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A NEW SPECIES OF *CHRYSODEMA* FROM MINDORO, PHILIPPINES (Coleoptera, Buprestidae)

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INTRODUCTION

The genus *Chrysodema* Laporte & Gory, 1835, has recently been object of a revision by T. Lander (2003) who, after the examination of extensive material in many collections, tried to put order in this large genus. Meanwhile, I got some specimens belonging to the *Chrysodema* generic group sensu Volkovitsh, 2001, coming from Mt. Halcon, Mindoro Is., Philippines. Three of them proved to be a new species, described in this paper.

Type material preserved in the collection of the author.

Chrysodema (Chrysodema) d a n t e r i n a n. sp.

DIAGNOSIS. Males can be easily recognized by the following characters: length mm 25.0-23.8; width mm 7.7-7.0; body black, about 3.3 times as long as wide; elytrons 2.5-2.6 times as long as wide, with 20-28 small, metallic bronze impressions; antennae black, about 1/5 of body length, the 1st antennomere less than 2.5 times as long as wide, the 3rd one less than 3.0 times as long as wide; tarsi very wide, especially those of fore legs, 3.9 times as long as wide; scutellum about as long as wide; prosternal process smooth on the sides, furrowed in the middle, deeply rugose anteriorly; aedeagus black, more than 1/2 of body length (fig. 3). Female unknown.

TYPE SERIES: Holotype: Philippines, Mindoro Is., Mt. Halcon, VII.2002, N. Mohagan legit, 1 ♂; Paratypes: same data and collector, 2 ♂♂. Holotype and paratypes deposited in M. Gigli coll. (Rome, Italy).

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Description of holotype. Length: 24.8 mm, width: 7.5 mm. Habitus like in fig.1. Body slender, about 3.3 times as long as wide, regularly bent from the head to 2/3 of the length, then straightly convergent up to the apex. Upper side black, with metallic bronze impressions on pronotum and elytrons. Ventral side black, shiny, with dark greenish bronze tinge. Head and pronotum with spaced white pubescence, made of short bent setae, directed forward, more developed on frontal depression. Elytral hair smaller, directed backward. Ventral side with longer and denser white pubescence. Legs with dense, whitish-blonde pubescence, longer on tarsal upper surface.

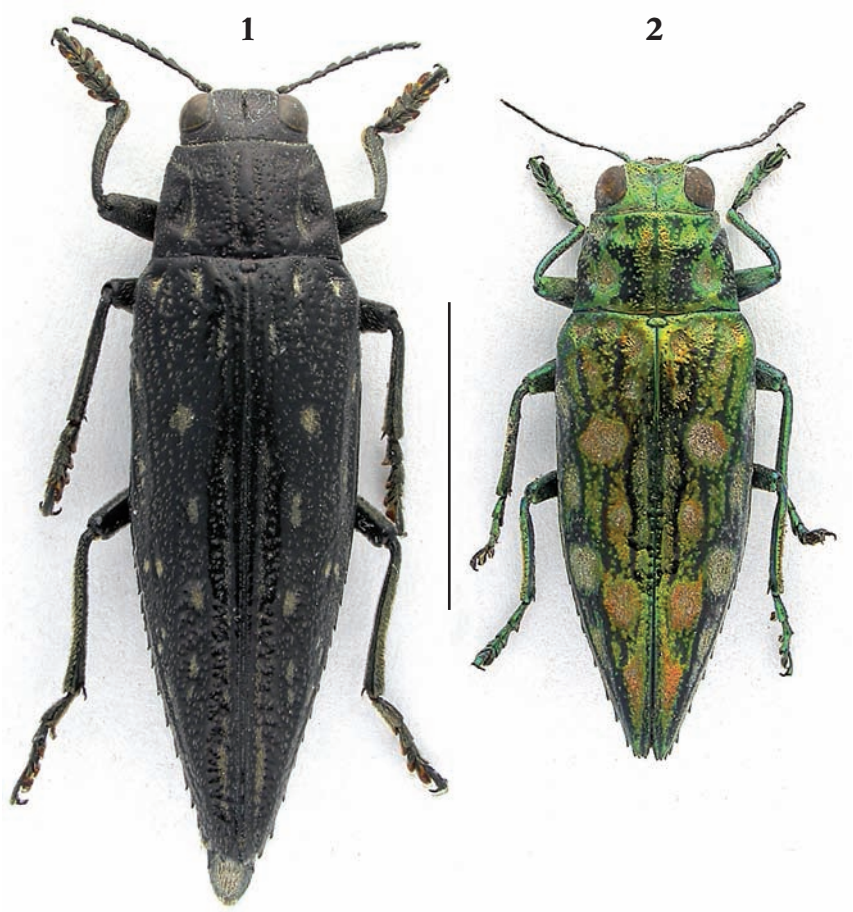
Head irregularly punctured and finely microsculptured, reticulated by very small subpolygonal cells, sometimes forming a sort of wrinkles. Punctures are usually rounded, deep, black or bronze, with a white bristle, flowing in irregular wrinkles in frontal depression and small furrows along internal edges of eyes. Labium brown, subtrapezoidal, slightly concave, with a V shaped depression forward, endowed with about 30 long whitish-blonde bristles. Clypeus sharply bilobated, widely and deeply hollow in the middle. Frons about 2 times wider than a single eye when seen from above, with a large and deep depression, with longer hair, and a strong longitudinal furrow in the middle, prolonged toward the vertex in a narrow line. Sides of the head, behind the eyes, more densely punctured. Eyes somewhat bulgy, subellyptical, slightly widened forward. Antennae almost reaching basal angles of pronotum, 5.1 times shorter than body, black, except the base of the first joint, dark reddish-brown, with few light hair. First antennomere claviform, 3.2 times as long as wide, second one short, subcylindrical, 1.3 times as long as wide, third one shorter than the first one, slightly enlarged toward the apex and bent, 2.7 times as long as wide. Joints 4-10 triangularly enlarged toward the apex, the fourth one as long as the third one; length decreasing from the fourth to the eighth joint, eleventh joint subcylindrical.

Pronotum trapezoidal, 1.5 times as wide as long, widest at the base. Anterior margin straight in the middle and concave to the sides. Sides slightly sinuate, strictly rimmed in the back half. Rims are visible from above. Basal margin slightly sinuate. Surface of pronotum microsculptured, with few micropunctures, and studded with punctures larger than those on the head. Two parallel strips of punctures, starting after the anterior margin and arcuately converging before the posterior margin, delimit a wide longitudinal relief in the middle.

Around there is a wide relief, wider backward, with few irregularly scattered punctures, denser laterally, sometimes confluent together near anterior corners. Any side of the pronotum with a long arched fovea, twice nearest to the side than to the middle, irregularly widened and with long hair in the back half. Deeper parts are metallic bronze.

Scutellum corn-seed shaped, 1.15 times as wide as long, wider posteriorly, slightly hollowed in the middle, microsculptured.

Elytra regularly convex forward, somewhat tectiforme backward, 2.56 times as long as wide, slightly widened from the base to 1/5 of the length, about parallel in the median part, converging toward the apex in the second half. Apex of each elytron provided of a short, strong and rounded tooth, with other 14 (right elytron) or 15 (left elytron) sharp and strong teeth along the second half of the external margin. After each tooth, a long white hair directed backward. Each elytron with 4 ribs, anteriorly indistinct, because hidden by transversal wrinkles, except the last one. The first one forming a lengthened alveolus with the suture before the apex. Surface smooth, opaque, without microsculpture, with several punctures similar to those on the pronotum, smaller toward the apex, vaguely arranged in rows. Several bronze hollow spots with dense white hair on each elytron: the first one following the pronotal fovea, another one situated among the first one and the scutellum, a third one a little back, near the suture; a long depression, subdivided in several lengthened, indistinct spots, lies near the suture, among it and the first rib, in the last 3/5 of each elytron; the larger spot, bright bronze and irregularly rounded, lies on the second rib, at about 1/5 of elytral length, followed by other four spots, among the first and the second rib; other 6 smaller spots lies near the external margin, alternated to those of the previous series.
Ventral side microsculptured and with punctures, smaller and shallow on the abdomen, larger and stronger elsewhere, especially on the prosternum, where they partially meet, forming transversal wrinkles. Each puncture with a white hair, longer on pro and mesosternum and sides of the whole ventral surface. Anterior margin of prosternum simple, slightly concave, with dense white hair directed forward; prosternal process with irregular long hair, mainly smooth on the sides, with few strong punctures and a median furrow, constituted by large and irregular dimples merged together. Sides of abdomen marked by large and shallow depressions, with rough and hairy



Figg. 1-2 – Habitus of *Chrysodema danterina* n. sp. holotype ♂ (1); habitus of *Chrysodema smaragdula* (Olivier, 1790) ♂, from Mindanao (2). Scale bar = 10 mm.

surface, covered with dense white-brownish tomentum. Last sternite ending with two sharp points, delimiting a triangular, acute incisure, hemmed by an irregularly sculptured band.

Legs black with the same surface of sternites and well developed blonde hair everywhere. Tibiae are cylindrical, apically expanded, with two distal short and sharp thorns, less developed in foretibiae. Inner side of the expanded apex of foretibia covered by a brush of short and dense blonde hair. Foretibiae strongly arcuate, middle tibiae straight and hind tibiae slightly sinuate. Tarsi with the fourth segment very short and deeply bilobate, with large and long testaceous

Figg. 3-8 – Aedeagus of *Chrysodema danterina* n. sp. holotype (3); aedeagus of *Chrysodema smaragdula* (Olivier, 1790) (4); fore tarsomera of *Chrysodema danterina* n. sp. holotype ♂ (5); fore tarsomera of *Chrysodema smaragdula* (Olivier, 1790) ♂ (6); antenna of *Chrysodema danterina* n. sp. holotype ♂ (7); antenna of *Chrysodema smaragdula* (Olivier, 1790) ♂ (8). Scale bars: figg. 3-4 = 10 mm, figg. 5-8 = 1 mm.

pads and simple claws. Foretarsi short and wide, 3.9 times as long as wide: first tarsomere wider than long, second of the same width but longer, third like the first one, fourth tarsomere narrower. Middle tarsi less short and wide: first and second tarsomeres of the same length, longer than wide, third and fourth shorter. Hind tarsi longer: first seg-

Chrysodema danterina n. sp.	***Chrysodema smaragdula*** (Olivier, 1790)
body black, very slender, about 3.3 times as long as wide (fig. 1)	body metallic, golden green, less than 3.0 times as long as wide (fig. 2)
antennae shorter, 5.1 times shorter than body, black (fig. 7)	antennae longer, 3.8 times shorter than body; first two antennomera metallic green (fig. 8)
Anterior margin of the labium slightly hollow, with a V shaped depression	Anterior margin of the labium with a deep triangular incisure instead of the depression
Scutellum trapezoidal, about as long as wide, corn-seed shaped	Scutellum transverse, elliptical, over 2 times as wide as long
pronotal and elytral spots smaller, very dark bronze	pronotal and elytral spots larger, rounded, golden to coppery-red
protarsi black, wide and short, 3.8 times as long as wide (fig. 5)	protarsi metallic green, less widened, 5.1 times as long as wide (fig. 6)
protibiae more arcuated, for the whole length	protibiae less arcuated, straight in the distal half
prosternal process smooth on the sides, with few strong punctures, and a median furrow made by large, irregular dimples merged together	prosternal process flat or feebly depressed in the middle, with many sparse dimples, sometimes closer in the middle
aedeagus very large, longer than 50% of the body, very sclerotized, mainly black to dark brown, 10 times as long as wide (fig. 3)	aedeagus much smaller, of medium size in the genus, about 30% of the body, less sclerotized, testaceous, 7 times as long as wide) (fig. 4)

ment as long as second and third together, third shorter than second, the last one even shorter.

Aedeagus exceptionally long, 53% of body length, strongly sclerotized, brownish-black except for membranaceous areas of basal piece and testaceous expansions of parameres. About 10 times as long as wide, bisinuate, widening from the base to 1/3 of the length, then narrowing for another third of the length, and about parallel in the last third (fig. 3). Parameres with outer apical margins flattened, testaceous, with 7-8 long, slightly bent setae on each side, directed outside. Penis parallel, with sharp apex and a narrow longitudinal median line on dorsal surface.

Variability. Size variation already given in the "diagnosis" chapter. Small variations in the number and development of elytral spots. Elytral teeth are always 15 on the left elytron and 16 on the right elytron.

Comparative notes. The new species shows a very different look compared with any other species in the genus, mostly for its slender and black body. Male genitalia are extremely large, about two times longer than those of any other species of *Chrysodema*. Aedeagus of each specimen was sticking out of the abdomen 3-4 mm, and the author suspects it's not completely retractable. This species shows some similarities with *Chrysodema (Chrysodema) smaragdula* (Olivier, 1790). One of the taxa at the present time included in this polymorphic species, *Chrysodema proxima* Saunders, 1874, is sympatric with it and males from Mindanao were used for comparison in the table I.

Biology and distribution. Biology and host plant of the new species are unknown. It seems to be endemic to Mindoro, Philippines.

Derivatio nominis. The name of the new species comes from the combination of those of my father, Dante, and my mother, Caterina, who sustained my entomological interests during almost forty years and were my companions in many of my entomological trips.

Notes. Three taxa belonging to the *Chrysodema smaragdula* (Olivier, 1790) group were found together in the same locality of Mindoro Island (Mt. Halcon). Species described in this paper is the most differentiated, showing several extreme characters, estranging it from any other species in the genus. Some of these characters could be adaptive, others are probably caused by genetic drift, but in both cases they could be a consequence of an isolation on Mindoro Island. A second possible new species, of the same black colour of the first one, shows some differences compared with *C. smaragdula*, but bad conditions of known specimens, a broken female and a male without genitalia, don't allow to reach a conclusion. The third species is *C. smaragdula*. These three sympatric taxa suggests that they reached Mindoro in three different waves, beginning with *C. danterina* n. sp. and finishing with *C. smaragdula*; the last one didn't have enough time to differentiate from populations living on other islands.

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SUMMARY

Chrysodema danterina n. sp. from Mindoro, Philippines, is described and illustrated. Comparative remarks are made with the widely distributed *Chrysodema smaragdula* (Olivier, 1790) that, despite a very different general look, shows several similar characters. The new species, whose female is unknown, is immediately recognizable from any other in the genus for the proportions of the body, the completely black colour and the shape and the exceptional size of male genitalia.

RIASSUNTO

Una nuova specie di Chrysodema *di Mindoro, Filippine (Coleoptera, Buprestidae).*

Viene descritta ed illustrata *Chrysodema danterina* n. sp. delle Filippine (Isola di Mindoro). La nuova specie viene comparata con *Chrysodema smaragdula* (Olivier, 1790), specie a larga distribuzione che, malgrado un aspetto generale molto diverso, presenta alcune significative somiglianze in alcuni particolari morfologici. La nuova specie, di cui non si conosce la femmina, è immediatamente riconoscibile da tutte le altre del genere per le proporzioni corporee, per il colore completamente nero e soprattutto per la forma e le eccezionali dimensioni dei genitali maschili.

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