

Review of the oryctoderine genus *Onychionyx* Arrow, with description of a new species from the Moluccas (Coleoptera: Scarabaeidae: Dynastinae)

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Abstract. *Onychionyx moluccanus* sp. nov. is described, illustrated and compared with its three known congeners. The hitherto unknown male of *Onychionyx australicus* Dechambre, 2003 is described and figured and a key to species of the genus is presented.

INTRODUCTION

The genus *Onychionyx* Arrow, 1914 belongs to the tribe Oryctoderini, which contains 11 genera and about 42 species. Both sexes have unarmed heads and pronota, and occur from Sulawesi to the Solomon Islands, with the highest diversity in the Papua New Guinea mainland. Arrow (1914) established the genus for *O. opacipennis* (Fig. 4), which thus became the type species by monotypy. Endrödi (1971, 1985) reviewed the genus, and Dechambre (2003) revised it and added two new species, *O. minor* (Fig. 3) from the Indonesian part of Papua New Guinea and *O. australicus* (Fig. 2) from the Cape York peninsula of Queensland, Australia.

A highland population of *Onychionyx* was discovered by the first author on Obi and Bacan Islands in the Moluccas, eastern Indonesia. Examination of a good number of specimens revealed them to belong to a new species that is described below. Also described is the hitherto unknown male of *O. australicus*, which Dechambre (2003) based on a single female from the Iron Range National Park in northern Queensland, Australia. Three males of *O. australicus* were collected at the type locality.

MATERIAL AND METHODS

Length was measured from the anterior margin of the clypeus to the apex of the elytra.

The holotype of the new species is provided with a red printed label bearing the name of the taxon, HOLOTYPE, sex symbol, and St. Jákł & J. Zídek det. 2015. Paratypes are provided with similar yellow printed labels stating PARATYPE, the sex symbol and a collection number. Aedeagi of at least 10 males were examined.

The type material is deposited in following collections:
BMNH Natural History Museum, London, United Kingdom;
MNHN Museum National d'Histoire Naturelle, Paris, France;
NMCP National Museum (Natural History), Praha, Czech Republic;
SJCP Stanislav Jákł Collection, Praha, Czech Republic.

TAXONOMY

Onychionyx moluccanus sp. nov.

(Fig. 1)

Type locality. Indonesia, Moluccas, Obi Island, Seribu Mtns., 1200 m alt.

Type material. Holotype (♂) labelled: Indonesia, C Moluccas/OBI ISL., S coast, 1200 m / Seribu Mts., 22 km N of / TAPAYA v., 21.V.-9.VI. 2008 / St.Jákł leg. Paratypes: (No. 1 ♂ and Nos. 2-11 ♀♀) labelled same as holotype; (Nos. 12-13 ♂♂ and Nos. 14-15 ♀♀) labelled: Indonesia, C Moluccas / OBI ISL. south coast, 1100 m / SERIBU MTS., 22 km N of / Tapaya, 21.5.-9.6.2008 / St. Jákł lgt.; (Nos. 16-28 ♂♂ and Nos. 29-38 ♀♀) labelled: Indonesia, Moluccas centr. / OBI ISLAND, south coast / 25 km N of TAPAYA vill. / 20.6.-20.7.2008 / 1600-1700 m, St.Jákł lgt.; (Nos. 39-49 unsexed) labelled: Indonesia, Centr.Moluccas / OBI ISL., south coast / Seribu Mts., 1200-1500 m / 22 km N of TAPAYA vill. / 3.-20.IV. 2009, St.Jákł lgt.; (Nos. 50-78 unsexed) labelled: Indonesia, Centr. Moluccas / OBI ISL., south coast / Seribu Mts., 1200-1500 m / 22 km N of TAPAYA vill. / 20.11.- 10.12.2008, St. Jákł lgt.; (Nos. 79-80 ♂♂ and No. 81 ♀ labelled): Indonesia, N. Moluccas / 600-850 m, BACAN ISL / SE slopes of MT. SIBELA / SE of Makian vill., ca 7-8 km / 18.-30.8. 2008, St. Jákł lgt.

Pairs of paratypes are deposited at BMNH, MNHN and NMCP. Other material is in SJCP.

Description of holotype. Chestnut brown, weakly glossy, elytra with silvery cuticle. Length 24.7 mm, maximum elytral width (in posterior third) 12.6 mm.

Head. Black. Clypeus semicircular, bordered throughout, anteromedially with a pair of sharp vertical triangular teeth, posteromedially with a pair of obtuse horns; punctation coarser, denser and deeper than on frons. Frons parallel-sided, densely punctate, near vertex punctures sparser. Antennae brown, setation of peduncle brownish, setation of club paler.

Pronotum. Chestnut brown, medially with a lustre. Transverse, width to length ratio approximately 1.1 : 0.7. Punctures circular, with interspaces 2-4x greater than puncture diameters. All sides bordered, but anterior border narrower and medially vague. Lateral margins evenly rounded.

Scutellum. Brownish, wider than long, punctation present only at sides and base.

Elytra. Chestnut brown, with silvery cuticle, medially reflective. Widest in posterior third. Punctation denser than on pronotum, punctures circular and bearing short reddish to yellowish setae. Lateral margins with simple border. Sutural ridge simple, obtuse. Striola along sutural ridge interrupted, present only in basal third and apical part of elytron. Humeral and apical calli obtuse.

Pygidium. Slightly lighter-colored than elytra. Fine striolation present throughout length. Covered with very short, fine, yellowish to brownish setae.

Venter. Lighter-colored than dorsum, reddish to light brown. Mentum with long reddish to yellowish setae, prosternum and metasternum punctate and setose, more so laterally, setae colored as on mentum but shorter. Abdominal ventrites glabrous but punctate, punctures denser laterally.

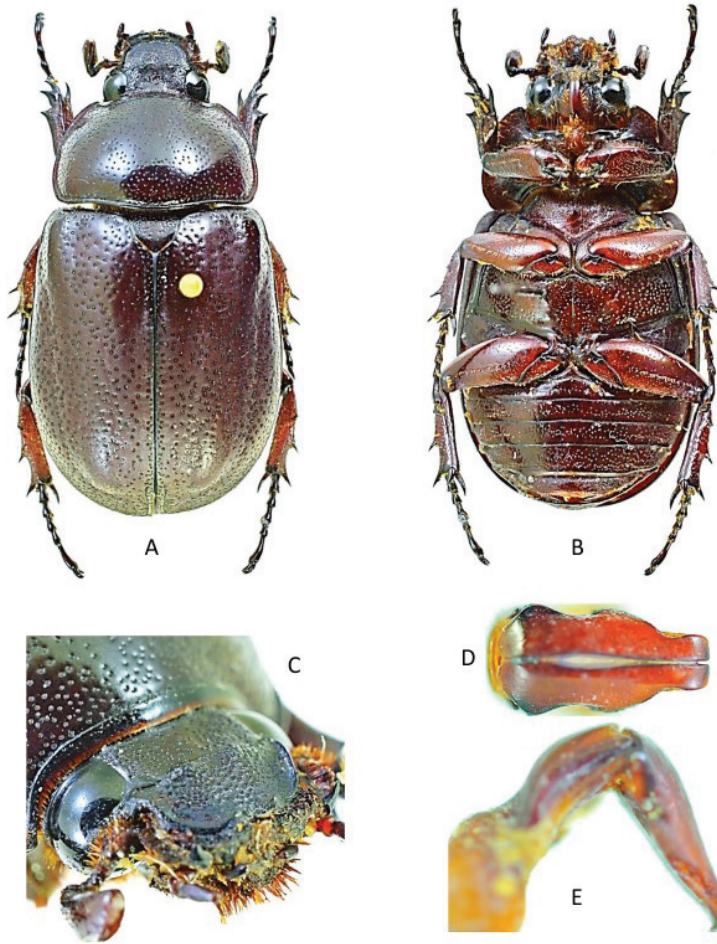


Fig. 1. *Onychionyx moluccanus* sp. nov. holotype male from Obi Island. A) Dorsal habitus, length 23.5 mm. B) Ventral habitus. C) Anterolateral view of head. D) Aedeagus in dorsal view. E) Aedeagus in left lateral view.

Legs. Femora reddish, with striola in posterior half bearing a line of short setae. Tibiae brown to dark brown, tarsi dark gray. Protibia tridentate, proximal tooth more removed from distal teeth. Meso- and metatibiae each with three lateral spines, proximal incipient and central and distal large and sharp. Meso- and metatibial spurs both reach about midlength of second tarsomere.

Aedeagus. Parameres relatively wider than in congeners and their ventrolateral carinae visible from above through much of length, but basally not terminating in sharp points. Paramere tips broadly truncate, chisel-like.

Variability. Length 23.5-28.5 mm. Specimens from Bacan Island tend to have the scutellum punctate throughout, the elytral striola along suture basally longer, reaching nearly

midlength, and meso- and metatibiae darker-colored. All these differences are clearly intra-specific, population-related.

Sexual dimorphism. Females 24.5-29.5 mm long, generally darker-colored than males, some almost black. Clypeal horns more obtuse. Protibial teeth almost equidistant. Abdomen more arched, its punctation distinctly denser.

Differential diagnosis. All three previously described species of *Onychionyx* are very similar to each other, but can be separated by the shape of the clypeus, pronotum, protibia and parameres, and elytral punctation. The new species is close to *O. minor* (Fig. 3) from the west part of PNG, from which it can be distinguished by: 1/ Semicircular clypeus (in *O. minor* elongated posterolateral margins and frontal emargination). 2/ Sides of pronotum rounded (in *O. minor* shallowly emarginate in posterior half). 3/ Striola alongside sutural ridge present only in basal and apical parts of elytra (in *O. minor* present throughout length of elytra). 4/ Dorsum darker and average size larger. 5/ Silvery tinge on elytra much weaker. 6/ Parameres wider at base and gradually narrowing to apex (in *O. minor* nearly parallel-sided). From the other two species *O. moluccanus* sp. nov. can be distinguished by: large size; dorsum dark brown to almost black; semicircular clypeus without elongated posterolateral margins and no emargination in front of said margins; no emargination or constriction of pronotal sides; striola alongside sutural ridge present only in basal and apical parts of elytra; silver tinge of elytra present but weak; and parameres narrowing gradually to apex.

Distribution. Indonesia, the central and north Moluccas, Obi and Bacan Islands.

Etymology. Named after the archipelago in eastern part of Indonesia.

Onychionyx australicus Dechambre, 2003

(Fig. 2)

Material examined. 3 ♂♂ (SJCP) labelled: AUSTRALIA, CAPE YORK / Iron Range N.P., 103 m alt. / S of Lockhart River, 11.-16. / XI. 2010, St. Jákl leg.

Description of male. Length 20.8-23.5 mm. Pronotum dark brown, glossy, elytra chestnut brown, silvery tinge nearly absent.

Head. Black. Clypeus semicircular, laterally bordered, anteromedially with a pair of steeply reclined teeth, finely, densely punctate throughout, posterolateral emargination present but shallow. Frons glabrous except sides finely punctate. Antennae short, brown with reddish to brownish setation.

Pronotum. Dark brown, with a strong lustre, punctation sparse, uniform. All margins bordered. Lateral emargination in posterior half present but indistinct.

Scutellum. Wider than long, dark brown to black, punctate.

Elytra. Chestnut brown, with very reduced silvery tinge. Punctation medially coarse and dense, each circular puncture bears a short reddish to ochre seta. Striola alongside sutural

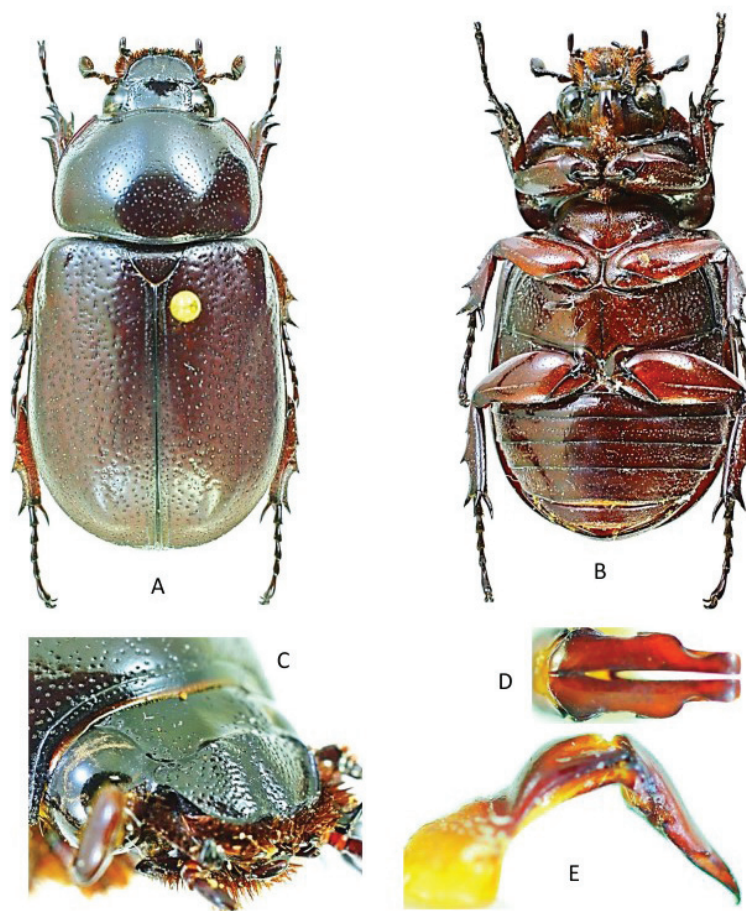


Fig. 2. Male of *Onychionyx australicus* Dechambre, 2003 from Iron Range National Park, Cape York, northern Queensland, Australia. A) Dorsal habitus, length 23 mm. B) Ventral habitus. C) Anterolateral view of head. D) Aedeagus in dorsal view. E) Aedeagus in left lateral view.

ridge developed in apex and fragmentally also in basal part of elytra. Humeral and apical calli very obtuse.

Pygidium. Brownish, with fine lustre. Sides with fine, rather dense striolation, middle part punctate.

Venter. Brown, lighter than dorsum. Mentum striolate, medially with reddish setation. Prosternum, metasternum and abdominal ventrites punctate, more densely so at sides.

Legs. Femora, tibiae and tarsi brown, tarsi darker. Protibia tridentate, proximal tooth farther apart from distal teeth. Meso- and metatibiae medially with sparse brownish setae and laterally each with three lateral spines, proximal incipient and central and distal large and sharp. Meso- and metatibial spurs both reach about midlength of second tarsomere.

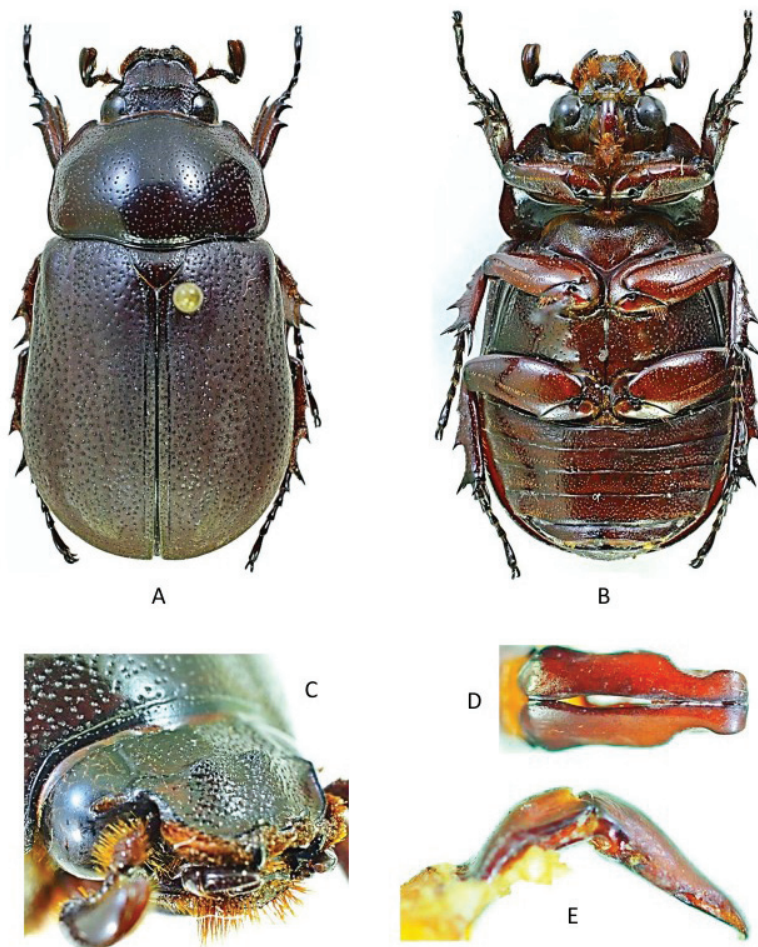


Fig. 3. Male of *Onychionyx minor* Dechambre, 2003 from Fak Fak, Western Papua New Guinea, Indonesia. A) Dorsal habitus, length 24 mm. B) Ventral habitus. C) Anterolateral view of head. D) Aedeagus in dorsal view. E) Aedeagus in left lateral view.

Aedeagus. Parameres in middle third laterally inflated, their ventrolateral carinae visible from above only proximally and terminating at midlength in sharp points. Paramere tips truncate, chisel-like.

Variability. The three available specimens vary only in size.

Diagnosis. *Onychionyx australicus* Dechambre, 2003 is intermediate between *O. minor* Dechambre, 2003 (Fig. 3) and *O. moluccanus* sp. nov. (Fig. 1). By the nearly absent of silvery tinge, extent of the striola alongside the suture, rounded lateral margins of the pronotum, and semicircular clypeus it is closer to *O. moluccanus* sp. nov., whereas by the shape of the parameres and distinctly smaller size it is closer to the West Papuan *O. minor*.

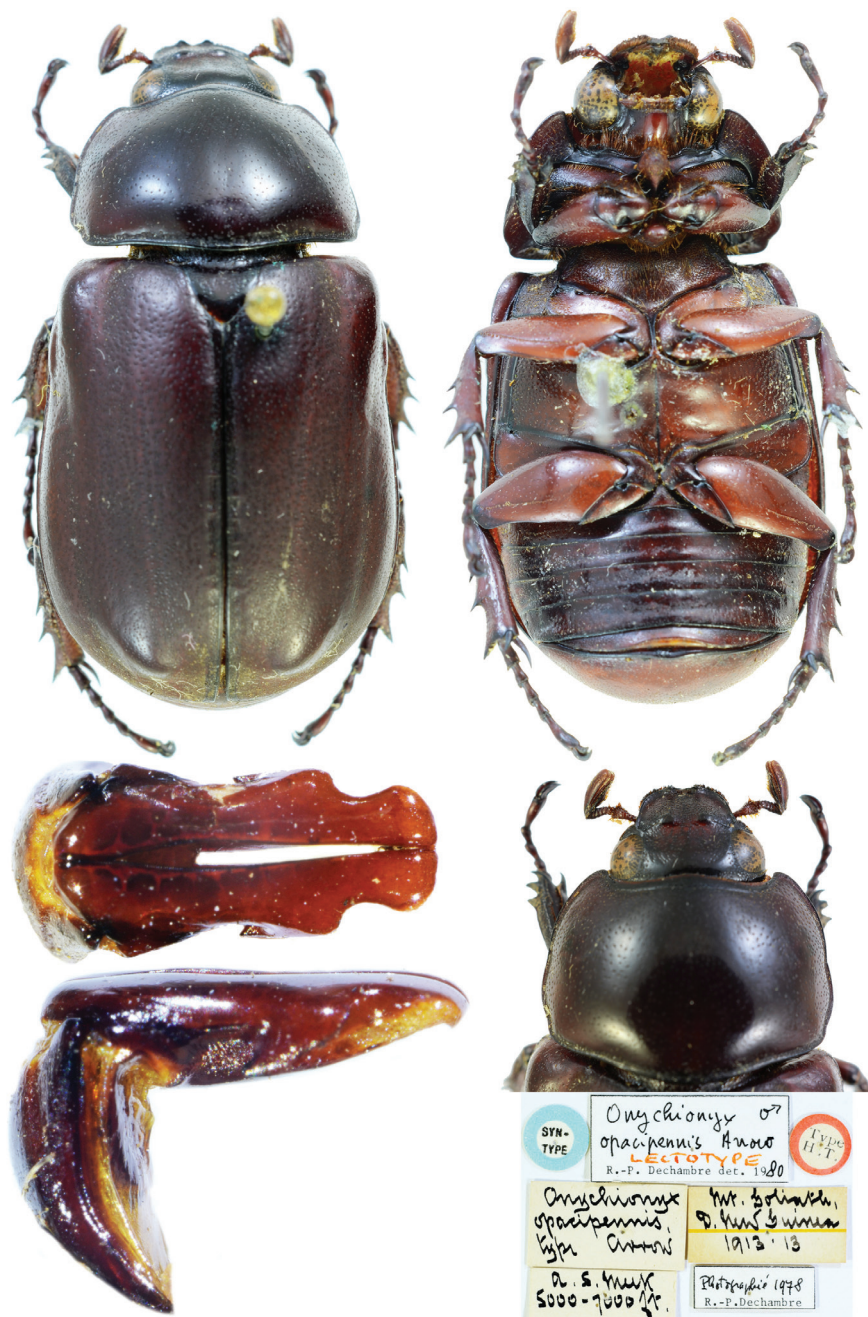


Fig. 4. Habitus, aedeagus and labels of the lectotype of *Onychionyx opacipennis* Arrow, 1941 the type species of the genus (BMNH).

Distribution. Known only from the type locality, Iron Range National Park, Cape York Peninsula, northern Queensland, Australia.

KEY TO SPECIES OF *ONYCHIONYX* ARROW

- 1 (2) Protibial teeth equidistant, meso- and metatibiae each with three lateral spines, proximal spine only slightly shorter than central and distal spines. Length 29-33 mm; Papua New Guinea. *O. opacipennis* Arrow, 1914
- 2 (1) Protibial teeth not equidistant, meso- and metatibiae each with three lateral spines, proximal spine incipient.
- 3 (4) Posterolateral margins of clypeus elongated. Striola alongside suture present throughout length. Silvery tinge (cuticle) of elytra covering whole surface. Length 20-28 mm; West Papua (Indonesia). *O. minor* Dechambre, 2003
- 4 (3) Posterolateral margins of clypeus not at all or only slightly elongated. Striola alongside suture never complete. Silvery tinge (cuticle) of elytra nearly absent.
- 5 (6) Posterolateral margins of clypeus with shallow emargination. Punctuation of frons sparser (disc almost glabrous) than of clypeus. Striola alongside suture present in apical and basal parts of elytra. Length 21.2-23.3 mm; Cape York, northern Queensland, Australia. *O. australicus* Dechambre, 2003
- 6 (5) Posterolateral margins of clypeus evenly rounded. Punctuation of frons as dense as that of clypeus. Striola alongside suture confined to basal and apical parts of elytra. Length 23.2-29.5 mm; Obi and Bacan Islands, Moluccas, Indonesia. *O. moluccanus* sp. nov.

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