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## A new Mexican species of *Strategus* (Coleoptera: Melolonthidae)

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A new Mexican species of *Strategus*, *S. moralesdelgadorum* from Guanajuato State is described and illustrated; a previous key to the genus is modified to incorporate this new species.

Keywords: Coleoptera, Melolonthidae, Dynastinae, *Strategus*, new species, Mexico.

### INTRODUCTION

The American dynastine genus *Strategus* KIRBY includes 32 valid extant species distributed from the northeastern United States to Argentina, with its greatest specific richness and endemism present in the Greater and Lesser Antilles, which contain 14 endemic species (RATCLIFFE, 1976, 1982; RATCLIFFE & DECHAMBRE, 1983).

Specimens recently collected in the unexplored mountains of the Sierra de Santa Rosa in the central state of Guanajuato, Mexico, belong to a new species which is described here. They add up to 10 species with four of them endemic to this country.

### DESCRIPTION

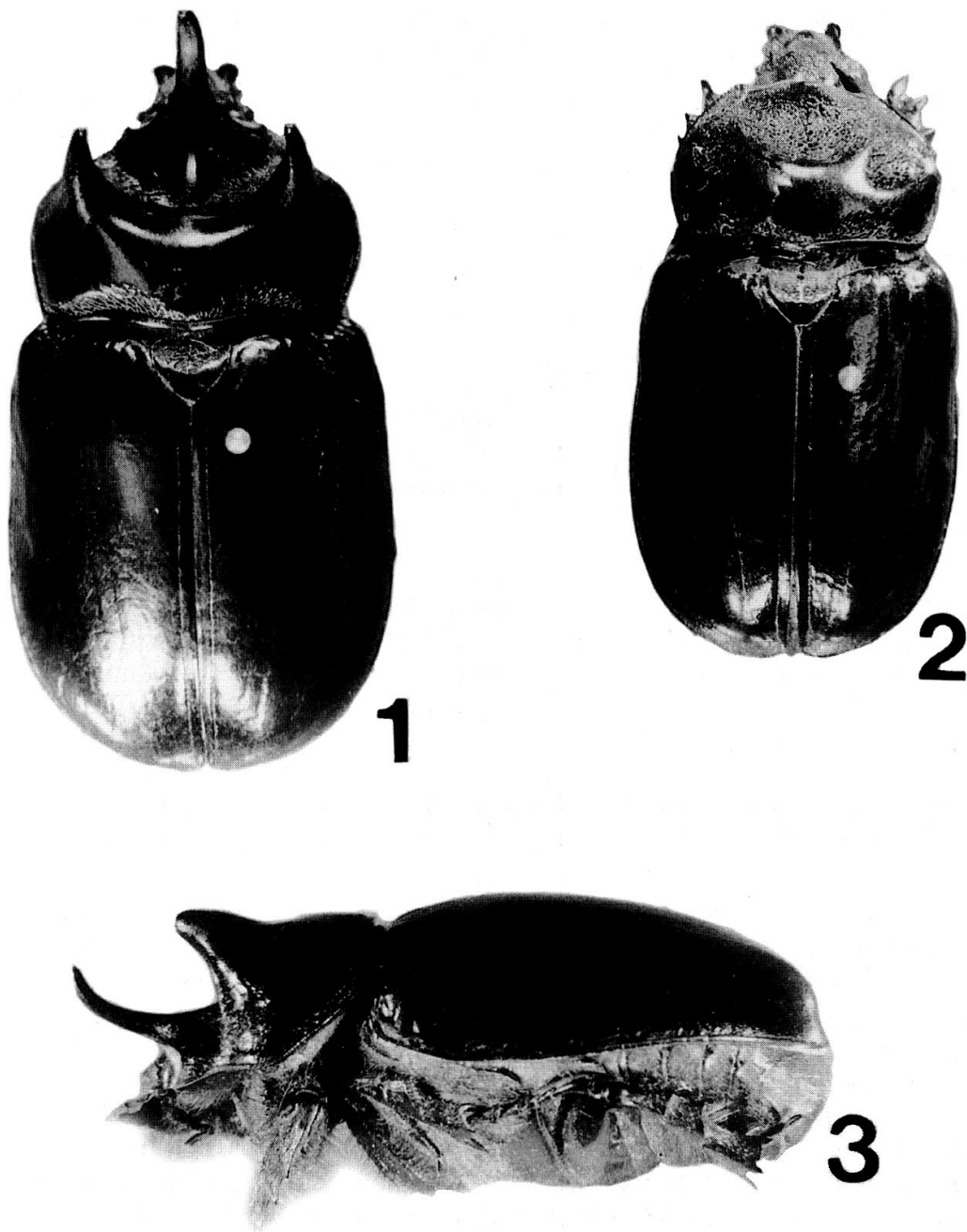
#### *Strategus moralesdelgadorum* sp. n. (Figs 1–6)

Material: Holotype male, allotype female and one paratype male: México, Guanajuato, Guanajuato, Sierra de Santa Rosa, Cañada de la Virgen, VII.1995, Alt. 2,330 m, bosque de encinos y alisos, luz, J. y M. CANO, additional four paratypes: same data as the preceding except for: 6–8.VII.1995, L. DELGADO (two males); VIII.1995, R. y J. CANO (two females). Holotype and allotype deposited in the Instituto de Ecología, A.C. (Xalapa, Mexico), paratypes in the following collections: R. P. DECHAMBRE (Paris, France), B. C. RATCLIFFE (Lincoln, U.S.A.), J. BLACKALLER (Mexico City) and L. DELGADO (Mexico City).

Male: Length from apex of clypeus to apex of elytra 35.8–40.7 mm; width across humerus 17.4–20.7 mm. Body oblong-ovate (Figs 1–3); head and pronotum piceous, elytra light to dark castaneous, surface polished.

Head: Clypeus with apex weakly but distinctly excised and slightly reflexed, sides strongly sinuate and surface rugose; frontal tubercles small to moderate, transverse to almost conical and feebly joined or separated; frons coarsely rugose, setigerous above eye. Interocular width 3.4–3.5 times transverse eye diameter. Mandibles with basal lobe small, rounded; middle lobe subtriangular, apex rounded; apical lobe very small and rounded.

Pronotum with a wide to moderately narrow rugose basal band, band reduced medially to basal bead: disc aciculate, with scarce to moderately dense, minute to



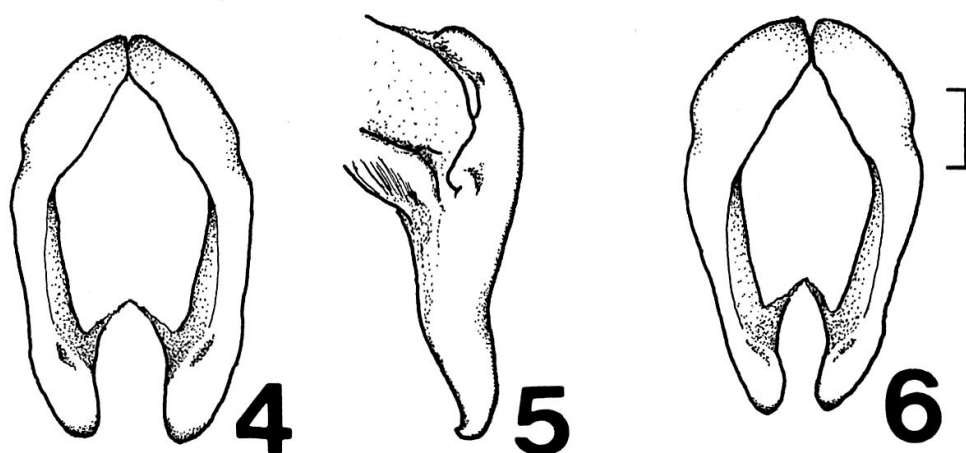
Figs 1–3. *Strategus moralesdelgadorum* sp. n. 1. Holotype, dorsal view. 2. Paratype minor, dorsal view. 3. Holotype, lateral view.

small punctures; sides more densely punctate, punctures small to large; anterior half rugose. Major and medium specimens (Fig. 1) with pronotal fovea deep, medially divided longitudinally by a broad, low, rounded ridge; fovea on either side of median ridge strongly rugose. In minor specimens (Fig. 2) fovea shallow and not divided by any ridge. Major specimens with pronotal horns well developed (Figs 1, 3), anterior horn acuminate, with apex entirely and dorsal surface nearly flat; posterior horns short, slender and pointed, project at about  $20^\circ$  from plane of disc, in dorsal view slightly curving toward one another. In minor specimens (Fig. 2) anterior horn reduced to a small, transverse tubercle with apex weakly emarginate, and posterior horns to very low, rounded bosses.

Elytra with sutural stria strongly impressed, wavy to crenulate; disc aciculate with sparse minute punctures and three feebly impressed, incomplete striae on lateral half; sides aciculate, sparsely punctate, wrinkled behind humerus and with a few simple or semiocellate, small punctures; apex with dense, small to minute punctures. Posterior half of metasternum almost glabrous.

Pygidium convex in lateral view, with apical margin strongly widened at central quarter; disc and apex with scarce, small punctures.

Genitalia with parameres glabrous, convergent at apex and slender to slightly widened (Figs 4–6).



Figs 4–6. Parameres of male genitalia of *S. moralesdelgadorum* sp.n. 4. Frontal view, holotype. 5. Lateral view, holotype. 6. Frontal view, paratype minor. Scale = 1 mm.

Female: Length 33.6–38.5 mm; width 16.4–18.8 mm. Like male except for: Clypeus with apex excised to acuminate in unworn specimens or rounded in worn specimens; frontal tubercles moderately connected by a transverse carina; interocular width 3.4–3.7 times transverse eye diameter; mandibles with basal and apical lobes larger, middle lobe smaller. Pronotal fovea smaller and shallow, its posterior border not exceeding one-half length of pronotum; pronotal tubercle small, conical with apex rounded; posterolateral region adjacent to fovea slightly depressed and rugose. Pygidium with basal half flat, apical half concave; disc and apex with granulate, small to large punctures, some of them confluent and bearing inconspicuous setae; apical margin weakly widened at central quarter.

Remarks: The excised or acuminate apex of clypeus, the separated or moderately joined frontal tubercles, the small eyes, the distinctly lobed mandibles, the presence of strongly developed horns in major specimens, the sparse and minute punctation on disc of elytra and the lack of rows of moderate to large, ocellate or umbilicate punctures on the elytral disc or behind humerus serve to separate this new species from all others. The key of the genus *Strategus* proposed by RATCLIFFE (1976) is modified as follows to incorporate the new species:

For males:

- 33(32) Interocular width  $2\frac{2}{3}$  times transverse eye diameter or more ..... 33a
- 33' Interocular width  $2\frac{1}{2}$  times transverse eye diameter or less ..... 34
- 33a Clypeus with apex truncate, moderately emarginate. Elytral disc with punctures small and moderate and of moderate density. Argentina, Uruguay ....  
..... *argentinus* KOLBE

- 33a' Clypeus with apex weakly but distinctly excised. Elytral disc with punctures minute, sparse ..... *moraesdelgadorum* sp.n.

For females:

- 54(52) Apex of clypeus distinctly to weakly excised or acuminate ..... 54a  
 54' Apex of clypeus rounded or truncate ..... 55  
 54a Elytra behind humerus usually with 2–3 short rows of moderate to large ocellate and/or umbilicate punctures. Disc of pygidium with long setae. Mexico to Honduras ..... *longichomperus* RATCLIFFE  
 54a' Elytra behind humerus without rows of ocellate or umbilicate punctures. Disc of pygidium with inconspicuous setae at most .....  
 ..... *moraesdelgadorum* sp.n.

Geographical distribution: *S. moraesdelgadorum* is only known from the type locality, situated in the Mexican central state of Guanajuato. The Sierra de Santa Rosa is located 5 km north of capital city of Guanajuato; its elevations range from 2,100 m to 2,800 m, with a temperate, subhumid climate and broad-leaved forest with oaks (*Quercus* spp.) as dominant trees. This mountainous system is recognized as an ecological island because it is surrounded by extensive low, dry and warm areas of thorn forest and scrubs (ESTRADA, 1996).

The new species was only collected in the ravine named “Cañada de la Virgen”, which presents a moist, mature oak forest with alders (*Alnus* spp.) as codominant trees. Areas of drier, younger, highly disturbed oak forest were sampled too; however, only one female specimen of *Strategus cessus* LÉCONTE (a northern species typical for dry oak-pine forest) was obtained.

Etymology: I take pleasure in naming this species after the family MORALES-DELGADO, Salvador, Graciela, Sara, Daniel and David, who have collected scarab beetles for a long time and have assisted me on several collecting trips.

#### ACKNOWLEDGEMENTS

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