

# *PHYMATOPLATA HALSTEADI* SP. NOV. – THE SECOND KNOWN SPECIES OF THE GENUS *PHYMATOPLATA* KOCH (COLEOPTERA: TENEBRIONIDAE: PLATYNOTINI)

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**Abstract.**— *Phymatoplata halsteadi* sp. nov. is described from tropical Africa. The genus *Phymatoplata* was previously known only from single species – *P. asperula* (Fairmaire, 1897). Lectotype and paralectotype are designated for *Selinus asperulus* Fairmaire, 1897.



**Key words.**— Coleoptera, Tenebrionidae, Platynotini, *Phymatoplata*, taxonomy, Africa.

## INTRODUCTION

In 1897 Fairmaire published a paper in which he described the species *Selinus asperulus*.

Sixty years later, Koch (1956) presented in detail his subdivision of the tribe *Platynotini* into subtribes and generic groups. One of the groups distinguished by Koch is the selinoid *Platynotina*. The group, apart from the already known genera (*Angolositus* Koch, *Glyptopteryx* Gebien and *Selinus* Mulsant et Rey), included another seven, newly described ones. One of them was monotypical *Phymatoplata* with single species *Selinus asperulus* Fairmaire, 1897 (type species by monotypy).

*Phymatoplata halsteadi* sp. nov. is the second known species of the genus *Phymatoplata*.

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## METHODS AND ABBREVIATIONS

Means and ratios are based on all specimens listed under "Material examined" and "Types". The following abbreviations have been used in the descriptions:

pl/pb – pronotum length/breadth ratio;  
 el/eb – elytra length/breadth ratio;  
 el/pl – length ratio elytra/pronotum;  
 eb/pb – breadth ratio elytra/pronotum;  
 lbp – length of basal part of aedeagal tegmen;  
 lap – length of apical part of aedeagal tegmen;  
 c1/c2/c3/c4/c4–c3 – length ratios coxites1/coxites2/coxites3/coxites4/coxites4–coxites3;  
 bc1/lc1 – coxites1 breadth/length ratio;  
 lp/lc1 – length ratio paraproct/coxites1.

## TAXONOMY

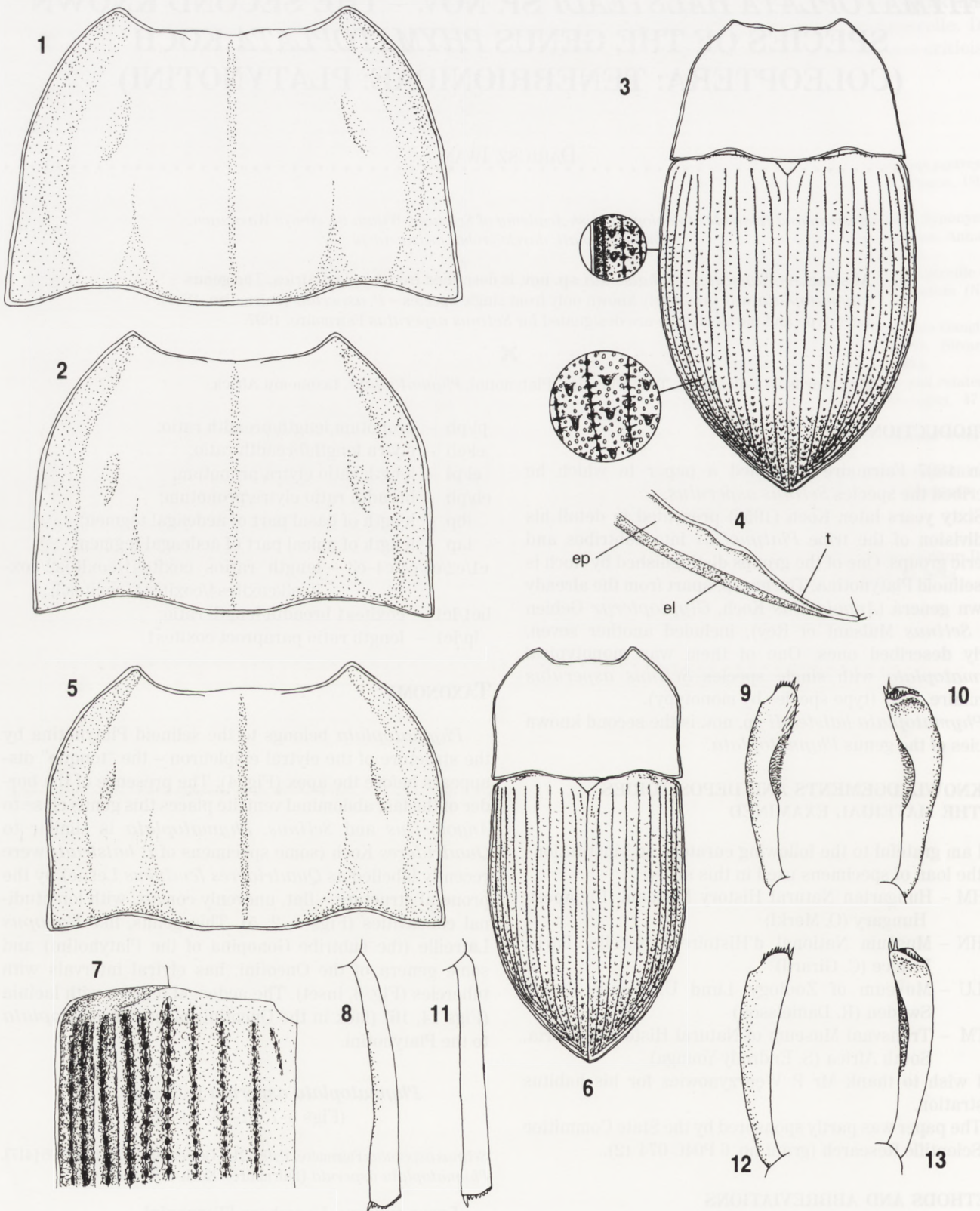
*Phymatoplata* belongs to the selinoid *Platynotina* by the structure of the elytral epipleuron – the "tonque" disappears before the apex (Fig. 4). The presence of the border of the last abdominal ventrite places this genus close to *Angolositus* and *Selinus*. *Phymatoplata* is similar to *Quadrideres* Koch (some specimens of *P. halsteadi* were recently labelled as *Quadrideres femineus* Lesne) by the pronotal structure – flat, unevenly convex, with longitudinal concavities (Figs 1, 2, 5). This genus, like *Gonopus* Latreille (the subtribe *Gonopina* of the *Platynotini*) and some genera of the *Oncotini*, has elytral intervals with tubercles (Fig. 3, inset). The aedeagal tegmen with lacinia (Figs 14, 16) (lack in the *Oncotini*) places *Phymatoplata* to the *Platynotini*.

*Phymatoplata asperula* Fairmaire, 1897  
 (Figs 5–7, 11–13, 16, 17)

*Selinus asperulus* Fairmaire, 1897: 121. – Gebien 1910: 227; 1938: 298 [417].  
*Phymatoplata asperula* (Fairmaire): Koch 1956: 269.

*Locus typicus*. Usambara [Tanzania].

**Diagnosis.** Length 8.0–9.50 mm, body more slender than *P. halsteadi* (Fig. 6); pl/pb = 0.62–0.69, el/eb = 1.25–1.38, el/pl = 2.17–2.34, eb/pb = 1.05–1.15. Pronotum



Figures 1–13. 1–4, 8–10. *Phymatoplatea halsteadi*, 5–7, 11–13. *P. asperula*. (1, 5) female and (2) male pronotum, (3, 6) dorsal view of pronotum and elytral, (4) apical part of elytron (ep – elytral epipleuron, el – elytron, t – “tonque”), (7) anterior part of elytron, (8, 11) hind male tibia, (9, 12) dorsal and (10, 13) ventral view of male fore tibia.

with sides subparallel at basal 2/3 (Fig. 5). Elytral intervals 7 and 8 costate (Fig. 7). Male legs, fore tibia slightly widened, with sharp ridge ventrally (Figs 12, 13); hind tibiae straight (Fig. 11). Female genitalia as in *P. halsteadi*. Aedeagus as in figs 16, 17,  $lap/lbp = 0.31$ ; lacinia relatively short, its base located below the level of suture uniting apical and basal part; apical part evenly narrowed apically, width of gap between parameres very narrow.

**Types.** Lectotype (male), MNHN: "Selinus asperulus Fairm., n. sp., Usambara; Afrique Orientale, Usambara, Deréma, L. Conradt, 1891; Type; Muséum Paris 1906, Col. L. Fairmaire". Paralectotype: Selinus asperulus Fairm., n. sp.; Afrique Orientale, Usambara, Deréma, L. Conradt, 1891; Type; Muséum Paris 1906, Col. L. Fairmaire, (MNHN) 1 f. Present designation.

**Material examined.** Rhodesia, Muséum Paris, 1952, coll. R. Oberthur, (MNHN) 2 m, 2 f; Usambara, Amani, Selinus asperulus det. Z. Kaszab, (HNHM) 1 m.

**Distribution.** Zimbabwe, Tanzania (Usambara Mts).

*Phymatoplata halsteadi* sp. nov.

(Figs 1–4, 8–10, 14, 15, 18–20)

**Name derivation.** This species is named for Dr. David G. H. Halstead, an outstanding British coleopterist.

**Locus typicus.** Mombasa (Kenya).

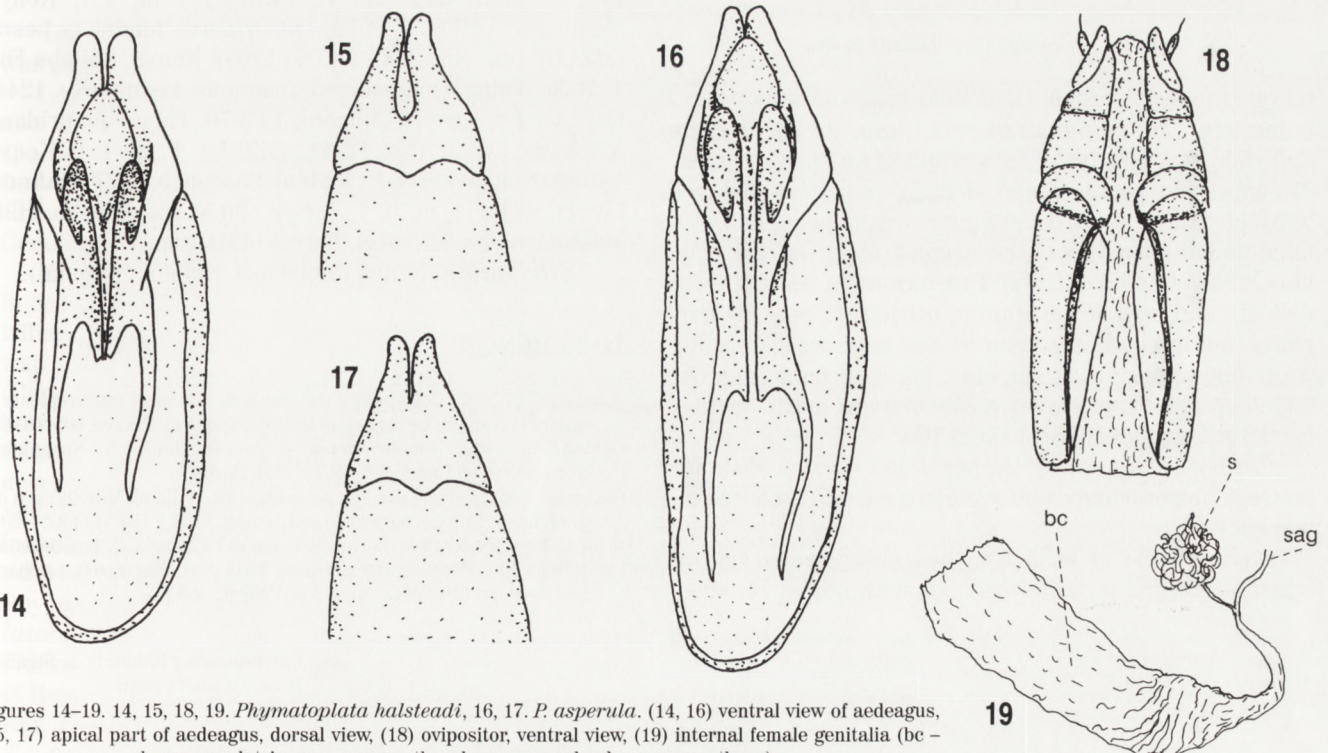
**Diagnosis.** Like *P. asperula*, it has small tubercles on the elytral intervals (Fig. 3, inset) and elytral epipleuron with "tongue" disappearing before the apex (Fig. 4). Both species have the body almost flat.

*P. halsteadi* is easily distinguished from *P. asperula* by the body size (*halsteadi* is smaller and more robust than *asperula*), the pronotal shape (cf. Figs 1, 2 and 5), the structure of elytral intervals 7 and 8 (strongly convex in *halsteadi*, costate in *asperula*), the structure of male fore and hind tibiae (widened and curved in *halsteadi*, slightly widened and straight in *asperula*) (cf. Figs 9, 10 and 12, 13; 8 and 11) and the shape of aedeagal apical part (with wide median gap between parameres in *halsteadi*, narrow one in *asperula*) (cf. Figs 14, 15 and 16, 17).

**Description.** Length 7.6–9.0 mm, males distinctly smaller than females. Body robust and almost flat (Fig. 3); colour from dark brown to black; surface of upperside shiny and strongly punctate, underside less shiny and with delicate punctation;  $pl/pb = 0.53–0.58$ ,  $el/eb = 1.15–1.26$ ,  $el/pl = 2.16–2.40$ ,  $eb/pb = 1.07–1.12$ .

Head widest on eyes level; its surface coarsely and densely punctate, distance between punctures ca. 0.2–0.5 puncture diameter; upperside with concavities, especially distinct at fronto-clypeal suture and along inner margin of eye; eyes weakly narrowed laterally – between tempus and gena 4 facets; clypeus shallowly emarginate anteriorly; mid part of mentum rather wide, slightly narrowed anterad, lateral wings narrow. Antenna with segments 7–11 slightly widened, segment 3 ca.  $2.2 \times$  as long as segment 2.

Pronotum transverse, widest at base, distinctly narrowed to apex (Figs. 1, 2); base deeply, bisinuate emarginate; anterior angles rounded; posterior angles rectangular, strongly produced posteriorly, but not protruding beyond the level of mid part of the base; border of anterior



Figures 14–19. 14, 15, 18, 19. *Phymatoplata halsteadi*, 16, 17. *P. asperula*. (14, 16) ventral view of aedeagus, (15, 17) apical part of aedeagus, dorsal view, (18) ovipositor, ventral view, (19) internal female genitalia (bc – bursa copulatrix, sag – spermathecal accessory gland, s – spermatheca).



Figure 20. *Phymatoplatia halsteadi*. Female.

margin widely interrupted in middle, base and sides entirely bordered; lateral border of even width, strongly convex and rather narrow (ca.  $0.36 \times$  width of antennal segment 3); upperside coarsely and densely punctate, distance between punctures ca.  $0.2\text{--}0.5$  puncture diameter, and with longitudinal concavities (the deepest along lateral margins, at base and medianly). Prosternum pubescent, with delicate and sparse punctation; prosternal process narrowly bordered and produced towards mesosternum; pronotal hypomeron smooth. Metasternum narrow, metasternal length between meso- and metacoxal cavities ca.  $0.3 \times$  length of metacoxal cavities.

Scutellum transverse, rather small-sized – distance between humeral angle and scutellum ca.  $6.5\text{--}7.0 \times$  scutellum width.

Elytra widest at basal  $1/3$ , then evenly narrowing to apex; not tucked in posteriorly; humeral angles rounded;

anterior margin of elytra arcuately convex anteriorly; elytral striae punctate-sulcate, with round, regular, rather small punctures; elytral intervals coarsely and densely punctate, with small tubercles (Fig. 3); intervals 5–9 more convex than the others. Elytral epipleura delicately and sparsely punctate; very broad at humeri to the level of posterior margin of postepisternum, gently narrowed posteriorly; with a “tongue”, which disappears just before elytral apex (Fig. 4). I–III abdominal ventrites with longitudinal rugosity, IV–V ventrites delicately and sparsely punctured; the last one narrowly bordered.

Legs of both sexes have hind tarsi with glabrous gutters ventrally on all segments and all tibiae obtuse (without ridges on outer margin). Male legs, fore tarsi wider than female ones; fore tibia considerably widened and strongly concave ventrally, bottom of concavity densely pubescent (Figs 9–10); hind tibiae slightly curved (Fig. 8).

Ovipositor (Fig. 18), length ratio paraproct/coxites ca.  $1.4$ ,  $lp/lc1 = 5.4$ ,  $bc1/lc1 = 1.3$ ,  $c1/c2/c3/c4/c4-c3 = 1.0/1.1/1.4/1.4/0.4$ ; internal female genitalia as in fig. 19, bursa copulatrix with no sclerites, evenly narrowed towards outlet of spermatheca and accessory gland; spermatheca with very narrow, regular, strongly sclerotized and multiple dichotomous branched ducts. Aedeagus as in figs 14, 15,  $lap/lbp = 0.34$ ; laciniae relatively short, its base located below the level of suture uniting apical and basal part; apical part evenly narrowed apically, width of gap between parameres equal to width of paramere at apex.

**Types.** Holotype (male), MZLU: “Kenya, Mombasa, 5-19/3-70, Th. Palm, *Phymatoplatia asperula* F.”. Paratypes: Kenya, Mombasa, 5-19/3-70, Th. Palm, *Phymatoplatia asperula* F., (MZLU) 1 m, 2 f; Kenya, Mombasa, 5-19/3-70, Palm, *Quadrideres femineus* Lesne, (MZLU) 1 m (No 1278), 2 f (No 1268); Kenya, Shimba For., 17/3-70, Palm, *Quadrideres femineus* Lesne (No 1244), (MZLU) 1 f; Kenya, Shimoni, 13/3-70, Palm, *Quadrideres femineus* Lesne (No 1273), (MZLU) 1 m, 1 f; Kenya, Nyandarua, 10 km S.-E. Njabini, 2550 m, 9.XI.77, Mahnert, Perret, (TM) 1 m, 1 f; Kenya, 30.XI.74, Shimba Hills, Makadara For., Mahnert, Perret (TM) 1 m.

**Distribution.** Kenya (Mombasa, Njabini, Shimoni).

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