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## **PLATYGENIOPS, A NEW OSMODERMINE GENUS FROM SOUTHEAST ASIA (COLEOPTERA: CETONIIDAE)**

by

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With 7 text-figures and one plate

### ABSTRACT

*Platygeniops expectans* gen. nov., sp. nov., from Borneo and the Malay Peninsula, is described and illustrated. Its closest known relative is the Holarctic genus *Osmoderma* LePeletier & Serville. A brief key to the seven known osmodermine genera is given, and their approximate ranges are mapped.

Previous workers had already noticed the peculiar lamellicorn beetle from Borneo which in 1940 reached the Leiden museum after having been kept in other collections for many decades, being an 19th century specimen. One of the former owners of the beetle, O. E. Janson, must have been utterly confused as to its affinities, for his handwritten labels indicate positions near two very different genera. In my opinion this lamellicorn represents a new genus, which seems most closely affined to *Osmoderma* Le Peletier & Serville, a rather uniform Holarctic genus of nine species. Initially I doubted the Southeast Asian origin of this curious new relative of *Osmoderma*, but the discovery of a second specimen from the same region in the collection of the late M. O. de Lisle removed all doubt. There is now no reason to postpone a diagnosis any longer.

The position of the new genus in the system of Trichiinae is explained by means of a practical key to the seven known genera of Osmodermini, starting with a diagnosis of the tribe. Despite scanty literature data I have attempted to map the approximate ranges of these genera (fig. 7), also taking into account the data of the Osmodermini in the Leiden museum. It should be

noted that the delimitation of the *Osmodermini* requires further investigation; to me their maintenance as a tribe seems not indisputable.

Genus ***Platygeniops*** nov.

Diagnosis. — Pronotum very wide in proportion to elytra (plate 1), disc deplanate, unmodified; lateral declivities evenly convex, borders marginate; dorsal outline of pronotum (fig. 2) almost semielliptic, posterolateral angles distinct. Middle and hind tibiae (fig. 6) with a single external protrusion. Preprosternum tectiform, postprosternum unmodified. Eye-canthi short, straight (fig. 1).

Clypeus marginate, anterior border bisinuate (fig. 1). General surface of cephalic disc evenly convex. Mesepimeron distinct in dorsal view. Scutellum triangular (fig. 3). Elytral disc deplanate (plate 1), striate and/or costate; humeral and distal umbones of elytra ill pronounced, apicosutural angle of elytra ca. 90°. Mentum small, unmodified, anteriorly simply bilobate. External lamella or mandibles strongly sclerotized. Middle coxae narrowly separated by longitudinal mesosternal "swelling". Transition from metasternal disc to wings evenly convex. Abdomen with 6+ (1) visible sternites. Propygidial sclerite constricted at spiracular level. Pygidium evenly convex (fig. 4), anal border marginate. Legs robust. Fore-tibia (fig. 5) with 3 external denticles, terminal spur robust, acuminate. Habitus plump (plate 1), somewhat like *Platygenia* due to deplanate dorsum; large, length between 2.5 and 3.5 cm; single known species shiny black. — Male unknown.

Type-species. — *Platygeniops exspectans* sp. nov.

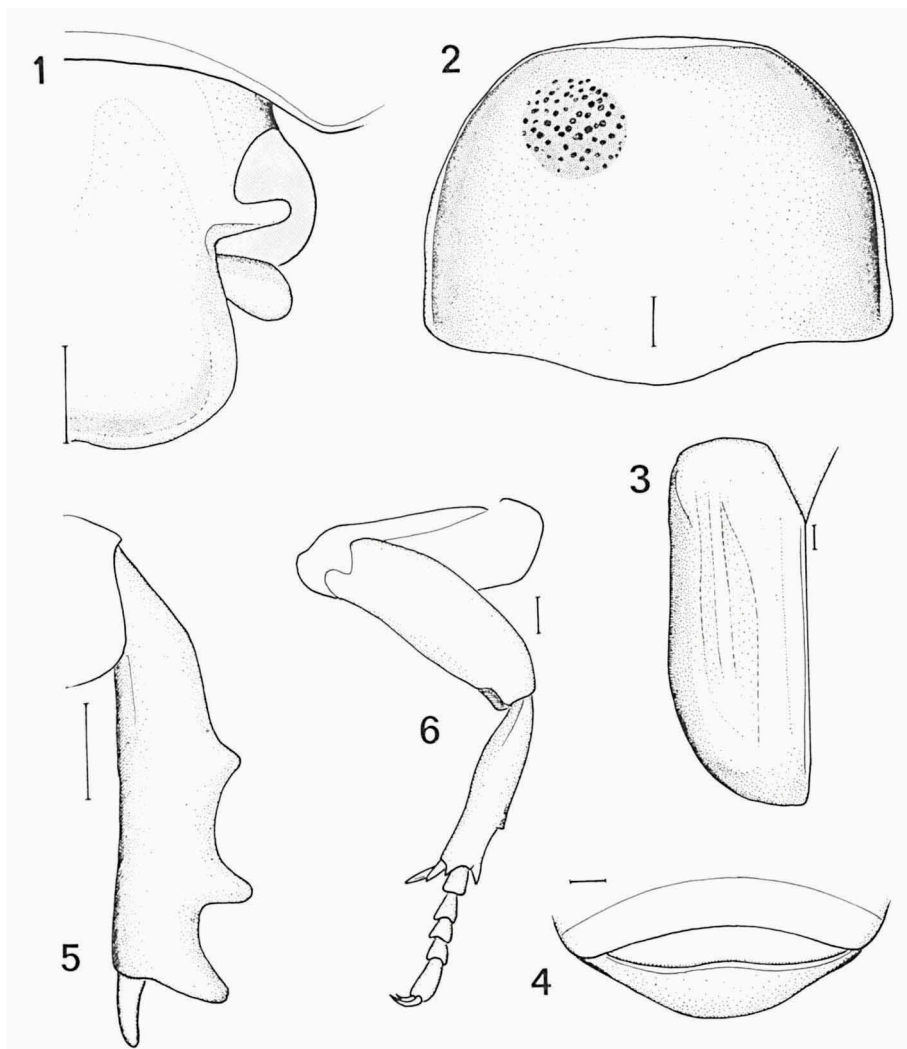
Affinities. — Although in the key given below *Platygeniops* is placed near *Osmoderma*, I am afraid that this is not based on a synapomorphy. Consequently the precise phylogenetic position of *Platygeniops* remains highly problematic. Intuitively I do not see any outstanding adaptive or other features that might be qualified as derived, the beetle thus seeming very primitive to me. On the basis of both its morphology and its distribution (fig. 7) I would term *Platygeniops exspectans* a relict.

There is a great overall similarity between *Platygeniops* and *Osmoderma*, and less so between this pair and *Platygenia*. This situation is largely due to the strong adaptive flattening of the body, a character complex of the last-mentioned genus.

Distribution. — The single known species is known only from two places in Sundaland (Borneo and Perak), but a wider distribution seems likely.

Bionomics. — Unknown; possibly living under bark (or in palm sheaths), in mould, like other *Osmodermini*.

Note. — The name *Platygeniops* is to be considered a masculine noun.



Figs. 1-6. *Platygeniops exspectans*, holotype. Contours of: 1, head, full-face, left half; 2, pronotum, dorsal view, with approximate punctation (inset); 3, left elytron, dorsal; 4, abdominal apex, ventral; 5, right fore tibia; 6, left hind leg. Scale lines — 1 mm.

***Platygeniops exspectans* sp. nov.** (figs. 1-6, plate)

Holotype (female). — Approximate length 26.5, width 13, height 9 mm. Shiny black; derm with sculpture varying from punctate to striolate, largely glabrous. Habitus, plate 1.

Cephalic contours, fig. 1. Clypeal margin distinctly thickened; clypeal derm contiguously finely striolate-punctate. Frontovortex more coarsely

punctate, with shiny, scarcely punctate median and lateral callosities. Maximum width of head capsule (including eyes) 4.8, maximum width of clypeus 3.5 mm.

Pronotal contours, fig. 2; disc of pronotum deplanate, anterior and lateral declivities feebly convex, their margins ridged. Pronotal centre finely, abundantly punctate, punctural diameters and densities increasing toward borders (see also inset fig. 2), lateral surface rugulate-punctate. Median length of pronotum 7.3, maximum width 9.9 mm. Scutellum (fig. 3) virtually impunctate, laterally with shallow groove filled with contiguous striolae.

Elytral contours, fig. 3. Apart from juxtasutural striola, elytral disc with  $2+3+1$  variably distinct striae or rows of more or less confluent annulate striolae; intervening (+) spaces longitudinally costate; parascutellar area sparsely finely punctate, slightly convex; elytral sides densely to contiguously, rather coarsely annulate-punctate, apical derm scabrous-striolate. Sutural length of elytron 12.1, maximum (longitudinal) length 16.0, maximum width of elytra combined 12.7 mm.

Antenna 10-segmented, including 3-segmented club, unmodified. (Mouthparts not present on holotype, glued to separate card). Preprosternum with median costa, angulate in frontoventral view; postprosternum unmodified. Pectoral sides densely striolate and striolate-punctate, locally setose; mesosternum smooth anteromedially, striolate-setose laterally; metasternal wings densely annulate-punctate, discal punctation fine, entire metasternum glabrous. Mesepimeron narrowly distinct in dorsal view; space separating middle coxae narrow, longitudinally "swollen", convex (in cross-section). Abdominal sternites evenly convex (in cross-section), medially finely punctate, laterally passing into dense annulate punctation, reflexed dorsal surface scabrous, finely setose; distal sternites, fig. 4. Pygidium evenly convex, almost entirely scabrous-striolate, with short blackish setae; anal area striolate, with longer brownish setae.

Fore-tibia (fig. 5) tridentate; upperside abundantly punctate, with many setae, underside finely densely striolate. Terminal spur acuminate, slightly curved, nearly reaching apex of tarsal segment 2. Middle and hind tibiae (fig. 6) striolate-punctate (underside) and finely striolate (upperside), with one external elevation; terminal spurs long, acuminate (middle tibiae) or with shortly rounded tip (hind tibiae). Femora striolate-punctate. Hind coxa anteriorly striolate-punctate, posteriorly finely striolate. Tarsi all robust, unmodified, with large sickle-shaped claws.

Variation. — The paratype, also a female, is larger (length 31 mm) and differs in some other features slightly from the holotype. The lateral striae on the elytral disc are obliterate, the annulate striolae being completely con-

fluent. The pygidium of the paratype is less convex, somewhat depressed whereas the pygidial microsculpture is fully scabrous.

Material examined. — Holotype, female, from "Borneo / coll. Turner//e. coll. Parry"; labelled by Janson as a "n.gen. allied to/*Platygenia*" and "? *Anthracophora*/affin". Paratype, female, from "Malacca/Perak/W. Doherty", "Gen.? sp.?/M. O. de Lisle 1969". Both in Leiden museum.

#### KEY TO THE GENERA OF OSMODERMINI

1. Fore-tibia with three external denticles, apical one included. External lobe of mandibles usually strongly sclerotized. Mentum never strongly modified. Pronotum lacking horns, clypeus with pair of horns in males of two Neotropical genera (couplet 7). Apart from some small species of *Incala*, large forms, i.e. length exceeding 1.5 cm. Dorsum never with bright red, orange, yellow or green, or a combination of these . . . . . *Osmodermini*, 2
- Fore-tibia with one or two external denticles and/or otherwise different from preceding diagnosis . . . . . other *Trichiinae*
2. Large forms (length usually exceeding 3.5 cm) with evenly convex elytral disc. Elytra frequently with velutinous pattern of brown and white; pronotum ditto or uniformly shiny metallic. Clypeus of males anteriorly with pair of robust horns. Posterolateral section of pronotum subangulate or rounded off. — New World tropics . . . . . 7
- Smaller forms (length less than 3.5 cm) with more or less flattened elytral disc. Clypeus lacking horns. — Eurasia, North America, Africa . . . . . 3
3. Dorsal outline of pronotum hexagonal, disc at most with feeble callosities. Elytra and other parts frequently greyish, velutinous. General appearance slender. Middle and hind tibiae with at most one non-apical external protrusion. — Afrotropical Region . . . . . 6
- Dorsal outline of pronotum different, sides rounded or sinuate, with or without distinct posterolateral angles. Dorsum lacking extensive velutinous cover. General appearance strongly complanate or plump . . . . . 4
4. General appearance strongly complanate, head very wide (greatly exceeding 0.5 of pronotal width). Prosternum both anteriorly and posteriorly with robust knob. Eye-canths very long, curving to posterior side of eye. Pygidium with abruptly reflexed anal margin. Propygidial sclerite wide at spiracular level. Elytra longitudinally striate or striate-costate. — Afrotropical, three species . . . . . *Platygenia* Macleay <sup>1)</sup>

1) Schenkling (1922) placed this genus in the *Trichiini*, but it seems better placed here, in the *Osmodermini*.

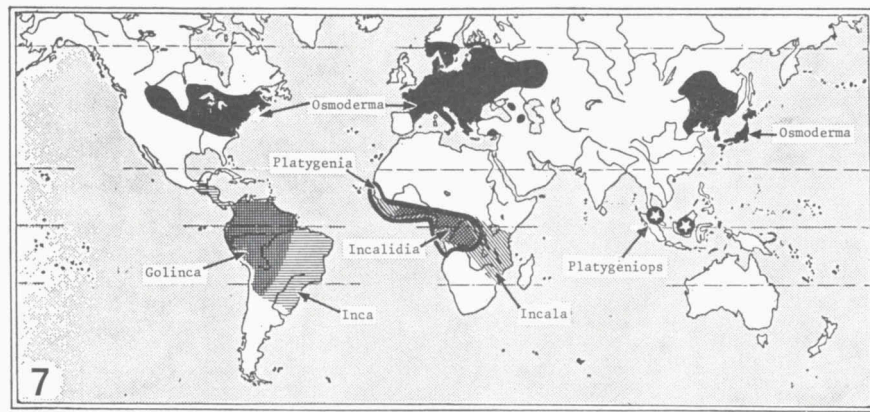


Fig. 7. Approximate known ranges of osmodermine genera. Cross-hatched: overlap of *Inca* & *Golinca* and *Incala* & *Incalidia*, respectively.

- General appearance less flattened, head narrow (less than 0.5 of pronotal width). Prosternum not knobbed. Eye-canths straight, short. Pygidium more or less evenly convex (at least in females), apically neither abruptly reflexed nor protuberant. Propygidial sclerite narrow at spiracular level, more or less constricted . . . . . 5
- 5. Pronotal disc with concavity; pronotum narrow (width usually less than 0.7 of combined elytral width), sides converging caudad. Middle and hind tibiae with two non-apical, usually spiniform protrusions. Posterolateral section of pronotum subangulate or rounded off (in dorsal view). Longitudinal striation of elytra feeble or absent. — Holarctic, nine species . . . . . *Osmoderma* LePeletier & Serville
- Pronotal disc simply deplanate (plate 1), sides evenly convex, border marginate; width of pronotum exceeding 0.7 of combined elytral width; dorsal outline of pronotum, fig. 2. Middle and hind tibia with one non-apical external protrusion (fig. 6). Elytral disc longitudinally striate-costate. — Southeast Asia, one species . . . . . *Platyganiops* nov.
- 6. Elytra usually velutinous, striae effaced. Anterior margin of clypeus medially more or less produced and reflexed. — Ca. 20 species . . . . . *Incala* J. Thomson
- Elytra punctate-striate. Anterior margin of clypeus simply bisinuate. Pronotal base marginate. Synonym or subgenus of *Incala*? — One species . . . . . *Incalidia* Janson
- 7. Clypeus of males with pair of divergent horns. — Six species . . . . . *Inca* LePeletier & Serville

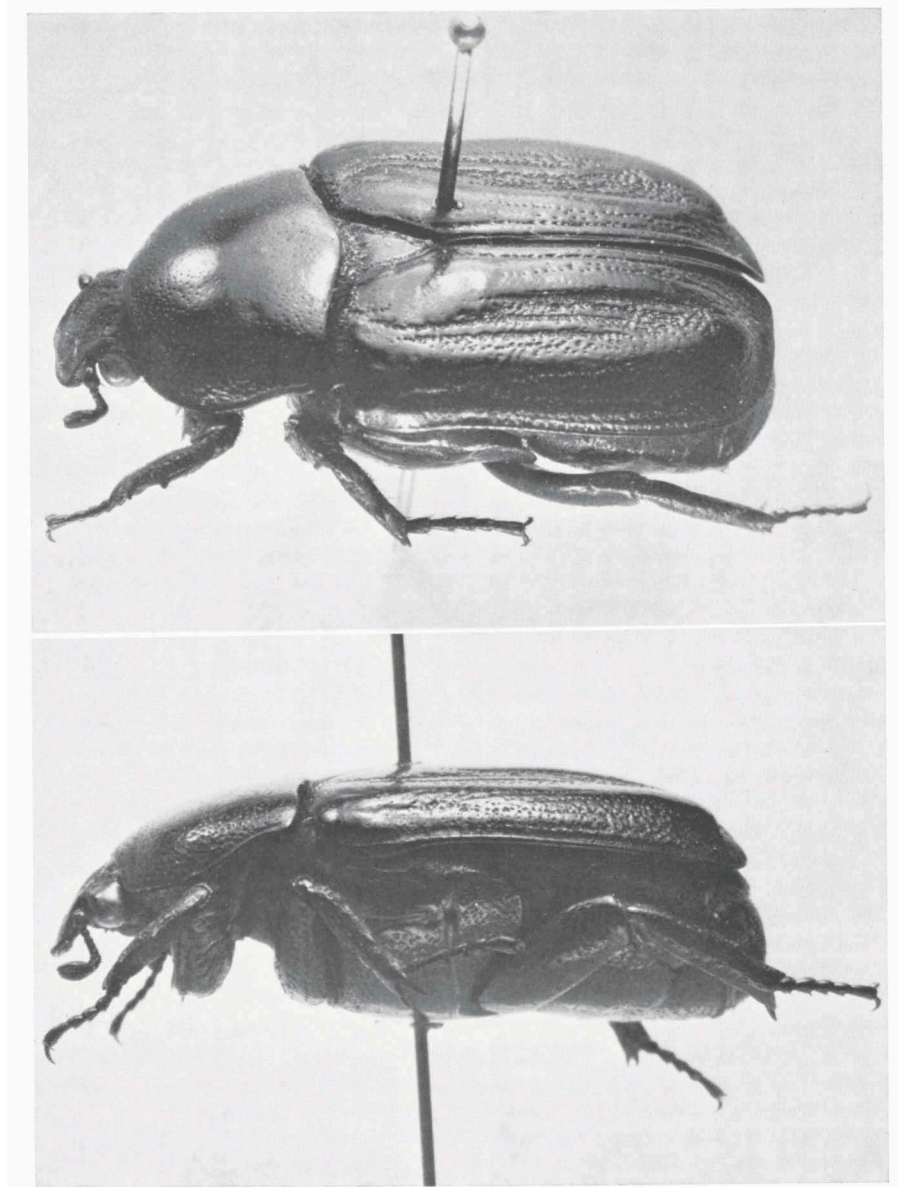
- Clypeus of males with pair of parallel, subcontiguous horns. Synonym or subgenus of *Inca*? — Two species . . . . *Golinca* J. Thomson

## ACKNOWLEDGEMENT

Mr. Renaud de Lisle (Paris) kindly donated the specimen of *Platygeniops* from his father's collection.

## REFERENCE

SCHENKLING, S., 1922. Scarabaeidae: Trichiinae, Valginae. — Col. Catalogus, 75, 58 pp.



*Platygeniops expectans*, holotype. Above: dorso-lateral view; below: lateral view.