

***Gelae californica* sp. nov. from California (Coleoptera: Leiodidae: Leiodinae)**

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Abstract. *Gelae californica* sp. nov. from California, the U.S.A. is described, illustrated and compared to similar species.

INTRODUCTION

The phylogenetic and therefore also systematic position of the genus *Gelae* Miller et Wheeler, 2004, known to widely occur in the Northern and Central America, is rather unclear as the genus is similar to some species currently assigned to *Anisotoma* Panzer, 1797, to Palaearctic *Agathidium* Panzer, 1797 (subg. *Neoceble* Gozis, 1886), to some Nearctic *Agathidium* and also to the genus *Liodopria* Reitter, 1909.

The genus *Gelae* can be differ from the other Agathidiini genera by the combination of the following characters: 1. Antennae with 11 antennomeres; 2. antennal club 3-segmented; 3. supraocular carina absent or developed in traces anteriorly, never extending caudally behind eyes; 4. clypeus convex anteriorly; 5. clypeal line developed; 6. tempora not developed; 7. pronotum with distinct anterior and posterior angles in lateral view; 8. elytra without punctured rows or striae; 9. elytra with distinct lateral angle; 10. femoral lines on metaventrite not developed.

Altogether eight species have been described or attributed to the genus up to now. The ninth species - *Gelae californicum* sp. nov. is described in this paper.

MATERIAL AND METHODS

Abbreviations of body parts and measurements:

AII-AXI antennomeres II-XI.

TI-TIII tarsomeres I-III.

AIII/AII The ratio of the length or width of the antennomeres III:II, analogously ratios of others antennomeres.

L Length.

W Width.

L/W or W/L Ratio between measurements.

MTLM Length of metaventrite measured at midline from the top of anterior process and top of posterior process of metaventrite.

MTLC Length of metaventrite measured at the shortest distance (between mid- and hind-coxae).

MTW Width of metaventrite measured between outermost postero-lateral points.

MTLM/MTW or MTLC/MTW Ratio between relevant measurements.

Terminology:

Supraocular carina = Antero-lateral raised marginal bead of head (e.g. Angelini 2004), i.e. carina at antero-lateral margin of head dorsum running from clypeus just above eyes (if present) caudally,

subocular line = line or even carina bordering eyes on ventral side,

basal part of median lobe = median foramen (Park, Leschen & Ahn 2013),

median lobe = median lobe of aedeagus.

Abbreviations of the collections:

NMPC National Museum, Praha, Czech Republic;

ZSPC Zdeněk Švec, private collection, Praha, Czech Republic.

The description of the new species is based on the holotype. Variability is mentioned in the paragraph "Variation" and includes features exhibited by paratypes.

The examined material has been compared with the material deposited in ZSPC. The material mentioned in this paper is deposited in the collections of NMPC and ZSPC.

DESCRIPTION

Gelae californicum sp. nov.

(Figs. 1-6)

Type material. Holotype (♂): "Pasadena/ Cal./ Dr. A. Fenyes", (NMPC). Paratypes (2 ♀♀): the same data, (NMPC, ZSPC).

Description. Length of body 2.1, head 0.3 mm, pronotum 0.5 mm, elytra 1.3 mm, antenna 0.6 mm, aedeagus 0.2 mm, spermatheca 0.1 mm. Maximum width of head 0.6 mm, pronotum 1.0 mm, elytra 1.3 mm.

Very short oval (Fig. 1). Head chest-nut, pronotum and elytra very light chest-nut, antennomeres I-VIII yellow, AIX- AXI brown. legs yellow-brown, tarsi yellow. Ventral surface reddish with darker metaventrite. Dorsum punctured, without microreticulation. Sutural striae well developed.

Head. Maximum width of head at yes. Eyes well developed, semi-globose. Ratio of W of space between eyes / eye = 7.8. Supraocular indistinct. Subocular line not developed. Clypeus distinctly convex, clypeal line developed. Antennomere III a little longer than AII (AIII/AII = 1.3). Ratio of length of AII-AXI (AII=1.0): 1.0-1.3-0.8-0.5-0.5-0.5-1.0-1.0-2.0. Ratio of width of AII-AXI (AII=1.0): 1.0-0.7-0.7-0.7-0.8-1.2-1.5-2.2-2.7-2.3. Ratio of W/L of AII-AXI: 0.8-0.4-0.7-1.0-1.3-1.8-2.0-1.6-2.0-0.9. Surface of head smooth, lacking micro-sculpture but with very densely arranged strong puncturation; punctures separated by about 1.0 times their own diameters.

Pronotum. Shape in dorsal view as in Fig. 1, in lateral view as in Fig. 2. Punctuation much finer and sparser than that on head; punctures separated by about 4-6 times their own diameter. Anterior and posterior angles not detectable in dorsal view, distinctly developed, broadly rounded, posterior angles obtuse. Lateral margin roundly tapered anteriorly in dorsal view, slightly concave laterally seen.



Figs. 1-6. *Gelae californicum* sp. nov.: 1-3- body dorsal, lateral; ventral aspect (female paratype); 4-5- aedeagus dorsally, laterally (holotype); 6- spermatheca.

Elytra. Shape as in Figs. 1, 2. Punctuation coarse, more stronger and distinct than that on head, much more distinct than that on pronotum.

Punctures separated by about 1-2 times their own diameter feebly tend to seriate in some places, without distinct punctures rows or striae. Sutural stria distinct, confined to apical two thirds of elytral length. Lateral angle obtuse but distinct. Lateral margin detectable at humeral area dorsally seen.

Legs. All tarsomeres, tibiae and femora slim, without specific characters. Tarsal formula: 5-5-4 in male; 5-4-4 in female.

Mesoventrite. Anterior part deeply excavate.

Metaventrite. Sparsely and finely punctured, each puncture equipped by recumbent short seta. Lateral parts micro-sculptured by longitudinal cells oriented medio-caudally. Femoral lines absent. Metaventrite well developed (Fig. 3). $MTLM/MTW=0.43$; $MTLC/MTW=0.32$.

Membranous wings fully developed.

Genitalia. Aedeagus as in Figs. 4, 5. Median lobe first widened, then tapered toward closely rounded apex in dorsal view. Operculum oval. Spermatheca as in Fig. 6.

Variation. Length of body 2.1-2.5 mm.

Differential diagnosis. *Gelae californicum* sp. nov. is similar to *G. baen* Miller et Wheeler, 2004 from Mexico in broad metaventrite and coarsely punctured elytra. It differs by the longer antennomere III in comparison to AII - AIII/AII=1.3 (in *G. baen* it is 1.1), by strong and dense punctuation on its head, by the shape of the aedeagus having widened tegmen before the broadly rounded apex while tegmen is slim with acute apex in *G. baen* and by distinctly longer parameres.

Name derivation. The name of the new species derived from the name of the U.S.A state California where the types were collected.

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