

**A NEW SPECIES OF NEW GUINEAN *STIGMODERA* ESCH. AND REMARKS ON  
*PSEUDHYPERANTHA* SND. (COLEOPTERA: BUPRESTIDAE)**

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**ABSTRACT:** Systematic position of the enigmatic genus *Pseudhyperantha* SND. is discussed: examination of the holotype of *Pseudhyperantha bloetei* THY. has shown that the genus belongs to the **Stigmoderina** LAC. rather than to the **Dicercina** GISTL, **Buprestina** LEACH or **Haplotrinchina** HOL. where it had been placed by various authors. Besides, a new species of *Stigmodera* (*Castiarina* C.G.) from New Guinea is described.

**KEY WORDS:** Taxonomy, classification, new species, Indo-Pacific Region, New Guinea, Buprestidae, *Pseudhyperantha*, *Castiarina*

The taxonomic rank of the trans-Pacific group of genera typified by *Stigmodera* ESCH. has markedly evolved in time: “classic” authors from Lacordaire (1857) through Kerremans (1893) to Obenberger (1934) treated it as a first-order subdivision (*i.e.* equivalent to what we currently term subfamily) of the **Buprestidae** LEACH; then Cobos (1980) implicitly and Bellamy (1985) explicitly included the taxon as a tribe into the subfamily **Buprestinae** LEACH; at last I (Holyński 1988, 1993) made a step further, considering it a subtribe (**Stigmoderina** ESCH.) within the tribe **Buprestini** LEACH. Similarly, the internal classification has also been variously understood: while traditionally *Castiarina* C.G. and *Themognatha* SOL. were included as subgenera into *Stigmodera* ESCH., the current tendency to apparently infinite splitting inclined most recent authors (after Gardner 1989) to consider them separate genera; in my opinion the differences are too trifling to justify the generic rank, so I follow in this respect the treatment of earlier authors (indeed, *Calodema* C.G., *Metaxymorpha* PARRY, or perhaps even Neotropical *Conognatha* ESCH. should also be included into type-genus of the subtribe).

On the other hand, Saunders (1969) described a distinctive genus (*Pseudhyperantha* SND.) from Penang, whose classification put him to great trouble: “*The difficulty I have experienced with this genus has not been how to distinguish it from its allies, but to find its allies with which I might place it. As far as I can make out, it should be placed*

between *Capnodis* and *Cardiaspis*. It resembles, in general form, the genus *Hyperantha*, from S. America, but has the antennary pores on each side of their joints, so that it will come into the division “*Chalcophorides*” of Lacordaire. This brings it in form nearest to *Capnodis*, which is placed at the end of Lacordaire’s division, and as *Cardiaspis* stands in my arrangement at the beginning of the “*Buprestides vrais*” of that author, and resembles this species much in general characters, I think the present insect makes a convenient link between them”. I quote his deliberations *in extenso* because they make a good anticipation of further debate: as seen from the above, Saunders (1969) found most acceptable to place the genus as a “*link between*” what in Lacordaire’s (1857) classification followed by him were representatives of two different primary subdivisions of the **Buprestidae** LEACH: the **Chalcophorides** LAC. (*Capnodis* ESCH.) and “**Buprestides vrais**” (*Cardiaspis* SND.), considering it closer to the former because of the distribution of antennal pores, and disregarding the (expressedly noticed!) similarity to *Hyperantha* GISTL for the same reason. Later students did not attribute so great importance to that character [according to recent classifications *Capnodis* ESCH. and *Cardiaspis* SND. belong to two (respectively *Dicercina* GISTL and *Haplotrinchina* HOL.) closely related subtribes of the same tribe – the **Buprestini** LEACH (Hołyński 1993) resp. **Dicercini** GISTL (Bellamy 2003)], but the only result as regards the systematic position of *Pseudhyperantha* SND. was its implicit (Théry 1935) or explicit (Kerremans 1893, 1904; Obenberger 1934; Bellamy 1985, 2003) placement close to *Cardiaspis* SND. rather than to *Capnodis* ESCH. It was only Tôyama (1989) who questioned the traditional classification, arguing for the transfer of *Pseudhyperantha* SND. “*to the tribe Buprestini from the Dicercini ... near the genus Buprestis*”; the fact that SAUNDERS’ sole argument against stigmoderine affinity applies equally well to any of these arrangements apparently escaped attention of (or at least has not been mentioned by) their authors.

Several years ago I had the opportunity to borrow the holotype of *Pseudhyperantha bloetei* THY. from the Nationaal Natuurhistorisch Museum in Leiden. As the result of the detailed comparison to the original description, some corrections and additions seem warranted. Yellow markings on ventral side are as follows: elongately triangular one on the anterior (decliving) part of prosternum; a pair of small, rounded spots on sides of maximum convexity of prosternum (at the base of prosternal process); small, indistinct on anteromedian angle of mesepisterna; very large, transversely triangular laterobasal on each side of metasternum; small, rounded somewhat behind the midlength of metepisterna; transverse one occupying all the metacoxae except narrow posterior, lateral, and part of anterior margins; broad (*i.e.*, more exactly, long) on 1.-2. sternites, except triangular anterolateral spaces and rather narrow anterior and posterior margins; much narrower (*i.e.* shorter) on 3.-4. sternites, where dark margins are much broader; basal half of anal sternite; rounded lateroventral spot on each mandible; narrow longitudinal anteroventral stripe on basal half of profemur. Sides of front are slightly but distinctly (lower width = *ca.* 1.1× upper width) divergent. Antennae extend to *ca.* basal fourth of pronotal sides. Distal joint of maxillary palpi more than 2× longer than wide, cylindrical, with apical round fovea (similar to that of, *e.g.* *Castiarina thomsoni* on fig. 31 in Gardner 1989). Labrum semicircular, *ca.* 1.5× wider than long (similar to that in some *Hyperantha* GISTL). Pronotal base seems to be, in fact, invisible, being covered by laminar extension of scutellum and elytra, so laterobasal angles seen obliquely from sides look decidedly acute and reach beyond rounded anterolateral angles of elytra (similar relations show most (all?) *Hyperantha* GISTL *s.str.*, *Calodema* C.G. and *Metaxymorpha* PARRY – but not *Hyperanthella* HOSCH., *Dactylozodes* CHEVR., *Conognatha* ESCH. or *Stigmodera*

ESCH.). Pronotum finely and sparsely [but by no means „*extrêmement*” so] punctulated. Prosternum like that in *Conognatha mayeti* THY. (acc. to fig. 30 in Hoscheck 1934), but distinctly concave behind maximum convexity. Apex of prosternal process rounded at tip. Posteromedian angle of proepisterna margined with distinct rim, extending far along posterior and median margin (similar – though usually less distinct – situation exists in at least some *Hyperantha* GISTL, *Calodema* C.G. and *Metaxymorpha* PARRY). Epipleura without denticle at meso-metasternal border. Mesoepisterna reach to *ca.* ½ the distance from mesocoxae to epipleura.

Tôyama (1989) is certainly right that “*Pseudohyperantha*” [*sic!*] does not belong to „**Dicercini**”: his reasons (maxillary palpi, wing venation) are rather weak, but in fact the only justification for the traditional classification seems to be some similarity in general shape of the body, size of scutellum, and conformation of apex of anal sternite, to *Cardiaspis* SND., while width of mesoepisterna, straight epipleural margin, slender metatarsi with long basal joint, and many other features point to the contrary. Tôyama includes the genus into „**Buprestini**” [=**Buprestina** LEACH *sensu* RBH] but, besides stressing the two above-mentioned differences from „**Dicercini**”, does not present any reason for such classification. In fact, general shape of body, proportions of front, shape and proportions of pronotum and elytra, structure of pronotoelytral suture, size and shape of scutellum, conformation of elytral and abdominal apices, „bulky” prosternum, and especially reduced mesoepisterna, as well as several minor features, clearly preclude the possibility to include *Pseudohyperantha* SND. into **Buprestina** LEACH, and equally clearly place it among the **Stigmoderina** LAC. (apparently close to *Calodema* C.G. and *Metaxymorpha* PARRY).

The inclusion of *Pseudohyperantha* SND. significantly extends the known distributional area of the **Stigmoderina** LAC.: this is the only genus of the subtribe occurring on the northwestern side of the Wallace’s Line (Philippines, Indochina, Malaya, Sumatra, Borneo – Bellamy 2006). Exact phylogenetic reconstruction (including proximate outgroups) is needed to clarify the origin of this enigmatic range: whether it has resulted from the expansion of an evolutionarily *derived* stigmoderine from Australia or “Palaeomelanesia”, or is it the relict distribution of Laurasian (or “Indogondwanan”) *basal* branch of the group?

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The genus *Stigmodera* ESCH., as traditionally understood, contains *ca.* 550 known species, more than 80% of them in the subgenus *Castiarina* C.G. Almost all are restricted in distribution to Australia, only very few inhabit New Guinea: in the last revision Nylander (2006) listed 8 spp., to which a year later he (Nylander 2007) added one more. Among the buprestid beetles borrowed from the Koninklijk Belgisch Instituut voor Natuurwetenschappen in Brussels there are three specimens of a tenth – clearly different from any of those described hitherto – New Guinean species, which I have the pleasure to name in honor of my friend, the best connoisseur of New Guinean **Stigmoderina** LAC., Ulf Nylander from Valbo (Sweden).

*Stigmodera (Castiarina) nylanderi* HOL.**Material examined:**

**Holotype:** "Museum Leiden Nieuw Guinea Exp., K.N.A.G. 1939, Paniai, 18 - XI - 1939"  
[ø (KBIN)]

**Paratypes:** "Museum Leiden Nieuw Guinea Exp., K.N.A.G. 1939, Paniai, 18 - XI - 1939"  
[1ø (KBIN); 1♂ (RBH: BPjur)]

**Holotype:** 7.2×2.3 mm. Slender, uniformly bronzed-brown, glabrous.

Epistome somewhat emarginated at middle of anterior border, between antennal grooves somewhat wider than long, not separated from front. Front longitudinally concave at middle, convex on sides, widened anterad (at anterior margins of eyes almost as wide as long, at upper margins *ca.*  $\frac{3}{4}$  that width); V:W $\approx$ 0.5; front rather coarsely, vertex finer, rather densely punctured. Antennae reaching to *ca.* midlength of pronotal sides; 1. joint club-shaped, almost 3× longer than thick, 2. subcylindrical, by half shorter and somewhat thinner (twice longer than thick); 3. as long as, but definitely thinner than, 2., slightly thickening towards apex; 4. a little shorter than 3. but more than twice as wide, triangular; 5. still shorter and still wider, somewhat wider than long, triangular with rather broadly rounded external angle; 6-10. similar to 5.; 11. definitely narrower, somewhat longer than wide, subovate.

Pronotum 1.5× wider than long, uniformly convex except small and indistinct prehumeral depressions; basal margin shallowly bisinuate, apical almost straight; basal angles distinctly acute; sides sinuate to basal third, then regularly arcuately tapering to not produced apical angles; surface regularly, rather coarsely (more so towards sides) and densely punctured, with distinct (but not quite reaching anterior or posterior margins) narrowly impunctate midline; surface between punctures very finely microsculptured; lateral carina sharp in basal half, disappears anteriorly.

Scutellum equilaterally subtriangular, with somewhat concave sides and very sharp sutural angle, very finely micropunctulated.

Elytra somewhat wider than pronotum, *ca.* 2.4× longer than wide; sides obliquely truncated at base, shallowly concave from humeral protuberances to midlength (where they are as wide as just behind humeri), then subarcuately tapering to sharply spiniform apical denticles on both sides of common semicircular sutural emargination; lateroapical margin smooth. Scutellar striae reaching to  $\frac{1}{4}$  of elytral length, 2. – 4. entire, 5. ends at *ca.* apical eighth where it joins 8., 6. and 7. start behind humeral hollow and extend to apical sixth, 8. (fine in basal  $\frac{2}{3}$ ) runs from behind prominent humeral protuberance to meeting with 5., 9. (beginning at midlength) and 10. join and end just before apex; all striae deep, finely and rather sparsely punctured; interstriae almost flat in basal half, 3., 5., 7., and 9. subcareniformly elevated before apex; surface between striae without distinct punctures, very finely microsculptured; epipleura rather wide before metacoxae, vanishing behind, epipleural denticle rudimentary.

Prosternum rather densely and coarsely, regularly punctured; proepisterna depressed at basal angles; prosternal process about as long as wide, parallelsided, roundedly truncated at apex, convex, sides (not apex) bordered with deep striae; metasternum, metacoxae and 1. sternite moderately, rest of abdomen finely, regularly and rather sparsely punctulate; all abdominal segments regularly convex, apex of anal sternite broadly arcuately subtruncated.

**Variability:** Sex of the holotype and one of paratypes (7.1×2.3 mm.) unknown (probably females). That latter differs from the holotype in being more bronzed, with cupreous rather than greenish shine, but otherwise seems virtually identical. Male paratype is smaller (6.7×2.2 mm.), uniformly bright green; sides of pronotum more strongly, less arcuately (almost cuneately) convergent in apical  $\frac{2}{3}$ ; elytra less distinctly sinuate at sides of basal half, at midlength not quite attaining their postbasal width; striae becoming conspicuously deeper and wider in apical third, all interstriae there almost equally careniform.

**Geographical distribution:** Known only from the type locality, Paniai on New Guinea (probably meaning the surroundings of Lake Paniai – 3°48′-3°58′S; 136°14′-136°24′E – in the Indonesian part of the island).

**Remarks:** *S. nylanderi* *sp. n.* seems to be the closest relative of *S. holynskii* (NYL.), but differs from that and all the remaining New Guinean species in being much slenderer and unicolorous, without any trace of yellow or reddish markings. It is the northwesternmost species of *Castiarina* C.G.: all those known to Nylander (2006, 2007) have been found in the eastern part of the island.

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Fig. 1. Holotype



Fig. 2. Male paratype

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