

**New species of the genus *Dolichoctis* Schmidt-Göbel from the  
Papuan Subregion and Oriental Region  
(Coleoptera: Carabidae: Lebiini)**

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**Taxonomy, descriptions, Coleoptera, Carabidae, Lebiini, *Dolichoctis*, Thailand, New Guinea, New Ireland, Aru Islands, Tanimbar Islands**

**Abstract.** Five new species of the lebiine genus *Dolichoctis* Schmidt-Goebel, 1846 from the Papuan Subregion and from Thailand are described: Of the nominate subgenus *D. skalei* from southern Thailand, and of the subgenus *Spinidolichoctis* Baehr, 1999, *D. ariensis* from Aru Islands, *D. ovipennis* from New Ireland, *D. parallelipennis* from Papua New Guinea, and *D. yamdenae* from Tenimber Islands. For the new species differential diagnoses are provided which distinguish them from related or similarly shaped species. They are also inserted into the most recent keys to the genus *Dolichoctis* (Baehr 2013a, c).

## INTRODUCTION

Through courtesy of A. Drumont (Brussels), M. Häckel (Prague), A. Skale (Bayreuth), and A. Weigel (Pössneck) I received for identification a number of carabid beetles which include five new species of the lebiine carabid genus *Dolichoctis* Schmidt-Goebel, 1846, collected in different parts of the Papuan Subregion and in Thailand. Although most species are represented by the holotype only, they are sufficiently different from any other species to be described. This paper is regarded a supplement to the partial revision of the subgenus *Dolichoctis* s. str. (Baehr 2013a) and the revision (with additions) of the subgenus *Spinidolichoctis* Baehr, 1999 (Baehr 1999, 2013c).

The lebiine genus *Dolichoctis* is distributed from India and Nepal in the northwest through the whole of tropical Asia to Japan in the east, and it covers the whole Indonesian and Philippine insular belts, New Guinea, the Bismarck Archipelago, Solomon Islands, and northeastern Australia. Baehr (1999) revised the species occurring in New Guinea, Australia, and surrounding areas and described additional new species and communicated additional records (Baehr 2003a, b, 2006, 2007, 2013c). I also revised the species related to *Dolichoctis striata* Schmidt-Göbel, 1846 of the nominate subgenus (Baehr 2013a, 2013b). According to these papers the genus is extremely rich in species as well in the Oriental Region, where most species of the nominate subgenus occur, as in the Papuan Subregion, where species of the subgenera *Spinidolichoctis* Baehr and *Papuadolichoctis* Baehr, 1999 dominate. Both latter subgenera are characterized by the angulate or spined apex of the elytra. The inarmate species of the nominate subgenus, however, are but sparsely represented in the Papuan Subregion and in Australia. In South Asia, however, the genus includes numerous species

of the nominate subgenus and those species not included in the papers mentioned above likewise need a thorough revision.

Specimens of *Dolichoctis*, including those of the subgenus *Spinidolichoctis*, preferably inhabit tropical rain forest where they have been sampled from the bark of logs, by fogging logs and standing trees, and at light. They seem to belong to the commonest carabid species in their habitats, but nevertheless little is known about their actual habits and almost nothing about diet and reproduction.

Until present, about 75 species and subspecies of the nominate subgenus have been described, 43 of the subgenus *Spinidolichoctis*, and 8 species of the subgenus *Papuadolichoctis* (Lorenz 2005). Most species of *Spinidolichoctis* and all species of *Papuadolichoctis* occur in the Papuan Subregion.

#### MATERIAL AND METHODS

Format and style of the descriptions, as well as measurements and ratios follow those used in my main revisions (Baehr 1999, 2013a). Measurements were made under a stereo microscope using an ocular micrometer. Length has been measured from the apical margin of the labrum to the apex of the elytra including the apical spines. Length of prothorax has been taken along midline, width of base of prothorax at the position of the posterior marginal seta, width of apex between the most advanced points of the apex.

For dissection of the male genitalia the specimens were weakened in a moist jar for a night, then the genitalia were cleaned for a short while in hot 4% KOH. The habitus photographs were obtained with a digital camera using ProgRes CapturePro 2.6 and AutoMontage and subsequently were worked with Corel Photo Paint X4.

The types of the new species are located in the working collection of the author in Zoologische Staatssammlung, München (CBM), Institut Royal des Sciences Naturelles de Belgique, Brussels (IRSNB), and Collection of M. Häckel. Prague (CHP).

#### ABBREVIATIONS

- NG - New Guinea
- NI - New Ireland
- PI - Papua Indonesia (Western New Guinea)
- PNG - Papua New Guinea
- c. - central
- e. - eastern
- n. - northern
- ne. - north-eastern
- nw. - north-western
- s. - southern
- se. - south-eastern
- sw. - south-western
- w. - western
- > - larger or longer than
- < - smaller or shorter than

## Genus *Dolichoctis* Schmidt-Göbel, 1846

*Dolichoctis* Schmidt-Göbel, 1846, 62. - Darlington 1968, 124; Moore et al. 1987, 293; Baehr 1999, 124; 2003a, 2; 2003b, 13; 2006, 39; 2007, 79; 2013a: 135; 2013c: 150; Lorenz 2005, 459.

**Type species.** *Dolichoctis striata* Schmidt-Goebel, 1846, by monotypy.

**Diagnosis.** For extensive diagnosis of the genus see the revisions (Baehr 1999: 124, 2013a: 150). This genus is very polymorphic and covers as well vividly coloured as uniformly black species, those with unarmed elytra, and species that bear more or less elongate apical spines, and even chetotaxy of head and pronotum is varied. All species, however, are characterized by their minute setiferous elytral punctures that invariably number only two, and by denticulate tarsal claws.

### Subgenus *Dolichoctis* Schmidt-Goebel, 1846

*Dolichoctis* Schmidt-Goebel, 1846, 62. - Lorenz 2005, 459; Baehr 2013a: 135.

**Diagnosis.** As for genus; apex of elytra always unarmed; head with two supraorbital setae; pronotum with both marginal setae, or with only the basal one.

#### *Dolichoctis skalei* sp. nov.

(Figs. 1, 5, 14)

**Type material.** Holotype (♂): “S-THAILAND, Phang-nha Prov. / Thimung distr., 5 km S Khao Lak / 08°36'N, 98°15'E, 10-100 m / 01-14.VIII.2014, leg. A. Skale“, (CBM).

**Description.** Measurements. Length: 4.5 mm; width: 2.1 mm. Ratios. Width/length of prothorax: 1.79; width base/apex of prothorax: 1.24; width prothorax/head: 1.59; length/width of elytra: 1.39; length elytra/prothorax: 3.5.

Colour (Fig. 14). Head and pronotum reddish-piceous, elytra dark piceous, lateral margin of pronotum widely, of elytra narrowly pale red. Elytra quadrimaculate, the spots of different size and shape, pale red, not well delimited. The anterior spot smaller, about rectangular and slightly elongate, on 6<sup>th</sup> - 8<sup>th</sup> intervals, the posterior spot about circular, on 2<sup>nd</sup> - 7<sup>th</sup> intervals. Antenna and palpi yellow; legs piceous, but apex of tibiae and tarsi yellow. Lower surface piceous to reddish-piceous.

Head (Fig. 14). Large, but much narrower than pronotum. Eye large, convex, laterad far produced, orbit very short, oblique. Antenna moderately elongate, well surpassing the base of the pronotum, median antennomeres c. 1.75 x as long as wide. Surface with dense and coarse, isodiametric microreticulation.

Pronotum (Figs. 5, 14). Wide, not cordiform, with moderately wide base. Apex deeply excised, apical angle produced but widely rounded. Lateral margin convex throughout, not sinuate; at the site of the anterior marginal seta not angulate. Basal angle very obtuse, c. 120°. Base in middle straight, laterally slightly oblique. Dorsal surface rather depressed. Median line well impressed and almost complete. Anterior transverse sulcus shallow, only in middle distinct, the posterior sulcus well impressed. Lateral marginal channel very wide,

deplanate, not or little widened towards base. Anterior marginal seta situated in middle, at the widest diameter, posterior marginal seta situated slightly in front of the basal angle. Disk with extremely fine, superficial, transverse microreticulation which in some areas is almost invisible, with fairly coarse, dense, irregularly transverse striae, surface moderately glossy.

Elytra (Fig. 14). Short and wide, little widened apicad, lateral margin in middle slightly convex, dorsal surface convex. Humerus not projected, evenly convex. Lateral apical angle evenly rounded, apical margin oblique, very slightly sinuate, slightly incurved towards suture. Marginal channel narrow. Striae impressed, barely punctulate. Intervals slightly convex, with fine, somewhat superficial but distinct microreticulation that is composed of very transverse meshes, apparently impunctate. 3<sup>rd</sup> interval bipunctate, punctures situated in middle of interval, the anterior one slightly behind middle, the posterior one at apical fourth. Surface rather glossy. Metathoracic wings fully developed.

Lower surface. Metepisternum moderately elongate, c 1.75 x as long as wide. Prosternum and mesosternum with short, rather dense, erect pilosity, abdomen at base with sparse and short pilosity which becomes even sparser apicad. Terminal abdominal sternum in male bisetose.

Male genitalia (Fig. 1). Genital ring narrow, almost parallel-sided, slightly asymmetric, with wide, deep basal plate and rather wide, oblique apex. Aedeagus strongly sclerotized, wide, straight, orificium moderately elongate, situated largely on the left side. Lower surface straight, near apex slightly concave. Apex very narrow and elongate, turned upwards and slightly to the right side. Internal sac with 4 narrow and elongate spines and with several faintly denticulate folds. Parameres very dissimilar in size, somewhat odd shaped, the left one fairly stout, with oblique-convex apex, the right one with narrow and elongate apical part.

Female gonocoxites. Not recorded

**Variability.** Unknown.

**Diagnosis.** Characterized by piceous colour, wide pronotum with evenly convex lateral margin and very obtuse basal angle and very wide marginal explanation, rather coarsely striolate pronotum, short and wide, laterally convex, quadrimaculate elytra with an almost circular apical spot, rather distinct, transverse meshes on the elytra, and an odd shaped aedeagus with narrow, elongate, upturned apex and several elongate spines in the internal sac.

**Collecting circumstances.** Not recorded.

**Relationships.** In body shape, particularly shape of pronotum, quite similar to *D. platycollis* Baehr, 2014, but the aedeagus is quite different.

**Etymology.** The name is a patronym in honour of the collector, my friend Andre Skale.

**Distribution.** Southern Thailand. Known only from type locality.

## Subgenus *Spinidolichoctis* Baehr, 1999

*Spinidolichoctis* Baehr, 1999, 129. - Lorenz 2005, 450; Baehr 2013c: 150.

**Type species.** *Dolichoctis aculeata* Chaudoir, 1869, by original designation.

**Diagnosis.** The subgenus is characterized by the dentate or spinose elytral apex in combination with absence of the anterior marginal pronotal seta, very common absence of the anterior supraorbital seta, either uniformly black colour, or, quite rarely, indistinctly maculate elytra, and usually rather wide and depressed body. The subgenus is quite homogeneous as well in external as in genitalic characters. The aedeagus usually lacks any strongly sclerotized spines or teeth.

### *Dolichoctis aruensis* sp. nov.

(Figs. 6, 10, 15)

**Type material.** Holotype (♀): "INDONESIA. or. ARU / Warmar Isl., vic. Dobo / S5°47'54"/E134°13'0" / 14.-17. II.2011 / leg. A. Weigel #11" (CBM).

**Description.** Measurements. Length: 5.2 mm; width: 2.4 mm. Ratios. Width/length of prothorax: 1.67; width base/apex of prothorax: 1.42; width prothorax/head: 1.43; length/width of elytra: 1.51; length elytra/prothorax: 4.0.

Colour (Fig. 15). Black, margins of pronotum and elytra very inconspicuously paler. Palpi and antenna pale red, legs reddish-piceous, apex of tibiae and tarsi pale red. Elytra with an inconspicuous, slightly oval shaped, red spot in the apical third that covers the 2<sup>nd</sup> - 4<sup>th</sup> intervals. Lower surface dark piceous to almost black.

Head (Fig. 15). Head rather wide, but much narrower than pronotum. Eye large, but not semicircular, laterad well protruded, orbit very short, oblique. Both punctures of the supraorbital setae present, but because all setae are broken, it is impossible to say whether the anterior seta is present, or not. Both antennae broken from 4<sup>th</sup> antennomeres. Surface with fine and slightly superficial, isodiametric microreticulation, with a few fine punctures in middle of the anterior part of frons, fairly glossy.

Pronotum (Figs 6, 15). Rather wide, depressed, apex comparatively narrow. Lateral margin slightly convex, apicad incurved, in basal half slightly oblique and almost straight, extremely faintly concave. Apex deeply excised, base of excision almost transverse, apical angle produced but shortly rounded. Basal angle angulate, slightly obtuse at tip, almost rectangular, base straight, laterally slightly oblique. Apex margined throughout, base not margined. Anterior transverse sulcus absent, posterior sulcus very shallow. Median line well impressed, almost reaching apex and base, basal grooves shallow, about linear, almost straight. Lateral explanation in apical half very narrow, basad widened and deplanate. Anterior lateral seta absent, posterior seta situated at basal angle. Surface almost devoid of transverse wrinkles, with some extremely fine punctures, with fine and extremely superficial microreticulation that is composed of transverse lines, glossy but not iridescent.

Elytra (Figs. 10, 15). Elongate, oval-shaped, widest in middle, lateral margin almost evenly convex, dorsal surface rather convex. Lateral apical angle angulate, sutural angle

slightly dehiscent, shortly dentate. Striae complete, well impressed, not crenulate, intervals slightly convex, apparently impunctate. Two fine discal punctures situated behind middle and at apical fifth. The anterior puncture situated in middle of 3<sup>rd</sup> interval, the posterior one near 2<sup>nd</sup> stria. Surface with only traces of extremely fine and superficial microreticulation that is composed of transverse lines, and which is barely visible even at very high magnification, glossy and slightly iridescent. Metathoracic wings fully developed.

Lower surface. Metepisternum moderately elongate, c 1.8 x as long as wide. Prosternum and mesosternum with short, rather dense, erect pilosity, abdomen at base with sparse and short pilosity which becomes even sparser apicad. Terminal abdominal sternum in female bisetose.

Male genitalia. Unknown

Female gonocoxites. As usual in subgenus: Gonocoxite 1 asetose at apical margin, gonocoxite 2 with one elongate dorso-median and two elongate ventro-lateral ensiform setae, but without a subapical nematiform seta.

**Variability.** Unknown.

**Diagnosis.** Medium sized, rather elongate species, characterized by black colour but unimaculate elytra, wide basis of the pronotum bearing a narrow lateral explanation, elongate elytra with short, not spinose but only dentiform apex, and deep elytral striae. Distinguished from both described maculate species of *Spinidolichoctis* by shorter elytral apex and very differently shaped pronotum.

**Collecting circumstances.** Not recorded.

**Relationships.** Uncertain. Body shape quite different from both maculate species of *Spinidolichoctis*, also from those immaculate species which possess a not spinose but only dentate elytral apex.

**Etymology.** The name refers to the provenance of this species, Aru Islands off the south-west coast of New Guinea.

**Distribution.** Warmar Island, Aru Islands. Known only from type locality.

***Dolichoctis ovipennis* sp. nov.**

(Figs. 2, 7, 11, 16)

**Type material.** Holotype (♂): "PAPUA-NEUGUINEA / New Ireland, Hans- / Meyer Range, 60km SE / Namatanai, Hirudan River, S04°00'41" / E152°05'79", 8.III. / 2000, leg. A. Weigel" (CBM).

**Description.** Measurements. Length: 5.6 mm; width: 2.7 mm. Ratios. Width/length of prothorax: 1.69; width base/apex of prothorax: 1.32; width prothorax/head: 1.37; length/width of elytra: 1.35; length elytra/prothorax: 3.7.

Colour (Fig. 16). Black, also margins of pronotum and elytra black. Palpi reddish-piceous with paler apex, four basal antennomeres pale red, rest brown; legs black, on upper surfaces piceous, tarsi pale red.

Head (Fig. 16). Head rather wide, but much narrower than pronotum. Eye large, but not semicircular, laterad well protruded, orbit very short, oblique. Both punctures of the supraorbital setae present, but because all setae are broken, it is impossible to say whether

the anterior seta is present, or not. Antenna short, not attaining the base of the pronotum, median antennomeres c. 1.5 x as long as wide. Surface with fine and slightly superficial, isodiametric microreticulation, with scattered, very fine punctures, fairly glossy.

Pronotum (Figs. 7, 16). Rather wide, depressed, apex rather wide. Lateral margin anteriorly convex, apicad incurved, in basal fourth markedly sinuate. Apex deeply excised, excision almost transverse, apical angle produced but rounded. Basal angle slightly less than rectangular, acute at tip, base straight, laterally barely oblique. Apex margined throughout, base not margined. Anterior transverse sulcus absent, posterior sulcus extremely shallow. Median line well impressed, almost reaching apex and base, basal grooves very shallow, barely perceptible. Lateral explanation in apical three fourths very narrow, only close to base widened and deplanate. Anterior lateral seta absent, posterior seta situated at basal angle. Surface devoid of transverse wrinkles, with scattered, extremely fine punctures and with fine and extremely superficial, even at high magnification barely perceptible microreticulation that is composed of transverse lines, glossy but not iridescent.

Elytra (Figs. 11, 16). Short, markedly oval-shaped, widest in middle, lateral margin almost evenly convex, dorsal surface markedly convex. Lateral apical angle obtusely angulate, sutural angle slightly dehiscent, shortly spinose. Striae complete but not impressed, weak, faintly punctate, intervals absolutely depressed, with a very inconspicuous row of fine punctures in middle. Two fine discal punctures situated at middle and at apical fourth. The anterior puncture situated in middle of 3<sup>rd</sup> interval, the posterior one near the 2<sup>nd</sup> stria. Surface only here and there with very inconspicuous traces of extremely fine and superficial transverse lines which are barely visible even at very high magnification, glossy and slightly iridescent. Metathoracic wings fully developed.

Lower surface. Metepisternum moderately elongate, c 1.6 x as long as wide. Prosternum and mesosternum with short, rather sparse, erect pilosity, abdomen at base with sparse and short pilosity. Terminal abdominal sternum in male bisetose.

Male genitalia (Fig. 2). Genital ring very wide, convex, slightly asymmetric, with wide, deep basal plate and narrow apex. Aedeagus moderately large, laterally sinuate, lower surface slightly concave; apex moderately short, obtusely triangular; orificium short, situated quite symmetric on the upper surface; internal sac rather complexly folded, with a narrow, denticulate plate in upper apical part that becomes more denticulate apicad; parameres very dissimilar, left paramere moderately stout, with obliquely rounded apex; right paramere small, somewhat axe-shaped.

Female gonocoxites. Not recorded.

**Variability.** Unknown.

**Diagnosis.** Medium sized, black species, characterized by wide, laterally near base deeply sinuate pronotum bearing a very narrow lateral explanation, oviform, dorsally very convex elytra with fine, barely impressed striae and a short-spined apex. Distinguished from any similarly shaped species, e.g. *D. aculeata* Chaudoir, 1869 and related species, by the very short elytral spines.

**Collecting circumstances.** Not recorded.

**Relationships.** With respect to body shape rather similar to *D. aculeata* Chaudoir, but the apex of the elytra is very different.

**Etymology.** The name refers to the dorsal and lateral convex, oviform elytra of this species.

**Distribution.** New Ireland. Known only from type locality.

*Dolichoctis parallelepennis* sp. nov.

(Figs. 3, 8, 12, 17)

**Type material.** Holotype (♂): "PAPUA NEW GUINEA / Canopy Mission / Madang Province / Baiteta Light XJ.-1995 / Leg. Olivier Missa", (IRSNB).

**Description.** Measurements. Length: 6.05 mm; width: 2.6 mm. Ratios. Width/length of prothorax: 1.57; width base/apex of prothorax: 1.31; width prothorax/head: 1.34; length/width of elytra: 1.50; length elytra/prothorax: 3.75.

Colour (Fig. 17). Very dark piceous to almost black, margins of pronotum and elytra not translucent. Palpi and antenna pale red, legs dark red, apex of tibiae and tarsi pale red. Apical spine of elytra dark. Lower surface piceous, in middle reddish to reddish-piceous.

Head (Fig. 17). Head rather wide, but much narrower than pronotum. Frons with two shallow, oblique sulci and a small, triangular fovea in middle. Eye very large, almost semicircular, laterad markedly protruded, orbit barely perceptible. Only the posterior supraorbital seta present, the pore of the anterior seta very small and inconspicuous. Antenna short, just attaining the base of the pronotum, median antennomeres c. 1.3 x as long as wide. Surface with fine and slightly superficial, isodiametric microreticulation, apparently without punctures, fairly glossy.

Pronotum (Figs. 8, 17). Rather wide, depressed, apex rather wide. Lateral margin convex throughout, apicad incurved, near base not at all sinuate. Apex moderately excised, excision rather regularly concave, apical angle produced but rounded. Basal angle slightly obtuse, c. 115°, base straight, laterally oblique. Apex margined throughout, base not margined. Anterior transverse sulcus absent, posterior sulcus extremely shallow. Median line well impressed, almost reaching apex and base, basal grooves very shallow, barely perceptible. Lateral explanation in apical half rather narrow, in basal half widened and deplanate. Anterior lateral seta absent, posterior seta situated at basal angle. Surface with some very fine transverse wrinkles, with scattered, extremely fine punctures, and with fine and superficial microreticulation that is composed of transverse lines, glossy but not iridescent.

Elytra (Figs. 12, 17). Fairly elongate, barely oval-shaped, widest in middle, lateral margins in middle almost straight, dorsal surface moderately convex. Lateral apical angle obtusely angulate, sutural angle slightly dehiscent, with elongate, straight, dark spines. Striae rather deeply impressed, not punctate, intervals slightly convex, apparently not punctate. Two fine discal punctures situated behind middle and at apical fifth. The anterior puncture situated in middle of 3<sup>rd</sup> interval, the posterior one near the 2<sup>nd</sup> stria. Surface with very fine and superficial microreticulation that is composed of dense transverse lines, glossy but not iridescent. Metathoracic wings fully developed.

Lower surface. Metepisternum rather elongate, c. 1.8 x as long as wide. Prosternum and mesosternum with short, rather sparse, erect pilosity, abdomen at base with sparse and short pilosity. Terminal abdominal sternum in male bisetose.

Male genitalia (Fig. 3). Genital ring very wide, convex, slightly asymmetric, with wide, deep basal plate and narrow apex. Aedeagus moderately large, straight, lower surface in

basal half slightly concave, in apical half straight; apex moderately short, obtusely triangular; orificium short, situated quite symmetric on upper surface; internal sac rather complexly folded, with a narrow, denticulate plate in upper apical part that becomes more distinctly denticulate apicad; parameres very dissimilar, left paramere elongate, comparatively narrow, with obliquely rounded apex; right paramere small, somewhat axe-shaped.

Female gonocoxites. Not recorded.

**Variability.** Unknown.

**Diagnosis.** Medium sized, dark piceous species, characterized by very large, much protruded eye, wide pronotum with convex margin, rather deep, impunctate elytral striae, and fairly elongate, dark elytral spines. Distinguished from similarly shaped and coloured species mainly by the large, protruded eye.

**Collecting circumstances.** Holotype collected at light in the canopy of rain forest.

**Relationships.** The species belongs to a group of quite similar species that are characterized by the evenly convex lateral margin of the pronotum. It is, however, distinguished by the exceptionally large, protruded eye and the short, quadrate elytra bearing elongate apical spines.

**Etymology.** The name refers to the rather parallel-sided elytra.

**Distribution.** Northern Papua New Guinea. Known only from type locality.

***Dolichoctis yamdenae* sp. nov.**

(Figs. 4, 9, 13, 18)

**Type material.** Holotype (♂): "INDOAUSTR.E-INDONESIA / Tanimbar isl. Yamdena is. / 20 km NE Saumlaki:Lorolum / vill. 150 m, XII-06, lgt S. Jakl", (CHP). Paratype: (1 ♀): the same data, (CBM).

**Description.** Measurements. Length: 5.7-5.8 mm; width: 2.55-2.6 mm. Ratios. Width/length of prothorax: 1.61-1.62; width base/apex of prothorax: 1.39-1.40; width prothorax/head: 1.38-1.39; length/width of elytra: 1.48-1.50; length elytra/prothorax: 4.0-4.1.

Colour (Fig. 18). Dark piceous but pronotum slightly paler. Lateral margin of pronotum widely red translucent, margin of elytra narrowly translucent. Palpi and antenna pale red, legs dirty yellow, but outer surface of tibiae darkened. Apical spine of elytra red. Lower surface piceous, in middle dark red to reddish-piceous.

Head (Fig. 18). Head rather wide, but much narrower than pronotum. Eye large, but not semicircular, laterad moderately protruded, orbit short but distinct, oblique. Both punctures of the supraorbital setae present, but as all setae are broken, it is impossible to say whether the anterior seta is present, or not. Antenna rather short, slightly surpassing the base of the pronotum, median antennomeres c. 1.6 x as long as wide. Surface with rather fine, slightly superficial, isodiametric microreticulation, apparently impunctate, glossy.

Pronotum (Figs. 9, 18). Rather wide, depressed, apex moderately wide. Lateral margin anteriorly convex, apicad incurved, near base shortly sinuate. Apex rather deeply excised, excision almost transverse, apical angle produced but rounded. Basal angle almost rectangular, c. 95°, slightly obtuse at tip, base straight, laterally slightly oblique. Apex

margined throughout, base not margined. Anterior transverse sulcus absent except in middle, posterior sulcus shallow. Median line well impressed, almost reaching apex and base, basal grooves shallow, about circular. Lateral explanation except near apex rather wide and deplanate, basad even widened. Anterior lateral seta absent, posterior seta situated at basal angle. Surface almost devoid of transverse wrinkles, with scattered, very fine punctures and with fine and extremely superficial, microreticulation that is composed of transverse lines, glossy but not iridescent.

Elytra (Figs. 13, 18). Elongate, slightly oval-shaped, widest in middle, lateral margins almost evenly convex, dorsal surface rather convex. Lateral apical angle angulate, sutural angle slightly dehiscent, shortly spinose. Striae deeply impressed, almost sulcate, impunctate, but intervals absolutely depressed, apparently impunctate. Two fine discal punctures situated behind middle and at apical fifth. The anterior puncture situated in middle of 3<sup>rd</sup> interval, the posterior one near the 2<sup>nd</sup> stria. Surface with extremely inconspicuous traces of fine and superficial transverse lines, which are difficult to see even at high magnification, glossy and slightly iridescent. Metathoracic wings fully developed.

Lower surface. Metepisternum moderately elongate, c 1.6 x as long as wide. Prosternum and mesosternum with short, rather sparse, erect pilosity, abdomen at base with sparse and short pilosity. Terminal abdominal sternum in both sexes bisetose.

Lower surface. Metepisternum moderately elongate, c 1.8 x as long as wide. Prosternum and mesosternum with short, rather dense, erect pilosity, abdomen at base with sparse and short pilosity which apicad becomes even sparser. Terminal abdominal sternum in female bisetose.

Male genitalia (Fig. 4). Genital ring wide, moderately asymmetric, with wide, deep basal plate and rather narrow, oblique apex; aedeagus comparatively small, laterally slightly sinuate, lower surface evenly concave; apex rather elongate, triangular, straight; orificium short, quite symmetric on upper surface; internal sac rather complexly folded, with a narrow, sinuate denticulate fold in upper apical part; parameres very dissimilar, left paramere large and elongate, with obliquely rounded apex; right paramere small, somewhat axe-shaped.

Female gonocoxites. As usual in subgenus. Gonocoxite 1 asetose at apical margin, gonocoxite 2 with one elongate dorso-median and two elongate ventro-lateral ensiform setae but without a subapical nematiform seta.

Variation. Unknown.

**Diagnosis.** Medium sized, dark piceous species, characterized by wide pronotum with basally oblique, about straight lateral margin and wide lateral explanation, deeply impressed elytral striae but depressed intervals, and short, red elytral spines. Distinguished from similarly shaped and coloured species by large but only moderately protruded eye, not perceptibly sinuate lateral pronotal margin, yellow femora, and the short, red elytral spines.

**Collecting circumstances.** Not recorded.

**Relationships.** Uncertain, distinguished from all similarly shaped species by combination of character states as mentioned in the diagnosis.

**Etymology.** The name refers to the provenance of this species, Yamdena Island of Tenimber Islands, off the south-west coast of New Guinea.

**Distribution.** Yamdena Island, Tenimber Islands. Known only from type locality.

## RECOGNITION

The new species are inserted into the keys of Baehr (2013a) for parts of the nominate subgenus and Baehr (2013c) for the subgenus *Spinidolichoctis*. For better use, numbers of figures from previous papers are introduced as **B99** (Baehr 1999), **B03a** (Baehr 2003a), **B06** (Baehr 2006), **B07** (Baehr 2007) **B13a** (Baehr 2013a), and **B13c** (Baehr 2013c). For the Papuan species of the subgenus *Papuadolichoctis* Baehr, 1999 the key in Baehr (2006) still applies.

*Dolichoctis skalei* can be inserted in the key in Baehr (2013a) at couplet 48 which must be altered as follows

48. Pronotum with evenly curved lateral margin, barely perceptible lateral angle, and wide and deep marginal channel; basal angle obtuse (Fig. 4, **B13a** figs 58, 79, 85); aedeagus either with four elongate teeth and narrow and elongate, upturned and asymmetric apex (Fig. 1), or with two or three spines or teeth which possess distinct basal plates (**B13a** figs 33, 38), or without teeth, but with wide, slightly upturned, and asymmetrically obtuse apex (**B13a** fig. 15).....49.
- Pronotum with lateral angle usually distinct, lateral margin in basal half usually straight or slightly excised, marginal channel less wide and deep, and basal angle less obtuse (**B13a** figs 41, 42, 44, 46-48, 50, 57, 60, 62, 63, 67, 70, 71, 72); aedeagus differently shaped **B13a** figs 2, 4-6, 8, 10, 14, 17, 19, 20, 22, 25, 26, 27) ..... 51.
49. Posterior elytra spot usually large (Fig. 13, **B13a** fig. 79), aedeagus either with narrow and elongate, upturned and asymmetric apex and four elongate spines (Fig. 1), or with narrow, bidentate, asymmetrically curved apex and three small spines which possess distinct basal plates (**B13a** fig. 33). s. Thailand, n. Borneo ..... 49a.
- Posterior elytra spot usually smaller (**B13a** figs 58, 85); elytral striae well impressed, intervals distinctly convex; aedeagus either with obtusely triangular apex and two large spines (**B13a** fig. 38), or with wide, slightly upturned, asymmetrically obtuse apex and without distinct spines (**B13a** fig. 15). Burma, n.Thailand, Philippines..... 50.
- 49a. Elytral striae little impressed, intervals depressed; aedeagus with narrow, bidentate, asymmetrically curved apex, internal sac with three small spines which possess distinct basal plates (**B13a** fig. 33). n.Borneo.....  
.....*dentifera* Baehr, 2013
- Elytral striae well impressed, intervals perceptibly convex; aedeagus with narrow and elongate, upturned and asymmetric apex and four elongate spines (Fig. 1). s.Thailand.....*skalei* sp. n.
50. As in Baehr (2013a).

*Dolichoctis aruensis* can be inserted in the key in Baehr (2013c) at couplet 4 which must be altered as follows:

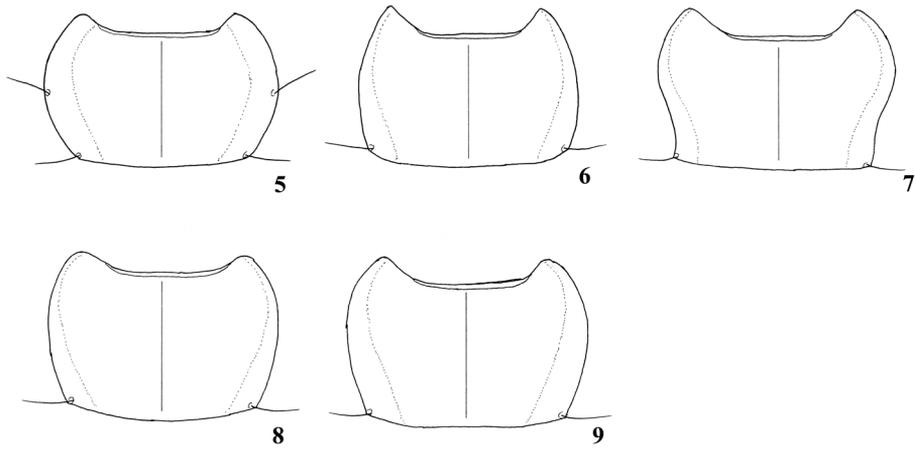
3. Elytra with reddish sutural stripe. NG..... *suturalis* Darlington, 1968  
- Elytra bimaclate in apical half..... 4.
4. Base of pronotum very wide (Fig. 5), apex of elytra only dentate, not spinose (Fig. 9). Aru Is... *aruensis* sp. n.  
- Base of pronotum narrower (**B99** figs 49, 50; **B06** fig. 10); apex of elytra spinose ..... 4a.
- 4a. Pronotum narrower, cordiform, without distinct reddish margins, basal angles almost rectangular (**B99** Fig. 49; **B06** Fig. 10); elytral spots broadly joined at suture, forming a common elliptical transverse spot (**B99** fig. 102) ..... 5.
- Pronotum wider, laterally evenly convex, with distinct reddish margins, basal angles obtuse (**B99** Fig. 50); elytral spots separated at suture, somewhat irregularly shaped (**B99** Fig. 103). e.PI..... *riedeli* Baehr, 1999
5. Pronotum narrower, basal angles almost rectangular (**B99** Fig. 49); microreticulation of head distinct, whole surface much less glossy. w.PI..... *angustemaculata angustemaculata* Baehr, 1999  
- Pronotum wider, basal angles more obtuse (**B06** Fig. 10); microreticulation of head weak, whole surface remarkably glossy. ne. PNG..... *angustemaculata glabrata* Baehr, 2006

*Dolichoctis ovipennis* can be inserted in the key in Baehr (2013c) at couplet 8 which must be altered as follows:

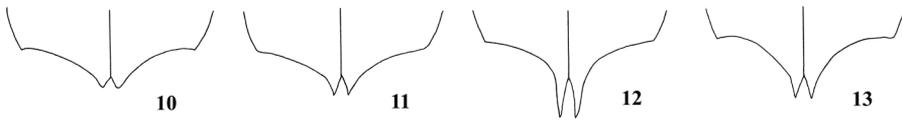
8. Sutural angle of elytra only dentate or very shortly aculeate (Fig. 10: **B99** fig. 62; **B03** fig. 5, **B13c** fig. 3H) 9.
  - Sutural angle of elytra distinctly aculeate (**B99** figs 59, 60, 63-77; **B06** figs 21-28; **B07** figs 8-10) ..... 12.
9. Elytra rather quadrate; pronotum narrow and cordiform, marginal channel narrow throughout, little widened towards base (**B99** fig. 32). NG..... *dentata* Darlington, 1968
  - Elytra oval-shaped (Fig. 15; **B03** fig. 6); pronotum wider, cordiform or not, marginal channel various (Fig. 6; **B03** fig. 4; **B06** fig. 16) ..... 9a.
- 9a. Pronotum with narrow marginal sulcus, markedly sinuate near base (Fig. 6); elytra dorsally very convex, with very fine striae (Fig. 15); antenna distinctly darker from 5<sup>th</sup> antennomere. NI..... *ovipennis* sp. n.
  - Pronotum with wide marginal sulcus (**B03** fig. 4; **B06** fig. 16; **B13c** fig. 2H); elytra dorsally less convex, with deep striae; antenna completely yellow..... 10.
10. As in Baehr (2013c).



Figs. 1-4. Male aedeagus, left side, lower surface, left and right parameres, genital ring: 1- *Dolichoctis skalei* sp. nov.; 2- *D. ovipennis* sp. nov.; 3- *D. parallelipennis* sp. nov.; 4- *D. yamdenae* sp. nov. Scale bars: 0.25 m.



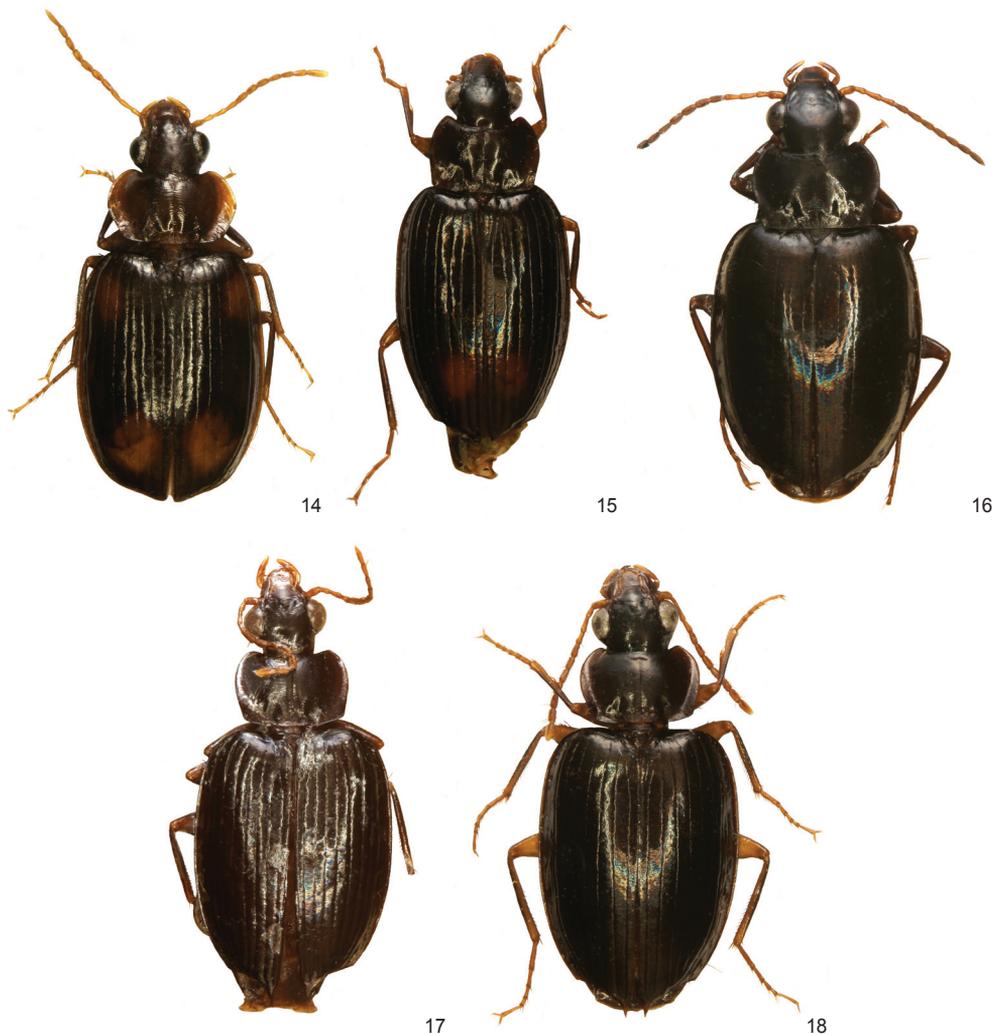
Figs. 5-9 Pronotum (from left): 5- *Dolichoctis skalei* sp. nov.; 6- *D. aruensis* sp. nov.; 7- *D. ovipennis* sp. nov.; 8- *D. paralelipennis* sp. nov.; 9- *D. yamdenae* sp. nov.



Figs. 10-13. Apex of elytra (from left): 10- *Dolichoctis aruensis* sp. nov.; 11- *D. ovipennis* sp. nov.; 12- *D. paralelipennis* sp. nov.; 13- *D. yamdenae* sp. nov.

*Dolichoctis paralelipennis* and *D. yamdenae* can be inserted in the key in Baehr (2013c) at couplet 34 which must be altered as follows:

34. Eye laterad little produced, orbit oblique, well visible (**B13c** fig. 26); prothorax with wide base and wide apex, lateral margins little narrowed basad (**B13c** fig. 8); lateral margin of pronotum barely explanate, lateral border distinct; aedeagus unknown. e.PNG ..... *latibasis* Baehr, 2013
- Eye laterad more produced, orbit very short or almost invisible (Figs 16, 17; **B13c** fig. 25); prothorax with narrower base and narrower apex, lateral margins more narrowed basad (Figs 7, 8; **B99** figs 39, 40, 45-48); lateral margin of pronotum considerably explanate, lateral border usually indistinct..... 35.
35. Lateral margin of pronotum wide, even at apex (Fig. 8) **and** eye laterally but moderately produced (Fig. 17) **and** femora yellow **and** apical spines of elytra short and red. Tenimber Islands ..... *yamdenae* sp. n.
- Lateral margin of pronotum various, but usually perceptibly narrower at apex (Fig.; **B99** figs 39, 40, 45-48; **B06** fig. 17); eye usually laterally more produced; femora usually piceous: apical elytral spines variable in length and colour ..... 35a.
- 35a. Pronotum narrower, ratio w/l <1.65 (Fig. 7; **B99** Fig. 45)..... 35b.
- Pronotum wider, usually ratio l/w >1.70 (**B99** figs 39, 40, 46-48; **B06** fig. 17) ..... 36.
- 35b. Lateral margin of pronotum less convex, near base straight (**B99** fig. 45); elytra longer, ratio l/w > 1.57, usually more, lateral apical angle remarkably acute (**B99** fig. 74); aedeagus markedly sinuate (**B99** fig. 17) . NG ..... *subquadrata* Darlington, 1968
- Lateral margin of pronotum more convex, near base still faintly convex (Fig. 7); elytra shorter, ratio l/w 1.50, lateral apical angle of elytra less acute (Fig. 16), aedeagus straight (Fig. 3). n. PNG ..... *paralelipennis* sp. n.
36. As in Baehr (2013c).



Figs. 14-18. Habitus. Body length in brackets: 14- *Dolichoctis skalei* sp. nov. (4.5 mm); 15- *D. aruensis* sp. nov. (5.2 mm); 16- *D. ovipennis* sp. nov. (5.6 mm); 17- *D. parallelipennis* sp. nov. (6.05 mm); 18- *D. yamdenae* sp. nov. (5.8 mm).

### REMARKS

The addition of another four new species to the subgenus *Spinidolichoctis* demonstrates that we are still far from a realistic estimation of the number of existing species in this subgenus. Moreover, the new species from Aru and Tenimber Islands again enlarge the range of the subgenus to areas, from where no records have still been known. In certain respects of their external morphology the species from Aru Islands and New Ireland are more different from other species than the other new species mentioned in the present paper.

*D. skalei* of the nominate subgenus in external features is very similar to *D. platycollis* Baehr, 2013 and similarly shaped species, but the complexly structured internal sac of the aedeagus is different from all recorded species of the subgenus which possess both marginal pronotal setae.

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