

***Nolicus areroensis* sp. nov., a new species of Aphodiinae from Ethiopia  
(Coleoptera: Scarabaeidae)**

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**Taxonomy, description, new species, Scarabaeidae, Aphodiinae, Aphodiini, *Nolicus*, Ethiopia**

**Abstract.** A new species of genus *Nolicus* Petrovitz, 1962, *Nolicus areroensis* sp. nov from Ethiopia is described and photographed.

INTRODUCTION

The taxon *Nolicus* was created by Petrovitz (1962) as a subgenus of the genus *Aphodius* Hellwig, 1798, to receive a species from South Africa whose conformation of the mesotibiae shows an unusual sculpture, notably by the shape of the apex which is strongly indented on the inner side in males. This taxon, until now monotypic, was raised to a generic rank by Dellacasa et al. (2001).

However, this conformation of the mesotibiae is present, although more or less developed, on several species of the Afrotropical Region now classed into the *Pharaphodius* Reitter, 1892. Most of these Afrotropical species should be transferred into the genus *Nolicus* as noted in Dellacasa et al. (2001) but this will be the subject of a future publication.

The present species does not have the typical shape of the mesotibiae of the *Nolicus* but, based on the morphology of the habitus, the aedeagus and the epipharynx, we place it in this genus.

MATERIAL AND METHODS

The specimens were observed with a Nikon SMZ-U stereoscopic microscope. The photographs published here were taken using a Canon EOS 5D Mark III connected with Canon MP-E 65mm macro lens. Photographs were edited using the Helicon Focus programme, and Adobe Photoshop Elements 2018.

For morphological terms used in the description of specimens we follow Dellacasa et al. (2001, 2010).

All specimens of a new species from the typical series are indicated by a red, printed label bearing the status of the specimen, its name, sex, name of the authors, and year of the designation.

The holotype and one paratype are kept in the private collection of Łukasz Minkina deposited in Institute of Systematics and Evolution of Animals (Kraków, Poland) (ŁM),

the allotype in the private collection of Miloslav Rakovič (Dobřichovice, Czech Republic) (MR), and one paratype is kept in the private collection of Patrice Bordat (Saint-Cirq, France) (PBOC).

## TAXONOMY

### *Nolicus areroensis* sp. nov.

(Figs. 1-7)

**Type locality.** Ethiopia, Arero.

**Type material.** Holotype (♂): Ethiopia, Arero, 11.v.2016, leg. Stanislav Prepsl [LM]. Allotype (♀): Ethiopia S., 27.iv.2007, near Bitata, 1460 m, N05°31', E39°30', J. Halada leg., (MR). Paratypes (1 ♂): Ethiopia, Arero, 11.v.2016, leg. Stanislav Prepsl, (LM); (1 spec.): Ethiopia, 6 km NW Negele, 5.v.2013, leg., Stanislav Prepsl, (PBOC).

**Description.** Male. Dorsum (Fig. 1). Body length of holotype 5.7 mm, elongate, weakly shiny, weakly convex, brownish, with sides and elytra dark orange-brownish, glabrous.

Head (Fig. 4) trapezoidal, weakly convex, weakly shiny, with weak microreticulation. Clypeus feebly bordered, distinctly sinuate anteriorly, widely rounded laterally, not notched before genae, clypeal border with short macrosetae. Genae rounded, distinctly exceeding eyes, with few moderately long macrosetae. Frontal suture rather distinct on sides of moderately elevated central gibbosity; no additional gibbosities present laterally. Epistome elevated in basal part, and connected with central gibbosity on frontal suture. Punctuation rather sparse, fine, rather regularly spaced, slightly irregular in size.

Epipharynx (Fig. 7) transverse, with sides broadly rounded, anterior margin of pedia feebly concave, with six celtes: two long celtes in the middle, and slightly below than the middle ones four moderately long lateral celtes. Lateral margins on mesoepitorma with sides feebly narrowed towards the apex. Tormae relatively long.

Pronotum distinctly transverse with its sides explanate, weakly convex, very slightly wider than base of elytra, widest near the base, weakly shiny, with trace of microreticulation, with double punctuation: larger punctures irregularly spaced, located mainly nearby base and on sides, moderately large, rather regular in size, three to six times larger than the smaller ones, rather sparse; smaller punctures rather regularly spaced, slightly irregular in size, rather dense; base and anterior margin not bordered, sides distinctly bordered; sides without macrosetae. Anterior angles and base of pronotum before hind angles widely rounded.

Scutellum small, triangular with sides almost parallel at base, with few punctures as large as largest of smaller punctures of pronotum, matte, with distinct microreticulation.

Elytra elongate, with the epipleural carina feebly but distinctly explanate weakly convex, slightly widened posteriorly, widest nearby the middle, matte, with distinct microreticulation; without humeral denticles; with ten striae and ten intervals. Striae distinctly, densely and moderately coarsely punctate; punctures feebly indenting margins of intervals. Striae before apex becoming deeper and wider, not joined together before apex; all striae slightly shortened before apex. Intervals matte, distinctly convex, more convex before apex, with fine, dense, irregularly spaced, regular in size punctuation, as large as smallest one of small punctures of pronotum.



Figs. 1-3. *N. areoensis* sp. nov., ♂, holotype: 1- dorsal view, 2- ventral view, 3- lateral view. Figs. 1-3: scale lines: 1.0 mm.

Fig. 4: *N. areoensis* sp. nov., ♂, holotype: head. Fig. 4: scale line: 1.0 mm.

Figs. 5-7: *N. areoensis* sp. nov., ♂, holotype: 5-aedeagus in dorsal view, 6- aedeagus in lateral view, 8- epipharynx. Figs. 5-7: scale lines: 0.5 mm.

Legs. Femora wide, shiny, without microreticulation, finely and sparsely punctate, without punctures bearing macrosetae. Protibiae very distinctly tridentate laterally, proximally not serrulate; dorsal side smooth, shiny, with few very fine punctures; apical spur long, relatively narrow, feebly downwardly and outwardly bent, with acute apex. Meso- and metatibiae with two strong transverse carinae, fimbriate apically with row of spinules of unequal lengths. Metatibia superior apical spur distinctly longer than first tarsal segment, latter approximately as long as next three following combined. Claws rather thick, feebly arcuate.

Macropterous.

Venter (Fig. 2). Metasternal plate shiny, nearly flat, with distinctly visible, quite deep median longitudinal line; with sparse, fine, rather regularly spaced punctures. Abdominal ventrites rather shiny, densely, rather finely punctate; all punctures bearing relatively long and thin macrosetae; with a trace of microreticulation.

Pygidium with structure similar to ventrites and several long setae at apex.

**Sexual dimorphism.** Female. Differs from the male by the frons with larger diameter of larger punctures, the central gibbosity lower, the sides of pronotum narrowed forward with punctures denser, particularly on disc, the spur of protibiae thinner.

**Variability.** Body length 5.5-5.9 mm. The punctuation of the body is slightly variable. The colour of the body can be slightly lighter or darker.

**Differential diagnosis.** The new species differs from all the Afrotropical species of *Pharaphodius* (*sensu lato*) so far known by the particularly enlarged and explanate margins of pronotum and elytra.

**Etymology.** Named with regard to its geographical origin.

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