

Three new species of *Platyprosopus* from Thailand, Cambodia, and Sierra Leone, and additional records (Coleoptera, Staphylinidae, Staphylininae)

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A b s t r a c t : Three species of *Platyprosopus* MANNERHEIM, 1830 are described and illustrated: *P. latitarsalis* nov.sp. (Thailand); *P. rossii* nov.sp. (Cambodia); *P. maximus* nov.sp. (Sierra Leone). Additional records of three species are reported primarily from Cambodia, among them two new country records.

K e y w o r d s : Coleoptera, Staphylinidae, Staphylininae, Platyprosopini, *Platyprosopus*, Oriental region, Afrotropical region, Thailand, Cambodia, Sierra Leone, taxonomy, new species, new records.

Introduction

According to HERMAN (2001), *Platyprosopus* MANNERHEIM, 1830, the sole genus in the tribe Platyprosopini, included 50 species distributed in the Neotropical, Nearctic, Palaearctic, Ethiopian, Madagascan, and Oriental regions. The Neotropical species were revised by IRMLER (1977). Recently, BORDONI (2015) described ten additional species and revalidated one species from the Oriental region. Prior to the present study, 15 and 24 species had been recorded from the Ethiopian and Oriental regions, respectively, two from Thailand, and five from Cambodia (HERMAN 2001, BORDONI 2015).

The present paper is based on *Platyprosopus* material from Thailand, Cambodia, and Sierra Leone examined during the past years. An examination of this material, most of which was collected by Walter Rossi (Università dell'Aquila), revealed that it included at least three undescribed species.

Material, methods, and measurements

The material treated in this study is deposited in the author's private collection (cAss).

The morphological studies were conducted using Stemi SV 11 and Discovery V12 microscopes (Zeiss), as well as a Jenalab compound microscope (Carl Zeiss Jena). The images were created using digital cameras (Axiocam ERc 5s, Nikon Coolpix 990), and Labscope and Picolay stacking software.

Body length was measured from the anterior margin of the mandibles (in resting position) to the posterior margin of the abdominal tergite VIII, the length of the forebody from the anterior margin of the mandibles to the posterior margin of the elytra, head

length from the anterior margin of the frons to the posterior constriction of the head, elytral length at the suture from the apex of the scutellum to the posterior margin of the elytra (at the suture), and the length of the aedeagus from the apex of the ventral process to the base of the aedeagal capsule. The "parameral" side (i.e., the side where the sperm duct enters) is referred to as the ventral, the opposite side as the dorsal aspect.

Results

Platyprosopus indicus MOTSCHULSKY, 1858

Material examined: **THAILAND:** 1♂, Chiang Mai, Mae Rim env., Huay Tung Tao reservoir, 24.X.2016, leg. Rossi (cAss). **CAMBODIA:** 5♂♂, 8♀♀, Kampong Chhnang prov., Phum Toul Ompel, shore of branch of Tonle Sap Lake, 12°14'N, 104°41'E, 4.+7.XI.2018, leg. Rossi (cAss); 10♂♂, 8♀♀, same data, but 17+26.V.2019, leg. Rossi & Kong (cAss); 1♂, Banteay Meanchey prov., Sisophon env., Mean Chey University env., 13°44'55"N, 102°55'26"E, small lake, 15.II.2017, leg. Rossi (cAss).

Comment: According to BORDONI (2015), this large species was previously known from Malaysia, Vietnam, and Indonesia (Sumatra, Java). The above specimens represent the first records from Thailand and Cambodia.

Platyprosopus fraternus BERNHAUER, 1922

Material examined: **CAMBODIA:** 1♂, Kampong Chhnang prov., Phum Toul Ompel, shore of branch of Tonle Sap Lake, 12°14'N, 104°41'E, 4.+7.XI.2018, leg. Rossi (cAss); 1♀, same data, but 17+26.V.2019, leg. Rossi & Kong (cAss); 1♀, Banteay Meanchey prov., Sisophon env., Mean Chey University campus, 13°34'45"N, 102°55'44"E, light trap, 20.V.2019, leg. Rossi & Kong (cAss).

Comment: This species was originally described based on material from Cambodia and subsequently reported also from Northeast India (Assam) and Bangladesh by BORDONI (2015).

Platyprosopus socius BERNHAUER, 1922

Material examined: **CAMBODIA:** 2♂♂, 3♀♀, Banteay Meanchey prov., Mean Chey University campus, 13°35'N, 102°56'E, light trap, 1.XI.2018, leg. Rossi (cAss); 1♀, Kampong Chhnang prov., Phum Toul Ompel, shore of branch of Tonle Sap Lake, 12°14'N, 104°41'E, 4.+7.XI.2018, leg. Rossi (cAss).

Comment: *Platyprosopus socius* is currently known only from Cambodia (BORDONI 2015). The above specimens represent the first records since the original description.

Platyprosopus latitarsalis nov.sp. (Figs 1-5)

Type material: **Holotype** ♂: "THAILAND - Nan distr., Pha Khab vill., 19°05'N, 101°10'E, 560 m, V.1993, leg. Pacholátko / Holotypus ♂ *Platyprosopus latitarsalis* sp.n. det. V. Assing 2019" (cAss). **Paratype** ♀: same data as holotype (cAss).

Etymology: The specific epithet is an adjective composed of the Latin adjectives *latus* (broad) and *tarsalis* (of the tarsi). It alludes to the dilated metatarsomeres I and II, one of the characters distinguishing this species from the similar *P. socius*.

Description: Body length 10.5-11.0 mm; length of forebody 5.8-6.0 mm.

Coloration: head dark reddish-brown; pronotum reddish-brown; elytra reddish with the scutellum and adjacent portions of elytra infuscate; abdomen dark-brown with the posterior margins of tergites III-VI, the posterior portion of tergite VII, and segments VIII-X reddish; legs reddish-yellow; antennae reddish-yellow to reddish-brown.

Head (Fig. 1) as long as broad or indistinctly oblong; lateral margins behind eyes subparallel in dorsal view; dorsal surface with very dense and moderately coarse macropunctuation and dense interspersed micropunctuation, in or along middle with glossy patch without macropunctuation of variable size and shape. Eyes of moderate size, shorter than postocular region in dorsal view. Antenna approximately 3.0 mm long.

Pronotum (Fig. 1) oblong, 1.06-1.08 times as long as broad and 1.05-1.07 times as broad as head, broadest in anterior half; anterior margin straight; disc with a dorsal series on either side of middle, each composed of six large punctures; whole disc with dense micropunctuation.

Elytra (Fig. 1) 0.77 times as long as pronotum; punctuation very dense and very fine, slightly asperate. Hind wings present. Metatarsomere I longer than the combined length of metatarsomeres II and III; metatarsomeres I and II dilated, distinctly broader than mesotarsomeres I and II.

Abdomen slightly narrower than elytra; punctuation fine and very dense; posterior margin of tergite VII with palisade fringe.

♂: sternite VIII with distinctly concave posterior margin; hemitergites IX and tergite X slender (Fig. 2); apices of hemitergites IX spine-shaped and bent upwards (Fig. 2); sternite IX (Fig. 3) very slender, posterior margin convex in the middle; aedeagus (Figs 4-5) 1.2 mm long; median lobe of aedeagus slender and apically acute both in lateral and in ventral view; parameres not reaching apex of median lobe, each with two apical setae.

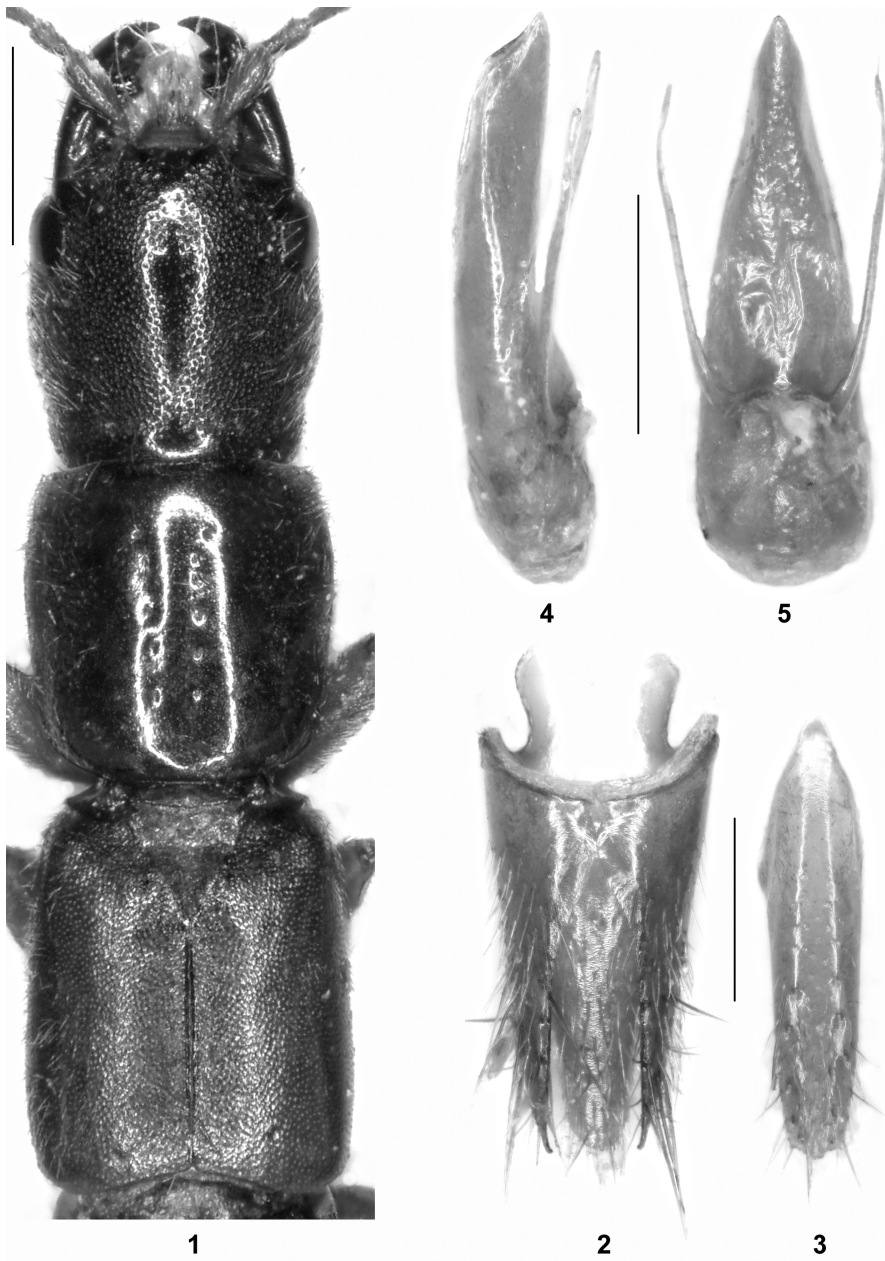
C o m p a r a t i v e n o t e s : The only other species recorded from the Oriental region with the dorsal series of the pronotum composed of six (or seven) punctures are *P. socius* (Cambodia) and *P. aequalis* BERNHAUER & SCHUBERT, 1914 (North India; male unknown). *Platyprosopus latitarsalis* is distinguished from them as follows:

from *P. socius* by a slightly more robust body, the coloration of the antennae (*P. socius*: apical five antennomeres paler than basal antennomeres), a less pronounced and less extensive glossy patch on the head, larger eyes, denser and more distinct micropunctuation of the pronotum, longer metatarsi, dilated metatarsomeres I and II, and an aedeagus of completely different shape (*P. socius*: ventral process much broader, shorter, and apically concave in ventral view);

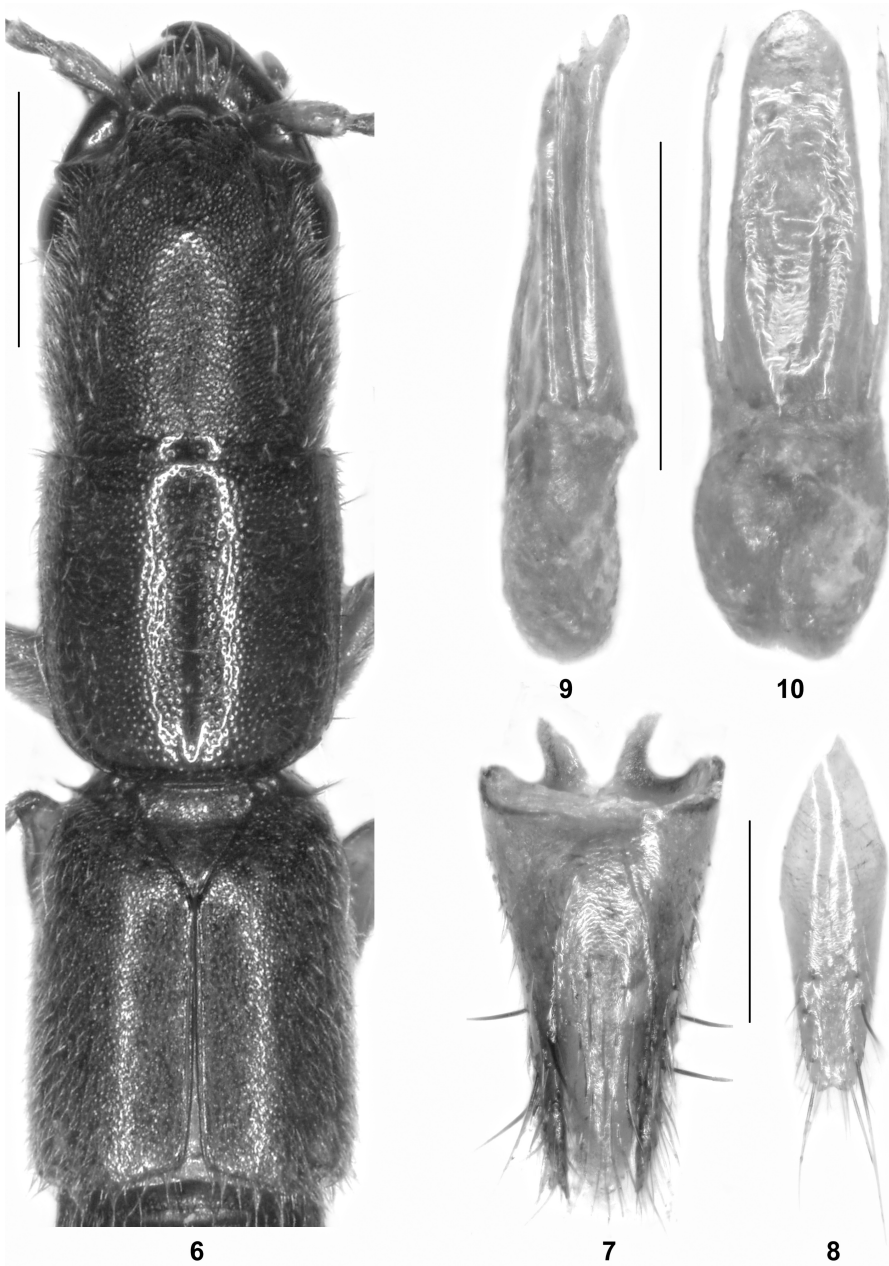
from *P. aequalis* by a broader head of subquadrangular shape (*P. aequalis*: head oblong and of suboval shape), the shape of the pronotum (*P. aequalis*: pronotum broadest posteriorly), the absence of a median impunctate band on the pronotum, and longer and broader elytra.

For illustrations of *P. socius* and *P. aequalis* see BORDONI (2015).

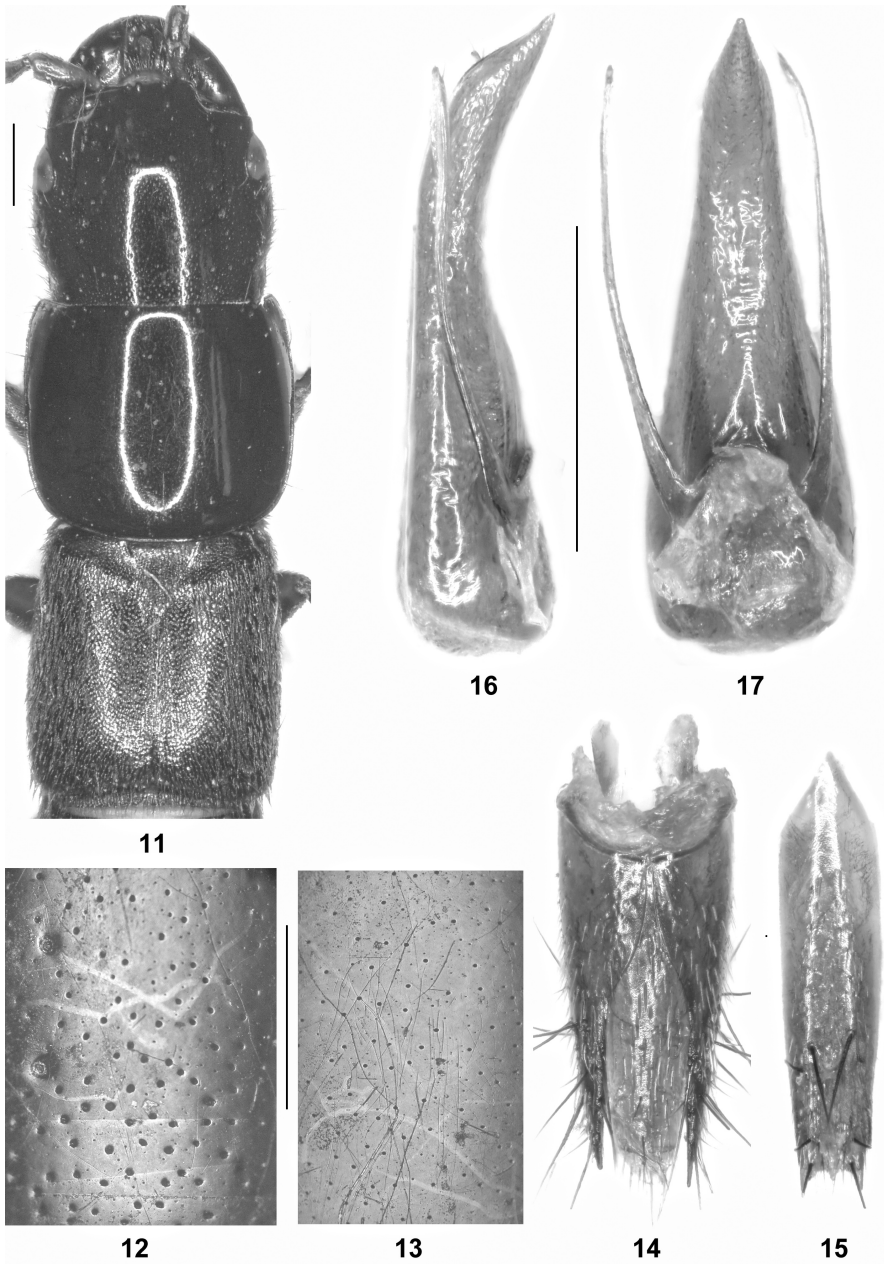
D i s t r i b u t i o n a n d n a t u r a l h i s t o r y : The type locality is situated in North Thailand at an altitude of 560 m. Additional data are not available.



Figs 1-5: *Platypsopos latitarsalis*: (1) forebody; (2) male tergites IX-X; (3) male sternite IX; (4-5) aedeagus in lateral and in ventral view. Scale bars: 1: 1.0 mm; 2-5: 0.5 mm.



Figs 6-10: *Platyprosopus rossii*: (6) forebody; (7) male tergites IX-X; (8) male sternite IX; (9-10) aedeagus in lateral and in ventral view. Scale bars: 6: 1.0 mm; 7-10: 0.5 mm.



Figs 11-17: *Platypsopos maximus*: (11) forebody; (12) median dorsal portion of head; (13) median portion of pronotum; (14) male tergites IX-X; (15) male sternite IX; (16-17) aedeagus in lateral and in ventral view. Scale bars: 11, 14-17: 1.0 mm; 12-13: 0.2 mm.

***Platyprosopus rossii* nov.sp. (Figs 6-10)**

Type material: Holotype ♂: "CAMBODIA - Kampong Chhnang prov., Kampong Chhnang env., Toul Ompel, 12°14'14"N, 104°41'15"E, light trap, 19+21.V.2018, leg. Bernardi, Kong & Rossi / Holotypus ♂ *Platyprosopus rossii* sp.n. det. V. Assing 2019" (cAss). Paratypes: 1♂, 1♀, same data as holotype (cAss); 1♂: "CAMBODIA - Kampong Chhnang prov., Kampong Chhnang env., Phum Toul Ompel, shore of branch of Tonle Sap Lake, 12°14'N, 104°41'E, light trap, 4+7.XI.2018, leg. W. Rossi" (cAss); 1♀: "CAMBODIA - Kampong Chhnang prov., Rolea Bi'er distr., Toulkrolanh vill., 12°13'31"N, 104°39'50"E, light trap, 7.XI.2018, leg. W Rossi" (cAss).

Etymology: This species is dedicated to Walter Rossi (Università dell'Aquila), who collected most of the material that this paper is based on.

Description: Body length 8.5-9.7 mm; length of forebody 4.4-4.9 mm. Coloration: head blackish-brown to black; pronotum dark-reddish to dark-brown; elytra reddish with the anterior portion somewhat darker; abdomen dark-brown to blackish-brown with the posterior margins of tergites III-VII and segments VIII-X reddish; legs reddish-yellow; antennae reddish with the apical half somewhat paler than the basal half.

Head (Fig. 6) approximately 1.15 times as long as broad; lateral margins behind eyes subparallel in dorsal view; dorsal surface with extremely dense and moderately coarse punctation, with the interstices reduced to narrow ridges, rendering the head matt; middle of dorsal surface with or without indistinct and narrow glossy patches. Eyes small, approximately half as long as postocular region in dorsal view. Antenna approximately 2.5 mm long.

Pronotum (Fig. 6) oblong, 1.05-1.15 times as long as broad and approximately as broad as head; anterior margin indistinctly concave; lateral margins parallel or weakly converging in anterior three-fourths in dorsal view; disc with moderately fine and dense punctation, without micropunctation and without dorsal series of macropunctures; disc with a narrow impunctate median band; interstices without microsculpture.

Elytra (Fig. 6) 0.77-0.85 times as long as pronotum; punctation very dense and very fine. Hind wings fully developed. Metatarsomere I as long as the combined length of metatarsomeres II and III; metatarsomeres I and II unmodified (not dilated).

Abdomen slightly narrower than elytra, with extremely dense and somewhat asperate punctation (particularly on tergites IV-VII) and with pronounced microsculpture rendering the surface matt; posterior margin of tergite VII with palisade fringe.

♂: sternite VIII with distinctly concave posterior margin; hemitergites IX and tergite X slender (Fig. 7); apices of hemitergites IX spine-shaped and bent upwards (Fig. 7); sternite IX (Fig. 8) very slender, posterior margin narrowly concave; aedeagus (Figs 9-10) 1.0 mm long; median lobe moderately broad, with semitransparent apex of broadly convex to triangular shape in ventral view; parameres not reaching apex of median lobe, each with one apical seta.

Comparative notes: *Platyprosopus rossii* is readily distinguished from other congeners known from the Oriental region by the combination of relatively small body size, a slender habitus, rather small eyes, very dense punctation of the whole body, a slender male sternite IX with a narrowly concave posterior margin, and particularly by the shape of the aedeagus.

Distribution and natural history: This species is currently known from two geographically close localities to the south of Tonle Sap Lake, Kampong Chhnang province, Cambodia. In the type locality, which is identical to that of

of several species of Paederinae (e.g., ASSING 2018a, b), *P. rossii* was collected together with *P. indicus*, *P. fraternus*, *P. socius*, and three females of an unidentified (undescribed?) species. All the specimens were collected with light traps.

***Platyprosopus maximus* nov.sp. (Figs 11-17)**

Type material: Holotype ♂: "SIERRA LEONE, Eastern Prov., Gola Rainforest N. P., nr Sileti Camp, 24.-26.XI.2015, W. Rossi / Holotypus ♂ *Platyprosopus maximus* sp.n. det. V. Assing 2017" (cAss).

Etymology: The specific epithet is the superlative of the Latin adjective magnus (large) and alludes to the enormous body size of this species.

Description: Body length 21.0 mm; length of forebody 10.0 mm. Coloration: body black, with the posterior margin of segment VII, the posterior portion of segment VIII, and the anterior portions of segments IX and X reddish; legs dark-brown; antennae dark-brown with the apical antennomeres partly slightly paler.

Head (Figs 11-12) 1.12 times as broad as long; lateral margins behind eyes subparallel in dorsal view; dorsal surface with moderately dense and more or less evenly spaced micropunctuation; interstices with minute punctuation visible only at high magnification (100 x); dorso-laterally, antero-laterally, and posteriorly with few coarse setiferous punctures; laterally with dense and moderately coarse setiferous punctures. Eyes slightly shorter than postocular region in dorsal view.

Pronotum (Figs 11, 13) 1.15 times as broad as long and 1.13 times as broad as head, broadest near anterior angles; anterior margin concave; dorsal series of punctures absent; setiferous punctures present only at margins and in antero-lateral portions; disc with fine, moderately dense, and more or less evenly spaced micropunctuation, this micropunctuation finer than that of head.

Elytra (Fig. 11) 0.75 times as long as pronotum; punctuation very dense, rather fine, and defined; pubescence short and depressed. Hind wings present. Metatarsomere I longer than the combined length of metatarsomeres II and III.

Abdomen narrower than elytra; punctuation fine and very dense on tergites III-VI, somewhat sparser and distinctly coarser on tergites VII and VIII; posterior margin of tergite VII with palisade fringe.

♂: sternite VIII with distinctly concave posterior margin; segments IX-X (Fig. 14) very slender; apices of hemitergites IX with spine-shaped extension curved upwards; sternite IX (Fig. 15) slender, posterior margin concave and laterally with a long and acute extension on either side; aedeagus (Figs 16-17) 2.0 mm long; median lobe slender and apically acute both in lateral and in ventral view; parameres not reaching apex of median lobe, each with two long apical setae.

Comparative notes: *Platyprosopus maximus* is readily distinguished from all described African congeners by much larger body size alone. The largest previously described species from the Afrotropical region is *P. ghidinii* CERRUTI, 1950 (15.5 mm) from Ethiopia, which is additionally distinguished from *P. maximus* by reddish-brown coloration of the body. There is a female of similar size as *P. maximus* from South Africa in my collection, but this specimen evidently belongs to an undescribed species. In habitus, coloration, punctuation, and the general structure of the male primary and secondary sexual characters, *P. maximus* somewhat resembles *P. indicus* from the Oriental region, suggesting that both species belong to the same species group. It is

distinguished from this species by significantly larger body size, a more robust body, a more transverse pronotum, darker legs, and a much larger aedeagus with an apically more acute median lobe and with relatively shorter parameres.

D i s t r i b u t i o n : Gola Rainforest National Park is situated in the south of Sierra Leone, close to the border with Liberia. Additional data are not available.

Acknowledgement

I am indebted to Walter Rossi (Università dell'Aquila, Italy) for the generous gift of Staphylinidae from Cambodia and Sierra Leone, including the type material of two of the species described in the present paper.

Zusammenfassung

Drei Arten der Gattung *Platyprosopus* MANNERHEIM, 1830 werden beschrieben und abgebildet: *P. latitarsalis* nov.sp. (Thailand); *P. rossii* nov.sp. (Kambodscha); *P. maximus* nov.sp. (Sierra Leone). Weitere Nachweise von drei Arten, mehrheitlich aus Kambodscha, werden gemeldet, darunter zwei Erstnachweise.

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