pronotum.

**Male:** Sternite 8 (Fig. 1). Aedoeagus (Fig. 2), parameres bifid with two apical setae.

## Dugesiana

**Female:** Unknown.

**Type Material:** Holotype (♂): MÉXICO: Jalisco, Zapopan, Los Guayabos, BE pert. 1600 m, 8.VII.-4.VIII.1994, ex NTP-80 pulpo, G. A. Quiroz & J. L. Navarrete: in the Centro de Estudios en Zoología (CZUG), Universidad de Guadalajara, Zapopan.

**Discussion:** *Euaesthetus navarretei* sp. nov. – which I warmly dedicate to José Luis Navarrete-Heredia, who collected the species – is the sister species of *Eu. franki* Puthz (Florida). It is distinguished from that species by the less densely punctate fore parts, larger body and the male sexual characters (for comparison see Puthz, 1998, Figs. 36, 37). In my key to the Neotropical species of *Euaesthetus* (Puthz; 2001c) it should be inserted at # 2 (3): It is distinguished from *Eu. juanaensis* Puthz by the broader head, the broader elytra, the small but distinct pronotal furrows and by the aedeagus (compare fig. 34, Puthz, 1998) with simple parameres.

### *Octavius mexicanus* Puthz

Figs. 3, 4

*Octavius mexicanus* Puthz, 2001a: 16 f.

(Localidad tipo: San Luis Potosi, Taman, 20 km SW Tamazunchale)

When describing this species I had only two females at hand. Now the corresponding males have been found (same data as the holotype; Field Museum of Natural History, Chicago and coll. m.), so that the male sexual characters can be described: Male. Sternite 8 asymmetrical (Fig. 4). Aedeagus (Fig. 3) resembling that of *O. flabellipennis* Puthz, parameres with 15 strong setae.

### *Edaphus izcoatl* sp. nov.

Figs. 5, 6

**Description:** Fully winged, dark brown, shining, impunctate, pubescence dense, recumbent. Antennae, maxillary palpi and legs brown.

**Length:** 1.3 mm (fore parts: 0.7 mm).

**Proportional measurements:** wH: 31; dE: 22; IE: 9; IT: 0; IG: 4.5; wP: 38; IP: 31; dlbc: 29; wEl: 52; lEl: 46; IS: 39.

Head distinctly narrower than pronotum (0.94), eyes large, finely faceted, no temples, genae moderately long, frons broad, ptff distinct, ampF slightly broader than each alpF (8:7), nearly flat, no offset between ampF and clp, alff indistinct. Antennae moderately long, club 2-segmented, segment 10 slightly broader than long, segment 11 about 1.5 x as long as segment 10. Pronotum broader than long (1.23), strongly constricted behind, with distinct lbc, a sharp mbc extending to base proper, and 4-6 indistinctly separated basal foveae. Elytra large, broader than long (1.13), shoulders moderately prominent with a very small and short outer carina. Mediobasal carina of tergite 3 about half the length of the posterior portion of that tergite.

**Type material.** Holotype (♂): MÉXICO: San Luis Potosi: 40 km W Xilitla, 1700 m, 12.VI.-6.VIII.1983, flight interception trap, pine-oak forest, S. & J. Peck: in the Muséum d'histoire naturelle de Genève.

**Male.** Sternite 8 (as in Fig. 5). Aedeagus (as in Fig. 6), parameres each with two strong apical setae. vs and SpP not discernable in collapsed internal structures of abdomen (specimen probably was collected in alcohol).

**Discussion.** *Edaphus izcoatl* sp. nov. is very close to *E. axayacatl* sp. nov. but can be easily distinguished from that species by the lack of punctuation (further differential characters see above). From *E. tizoc* Puthz it is distinguished by the much shorter length, less distinctly separated basal foveae of the pronotum, broader ampF and strongly restricted posterior portion of the pronotum. From *E. ashei* Puthz the new species can be distinguished by the recumbent pronotal pubescence, less broad ampF and the male sexual characters.

## On four Mexican Euaesthetinae

### *Edaphus axayacatl* sp. nov.

**Description.** Fully winged, light brown, shining, pronotum very finely, elytra very finely and shallowly punctate, pubescence scattered, recumbent. Antennae, maxillary palpi and legs yellow.

**Length:** 1.3 mm (fore parts: 0.75 mm).

Proportional measurements: wH: 31; dE: 22; IE: 8; IT: 1; IG: 4; wP: 40; IP: 32; dlbc: 22.5; wEl: 53; lEl: 45; IS: 38.

Head distinctly narrower than pronotum (0.78), eyes small (IE: 8; *nota bene*. ♀!), finely faceted, temples short, restricted, frons broad, ptfF distinct, ampF distinctly broader than alpF, very slightly elevated, no offset between ampF and clp, alpF moderately elevated, alfF indistinct; no punctation. Antennae moderately long, club 2-segmented, segment 10 slightly broader than long, segment 11 nearly twice as long as segment 10. Pronotum distinctly broader than long (1.25), strongly constricted behind with distinct lbc and a transverse furrow near base, which is distinctly divided into 5-6 foveae; no distinct mbf; punctation very fine, distinct, interstices twice or more as wide as punctures. Elytra broader than long (1.18), shoulders moderately prominent, no shC, punctation very fine, shallower and less distinct than that on pronotum. Mediobasal carina on anterior portion of tergite 3 shorter than half the length of the posterior portion of that tergite.

**Male.** Unknown.

**Type material.** Holotype (♀): MÉXICO: Hidalgo: 8.3 km S. Jacala, Hwy 85, 1270 m, miscellaneous mushrooms, 12.VII.1990, J. S. Ashe, K.-J. Ahn & R. Leschen # 159: in the Natural History Museum University of Kansas, Lawrence, KS.

**Discussion.** *Edaphus axayacatl* sp. nov. is very close to *E. izcoatl* (which is the same length) but is distinguished from that species by the light color, lack of mbc, distinct pronotal punctures, less dense pubescence, and the shorter mediobasal carina of tergite 3.

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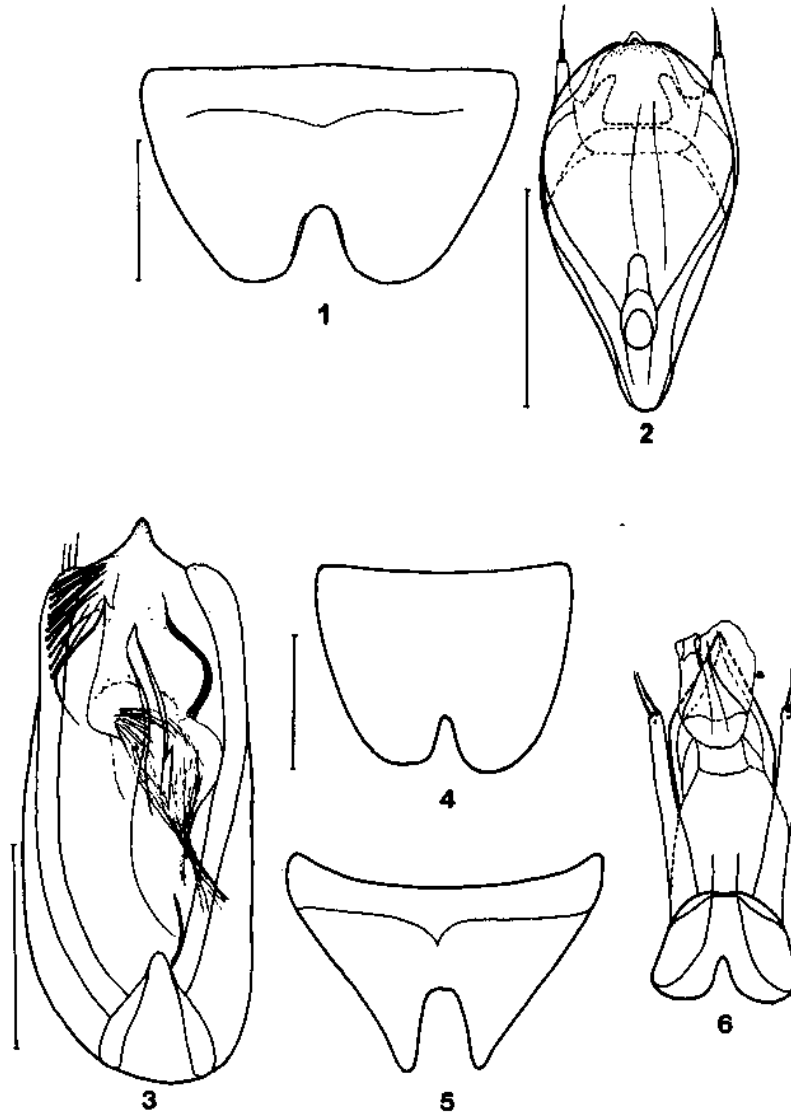
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Dugesiana



Figures 1, 2: *Euaesthetus navarretei* sp. nov. (Holotype). 8th sternite of male (1), dorsal aspect of aedeagus (2). Scale = 0.1 mm. Figures 3-6: Dorsal aspect of aedeagus (3, 6) and 8<sup>th</sup> sternite of male (4, 5). *Octavius mexicanus* Puthz (3, 4), *Edaphus izcoatl* sp. nov. (holotype; 5, 6). Scale = 0.1 mm (3=6; 4=5). Setae shown on only one paramere in Fig. 3.