

<https://doi.org/10.25221/fee.556.2>

<https://elibrary.ru/cpupov>

<https://zoobank.org/References/FE059F7D-FC52-498C-8E08-7E71E5BF85A7>

A NEW SPECIES OF *DOLICHURUS* LATREILLE, 1809 (HYMENOPTERA: AMPULICIDAE) FROM LOMBOK ISLAND, INDONESIA

M. V. Mokrousov¹⁾, M. Yu. Proshchalykin^{2*)}

1) *Institute of Biology and Biomedicine of Lobachevsky State University of Nizhny Novgorod, Nizhny Novgorod, 603950 Russia.*

2) *Federal Scientific Center of the East Asia Terrestrial Biodiversity, Far East Branch of the Russian Academy of Sciences, Vladivostok, 690022, Russia. *Corresponding author. E-mail: proshchalikin@biosoil.ru*

Summary. A new species of cockroach wasps, *Dolichurus rasnitsyni* Mokrousov et Proshchalykin, **sp. n.**, is described and illustrated, based on specimens of both sexes collected in the montane rainforest of Mount Rinjani on Lombok Island in Indonesia. The genus *Dolichurus* Latreille, 1809 is newly recorded from the Lesser Sunda Islands.

Key words: cockroach wasps, digger wasps, taxonomy, Oriental region, Wallacea.

M. B. Мокроусов, М. Ю. Прощалькин. Новый вид рода *Dolichurus* Latreille, 1809 (Hymenoptera: Ampulicidae) с острова Ломбок, Индонезия // Дальневосточный энтомолог. 2026. N 556. С. 18-24.

Резюме. Приводится описание и иллюстрации обоих полов нового вида роющих ос *Dolichurus rasnitsyni* Mokrousov et Proshchalykin, **sp. n.** из горного тропического дождевого леса горы Ринджани острова Ломбок, Индонезия. Род *Dolichurus* Latreille, 1809 впервые указывается для Малых Зондских островов.

INTRODUCTION

Wasps of the genus *Dolichurus* Latreille, 1809 are small sphecids that use cockroaches as prey for larvae, commonly called cockroach wasps. *Dolichurus* belongs to Ampulicidae, Dolichurini, and is the largest genus in the tribe Dolichurini.

At present, *Dolichurus* comprises 57 species (including the one species described herein) distributed worldwide: Nearctic – 1, Neotropical – 2, Palaearctic – 7, Ethiopian – 10, Oriental – 33, and Australian – 4 (Pulawski, 2026). While parts of the species-rich Oriental fauna have been revised for regions such as the Philippines (Tsuneki *et al.*, 1992), Southeast Asia (Tsuneki, 1992), India (Girish Kumar & Sheikh, 2018) and Southeast China (Bai *et al.*, 2025), many species in this region remain undescribed. The fauna of Wallacea, a biogeographical region in the centre of the Indonesian archipelago where the biogeographic realms of Asia and Australia meet, remains almost unexplored. Despite the wide distribution and abundance of *Dolichurus* species in Wallacea, only two species have been recorded to date (only on Sulawesi

Island). The absence of *Dolichurus* species north of the Wallace line between Australia and Southeast Asia is obviously and unsurprisingly an artefact of inadequate collecting (Ohl, 2002). This gap is partially filled by the present research.

The present paper is a continuation of the ongoing research of the Aculeate Hymenoptera fauna from Lombok Island (Indonesia) collected by first author in 2012 (Zryanin & Mokrousov, 2015; Lelej, 2024; Mokrousov & Proshchalykin, 2026).

MATERIAL AND METHODS

This paper is based on material deposited in the Zoological Institute, Russian Academy of Sciences (St. Petersburg, Russia) [ZISP] and personal collection of M.V. Mokrousov (Nizhny Novgorod, Russia) [MMC].

Photographs were taken with a digital camera Canon M200 attached to a Carl Zeiss Stemi 508 or Olympus CX33RTFS2 microscope. Final images were produced by stacking multiple photographs taken at different focal planes using Helicon Focus 8. All images were post-processed for sharpness, contrast and brightness using Adobe® Photoshop® v. CC 2017 (×64).

Morphological terminology generally follows Hymenoptera Anatomy Ontology Portal (2026) and Bohart & Menke (1976). The classification and distribution follows Pulawski (2026). We have used the following abbreviations: F – flagellomere; S – metasomal sternum; T – metasomal tergum; L – length; H – height; W – width. Body length measurements are rounded to 0.1 mm, the measurement ratios are rounded to 0.01.

TAXONOMY

Family Ampulicidae

Genus *Dolichurus* Latreille, 1809

Dolichurus Latreille, 1809: 387. Type species: *Pompilus corniculus* Spinola, 1808, designated by Latreille, 1810: 438.

Thyreosphex Ashmead, 1904: 282. Type species: *Thyreosphex stantoni* Ashmead, 1904, by monotypy. Synonymized with *Dolichurus* by Rohwer, 1910: 659 and by Schulz, 1911: 144.

Dolichurus rasnitsyni Mokrousov et Proshchalykin, sp. n.

<https://zoobank.org/NomenclaturalActs/47F70662-34C3-4099-8342-15B7062729F2>

Figs 1–17

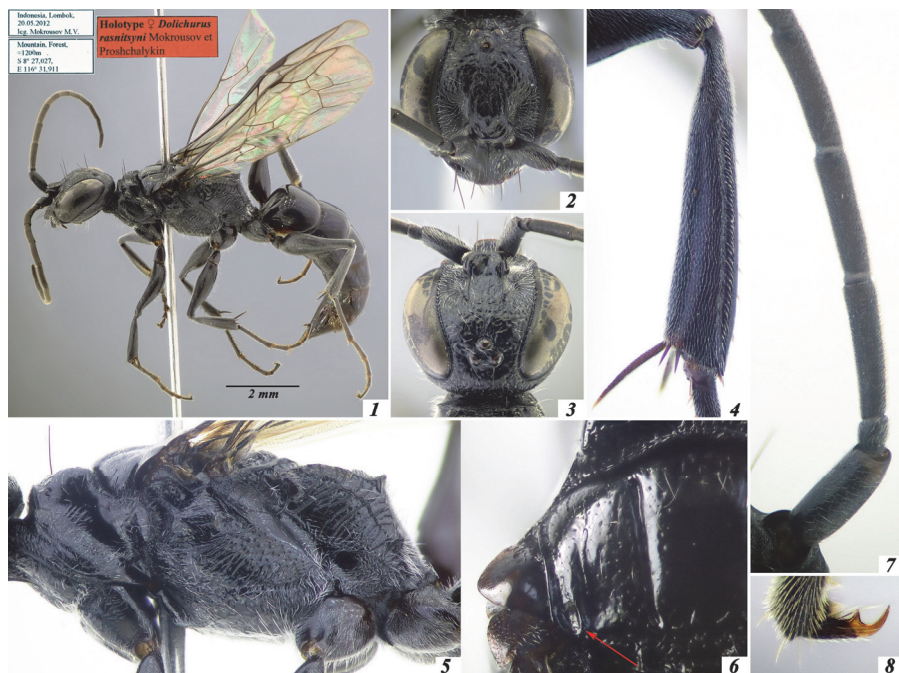
TYPE MATERIAL. Holotype – ♀, **Indonesia**: Lombok Island, Rinjani Mt., 8°27.027'S 116°31.911'E, forest, ≈1200 m, 20.V 2012, leg. M. Mokrousov [ZISP]; Paratypes: 1 ♀, 5 ♂ with the same labels as holotype [3 ♂ in ZISP; 1 ♀, 2 ♂ in MMC].

DESCRIPTION. Body completely black, mandible apically reddish in some specimens; veins dark brown, wings slightly infumate, with a faint metallic iridescence.

FEMALE (Figs 1–8). Total body length 9.5–10.4 mm (holotype 10.4 mm).

Head (Figs 2–3). Head ratio H:W = 0.98; POL:OOL = 0.89; inner eye margins slightly diverging bellow, ratio by shortest lower interocular distance to shortest upper interocular distance = 1.3. Clypeus virtually impunctate, only with scattered indistinct punctures medially; median carina in basal half distinct; clypeal lobe prominent, relatively narrow (not more than

one-third clypeal margin), truncate. Frontal platform almost parallel-sided. Occipital carina low but distinct, not reaching hypostomal carina. Scapus with sharp ventral carina. Antenna elongate, length ratio (inner view) – scape:F1:F2:F3 = 0.81:1.00:0.96:0.97; F1 ratio L:W = 4.3 (Fig. 7). Mandible with three teeth in apical third of inner margin. Head faintly shiny; frons shallowly punctatorugose, without median carina. Vertex shallowly punctate, gena with scattered minute punctures.



Figs 1–8. *Dolichurus rasnitsyni* sp. n., female, holotype: 1 – habitus, lateral view and labels; 2 – head, frontal view; 3 – head, dorsal view; 4 – midtibia, internal view; 5 – mesosoma, lateral view; 6 – mesoscutum, dorsal view (arrow indicate posterolateral carina); 7 – base of antenna, ventral view; 8 – hind claw.

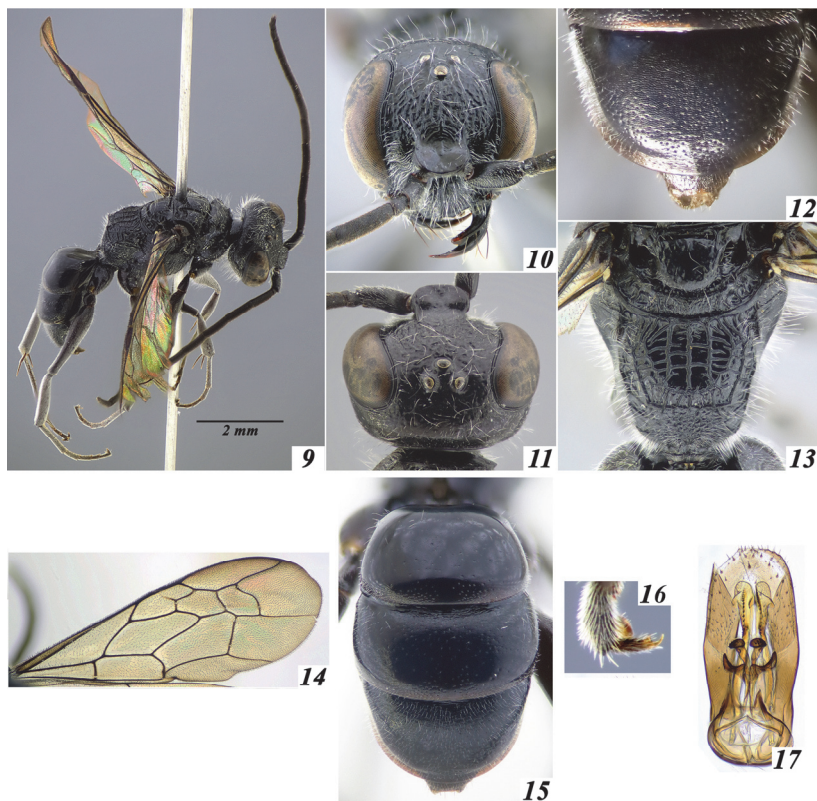
Mesosoma. Posterior half of pronotal dorsum with two rounded tubercles that not project over level of scutum (in lateral view). Median pronotal groove shallow, anteromedially obscured by irregular, transverse rugulae. Anterior pronotal carina prominent and complete. Lateral pronotal groove indistinct, crossed by a few longitudinal carinae. Scutum and scutellum smooth, with a few, widely scattered punctures; parapsidal line distinct and slightly convex. Scutum not depressed along midline, with longitudinal carina posterolaterally adjacent to the parapsidal line and separating posterolateral depression (Fig. 6). Mesopleuron irregularly obliquely sparsely rugose with scattered punctures; episcrobal area shiny, unclearly punctured ventrally and longitudinally rugose dorsally; omaral sulcus present, anteriorly delimited by sharp carina, dorsally originating at lower end of pronotal lobe (Fig. 5), ventrally continued by anteriorly directed, V-shaped acetabular carina, which terminates in small, tooth-like tubercle at midline. Stemaulus present as pitted groove; metanotum coarsely, longitudinally to obliquely rugose; metapleuron shiny, virtually impunctate, with a

few longitudinal rugae dorsally (Fig. 5). Metapostnotum rather regularly areolate with a certain number oblique or longitudinal and a varying number of transverse rugulae or carinae (as at Fig. 13). Posterior lamellate carina emarginate medially and without lateral projections. Propodeal posterior surface irregularly rugose, with two sharp but not large projections laterally. Propodeal side with irregular, oblique rugulae that partly diminishes anteriorly (Fig. 5).

Legs. Legs is typical for the genus. Hind coxa with low dorsal carina in basal half; internal face of midtibia with longitudinal groove with row of regular short spines (Fig. 4), external surface with two rows of short spines. Claw with large perpendicular tooth in apical third (Fig. 8).

Wings. Distal part of forewing vein *1r* sclerotized, distinct (as at Fig. 14). Otherwise, the venation is typical for the genus.

Metasoma. Terga and sterna shiny, virtually impunctate. Elevation on S1 sharply angled, with transverse carina or lamella. S2 with transverse basal carina, limiting anterior wide-triangular surface.



Figs 9–17. *Dolichurus rasnitsyni* sp. n., male, paratype: 9 – habitus, lateral view; 10 – head, frontal view; 11 – head, dorsal view; 12 – T3, dorsal view; 13 – scutellum, metanotum and propodeum, dorsal view; 14 – forewing; 15 – metasoma, dorsal view; 16 – hind claw; 17 – genitalia.

Vestiture. Head and mesosoma with scattered white setae, appressed at lower frons (on sides of front platform), and with distinctive paired, black macrosetae on mandibles (one by one), clypeus (four), frons (pair near base of frontal platform and pair at inner eyes margin), pronotum (pair) and scutellum (two pairs). Metasoma asetose, shiny, except for some scattered microsetae.

MALE (Figs 9–27). Total body length 7.2–7.9 mm.

Head (Figs 10–11). Head ratio H:W = 0.94; POL:OOL = 0.75. Outline of clypeus noticeably convex in lateral view; medial carina complete and sharp, ending by distinct tooth. Scapus with sharp ventral carina. Length of basal flagellomeres subequal, apical flagellomeres slightly shorter. At least flagellomeres VI–VIII slightly swollen medially, the swelling without thickened setae. Mandible with one internal tooth. Head sculpture like that of female but little rougher, median frontal carina developed.

Mesosoma. Anterior pronotal carina complete, but hardly discernible in some specimens among the numerous carinae medially. Mesosomal sculpture generally like that of female.

Metasoma. T1 virtually impunctate (only with single shallow punctures); T2 punctures scattered, underlying sculpture barely noticeably transversely microstriate (Fig. 15); T3 punctation more noticeable, but punctures at least several diameter apart, underlying sculpture noticeably transversely microstriated (Fig. 12). S1 with markedly elevated, median hump; S2 with basal transverse carina, diminishes on median elevation. S1 areolate-rugose, S2–S3 predominantly shiny, with widely spaced, minute punctures and finely microsculptured. Paramera (Fig. 17) with stout scattered spines.

Legs. Legs is typical for the genus. Hind coxa with low dorsal carina; internal face of midtibia without longitudinal groove. Claw with small subapical tooth (Fig. 16).

Wings. As in females (Fig. 14), but forewing vein *1r* at one specimen indistinct.

Vestiture. Markedly longer and denser than in female (Fig. 9).

DIAGNOSIS. A new species belong in a species group characterized by the combination of complete pronotal carina, sternaulus, paired macrosetae (at female), a clypeal carina confined to the basal half of the female clypeus. This group includes species from Southeast Asia – *D. amamiensis* Tsuneki et Iida, 1964, *D. formosanus* Tsuneki, 1967, *D. mindanaonis* Tsuneki, 1992, *D. pempuchiensis* Tsuneki, 1972, *D. rugosifrons* Tsuneki, 1992, *D. stantoni* (Ashmead, 1904) and *D. sahyadriensis* Anagha et Girish Kumar, 2020, as well as Australian *D. carbonarius* F. Smith, 1869, *D. crenatus* Ohl, 2002 and *D. yungaburra* Ohl, 2002. From all this species *Dolichurus rasnitsyni* sp. n. differs by presents longitudinal elevation (at male) or carina (at female) on mesonotum posterolaterally adjacent to the parapsidal line and separating posterolateral depression (Fig. 6) (posterolateral elevation indistinct or lacking in related species); present distal part of forewing vein *1r* (Fig. 14) (indistinct or lacking in related species); metallic iridescence of wings (wings hyaline or slightly darkened in related species). In addition, female F1–F3 (Fig. 7) nearly equal (F1 considerably longer than the following flagellomeres in related species except *D. pempuchiensis*); the male is distinguished by the presence of transverse microstriation on T3 (Fig. 12) (partly on T2 too) and very sparse punctation at T1–T2 (Fig. 15) (T1–T2 densely punctate in other species from this group except *D. stantoni*; T3 without microstriation except *D. mindanaonis* and *D. rugosifrons*); the absence of white spots (at least frontal platform with white marks in other species); paramera with stout scattered spines (Fig. 17) (at most with thin setae at other species).

DISTRIBUTION. The new species is known only from the type locality in Lombok Island (Indonesia).

BIOLOGY. Habitat in montane rainforest.

ETYMOLOGY. The species is named after a well-known Russian entomologist and paleontologist Prof. Alexander P. Rasnitsyn (Paleontological Institute of Russian Academy of Sciences, Moscow, Russia) on the occasion of his 90th birthday.

ACKNOWLEDGMENTS

The research was carried out within the state assignments of the Ministry of Science and Higher Education of the Russian Federation, No. 124012400285-7 (for M.P.).

REFERENCES

- Ashmead, W.H. 1904. A new genus and some new species of Hymenoptera from the Philippine Islands. *The Canadian Entomologist*, 36: 281–285. DOI: 10.4039/Ent36281-10
- Bai, X., Ma, L., Tang, G. & Li, Q. 2025. Two new species of *Dolichurus* Latreille (Hymenoptera, Ampulicidae) from China, with a key to species of the genus. *ZooKeys*, 1254: 331–345. DOI: 10.3897/zookeys.1254.161007
- Bohart, R.M. & Menke, A.S. 1976. *Sphecids of the world. A generic revision*. Berkeley, Los Angeles & London. ix + 695 pp.
- Girish Kumar, P. & Sheikh A.H. 2018. A taxonomic review of the genus *Dolichurus* Latreille (Hymenoptera: Ampulicidae) from the India with the description of a new species. *Species*, 19: 104–116.
- Hymenoptera Anatomy Ontology Portal. 2026. Electronic resource. Available from: <http://portal.hymao.org/projects/32/public/ontology/> (Accessed 19 August 2026)
- Latreille, P.A. 1809. *Genera Crustaceorum et Insectorum secundum ordinem naturalem in familias disposita, iconibus exemplisque plurimis explicata*. Amand Koenig, Parisiis et Argentorati [= Paris and Strasbourg]. Tomus quartus et ultimus. 399 pp.
- Latreille, P.A. 1810. *Considérations générales sur l'ordre naturel des animaux composant les classes des Crustacés, des Arachnides, et des Insectes, avec un tableau méthodique de leurs genres, disposés en familles*. F. Schoell, Paris. 444 pp.
- Lelej, A.S. 2024. Review of the velvet ants (Hymenoptera: Mutillidae) of Wallacea with special reference to Lombok, Indonesia. *Far Eastern Entomologist*, 504: 1–25. DOI: 10.25221/fee.504.1
- Mokrousov, M.V. & Proshchalykin, M.Yu. 2026. A new remarkable species of *Trirogma* Westwood (Hymenoptera: Ampulicidae) from Lombok Island, Indonesia. *Euroasian Entomological Journal*, 25, Supl. 1. [in press]
- Ohl, M. 2002. A revision of the wasp genus *Dolichurus* Latreille, 1809 in Australia (Hymenoptera: Apoidea: Ampulicidae). *Insect Systematics & Evolution*, 33: 35–51. DOI: 10.1163/187631202X00046
- Pulawski, W.J. 2026. Catalog of Sphecidae. Available from: <https://www.calacademy.org/scientists/projects/catalog-of-sphecidae> [Accessed 19.08.2026]
- Rohwer, S.A. 1910. Some new hymenopterous insects from the Philippine Islands. *Proceedings of the United States National Museum*, 37: 657–660
- Schulz W. 1911 (1912). Zweihundert alte Hymenopteren. *Zoologische Annalen*, 4: 1–220.
- Tsuneki, K. 1992. *Dolichurus* known from S. and S.E. Asia with a key to the species (Hym., Sphecoidea: Ampulicidae). *Special Publications of the Japan Hymenopterists Association*, 38: 40–49.
- Tsuneki, K., Nozaka, C., Tano, T., Kurokawa, H. & Murota, T. 1992. Studies on the Philippine Sphecoidea (Hymenoptera). I. *Special Publications of the Japan Hymenopterists Association*, 38: 1–39.

Zryanin V.A., Mokrousov M.V. 2015. Contribution to the ant fauna of Lombok Island. *Proceedings of the 10th ANeT International Conference, 23-26 October 2015, University of Kelaniya, Sri Lanka*: 34.

© **Far Eastern entomologist (Far East. entomol.)** Journal published since October 1994.

Editor-in-Chief: S.Yu. Storozhenko

Editorial Board: A.S. Lelej, S.A. Belokobylskij, M.G. Ponomarenko, V.A. Mutin, E.A. Beljaev, E.A. Makarchenko, A.V. Gorochoy, T.M. Tiunova, M.Yu. Proshchalykin, S.A. Shabalin, V.M. Loktionov

Address: Federal Scientific Center of the East Asia Terrestrial Biodiversity (former Institute of Biology and Soil Science), Far East Branch of the Russian Academy of Sciences, 690022, Vladivostok-22, Russia.

E-mail: storozhenko@biosoil.ru

web-site: <http://www.biosoil.ru/fee>