

***Phelotrupes (Sinogeotrupes) annamiticus* sp. nov.**  
**(Coleoptera: Geotrupidae) from Central Vietnam**

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**Abstract.** A new geotrupine beetle, *Phelotrupes (Sinogeotrupes) annamiticus* sp. nov., from the Kon Tum Province in Central Vietnam, is described. Its relevant diagnostic characters are illustrated. The new species is classified near *P. (S.) jendeki* Král, Malý et Schneider, 2001 from which it can be separated mainly by a different shape of head tubercles, sculpture of pronotum and shape of parameres.

## INTRODUCTION

The subgenus *Sinogeotrupes* Bovo & Zunino, 1983 of the genus *Phelotrupes* Jekel, 1866 is currently represented by 14 species restricted to the transient zone between the Palaearctic and Oriental zoographical regions. It is so far known to be distributed throughout eastern areas of the Tibetan plateau, and in mountainous areas of central and southwestern provinces of China (Fujian, Guizhou, Hubei, Hunan, Jiangsu, Jiangxi, Sichuan, Yunnan, Zhejiang) easternmost to Taiwan and southernmost to Vietnam (Král et al. 2001, Nikolajev 2007, Nikolajev et al. 2016, Ochi et al. 2010). The present paper is based on material from a primary mountain forest of the Ngoc Linh Mt. Recent material obtained probably mostly from the pitfall traps included a few specimens of *Sinogeotrupes* species which proved to be an undescribed species. Until now, no information has been reported on the occurrence of any *Sinogeotrupes* in Central Vietnam. In addition the record presented here represents so far the southernmost known occurrence of the subgenus.

## MATERIAL AND METHODS

Specimens examined including type materials are deposited in the following collections:  
NMPC - National Museum, Praha, Czech Republic;  
SJCP - Stanley Jákl collection, Praha, Czech Republic;  
VMCP - Vladislav Malý collection, Praha, Czech Republic.

## TAXONOMY

***Phelotrupes (Sinogeotrupes) annamiticus* sp. nov.**  
(Figs. 1-6)

**Type locality.** Vietnam, Kon Tum Province, Mountain Ngoc Linh [approximately 15°04'N 107°58'E].

**Type material. Vietnam: Kon Tum Province:** Holotype, ♂ (NMPC): "VIETNAM 5. 2013 | Kon Tum prov. | Mt. Ngoc Linh | local collector 01 [printed]"; Allotype (♀) (SJCP): "Mt. Ngoc Linh | Kon Tum Prov. | VIETNAM | 2011 MAY [printed]"; Paratype No. 1, ♂ (VMCP), same data as holotype.

**Description of holotype (♂).** Oblong, moderately convex; dorsal surface and legs dark blue; ventral surface black; claws brownish, macrosetation black brownish, dorsal surface finely microsculptured, semialutaceous; habitus as in Fig. 1.

Head (Figs. 2-3). Labrum slightly emarginate anteriorly. Anterior clypeal margin semicircular, feebly upturned; clypeal disc slightly elevated, in posterior third with slightly prominent, obtuse tubercle. Area of frontoclypeal junction slightly depressed, T-shaped suture distinct. Eye tubercle low, obtuse; eye canthus with lateral margin arcuate. Clypeal surface finely, but distinctly shallowly, densely punctate to slightly rugopunctate, clypeal tubercle impunctate, vertex finely, sparsely and irregularly punctate; eye canthus finely rugose.

Pronotum (Figs. 1-2) moderately convex, transversal, broadest just posteriorly of middle, entirely bordered except for basal margin, lateral margin not crenulate, anterior marginal carina slightly elevated and slightly widened especially in middle section, anterior angles broadly rounded, sides almost straight in approximately two anterior thirds, then arcuate to obtuse posterior angles, basal margin moderately evenly arcuate; anterior concavity missing, lateral fovea distinctly impressed, impunctate and shiny, posteromedial fovea lacking, longitudinal midline almost obsolete. Surface distinctly punctate only along lateral margin, double punctation consisting of coarse, shallowly impressed, sparse and irregularly distributed punctures, intermixed with fine, sparsely distributed ones, disc only very sparsely, shallowly punctate.

Scutellum (Figs. 1-2) broadly triangular, distinctly parallel basally, not bordered, impunctate.

Elytron (Figs. 1-2) with distinct humeral umbone; surface with 14 striae impressed along almost entire elytral length, except area of humeral umbone; area between suture and humerus with seven shallowly impressed striae, all striae finely, densely punctate, striae punctures making striae margins slightly crenate, striae 8-14 feebly impressed to hardly indicated, especially in apical third of elytron. Intervals markedly flat, all of approximately same width, with very fine to hardly indicated, sparsely and irregularly distributed punctures.

Macropterous.

Legs. Profemur in anterior half, and meso- and metafemur in posterior half, microsculptured to scabrous, moderately shiny, impunctate; profemur not armed but with distinct transversal edge; metafemur armed with weak denticle on posterior edge. Ventromedial edge of protibia with eight denticles situated along entire length of protibia, denticles 4 and 7 only slightly more developed.

Abdominal ventrites scabrous, coarsely and densely punctate, with short, recumbent macrosetation.

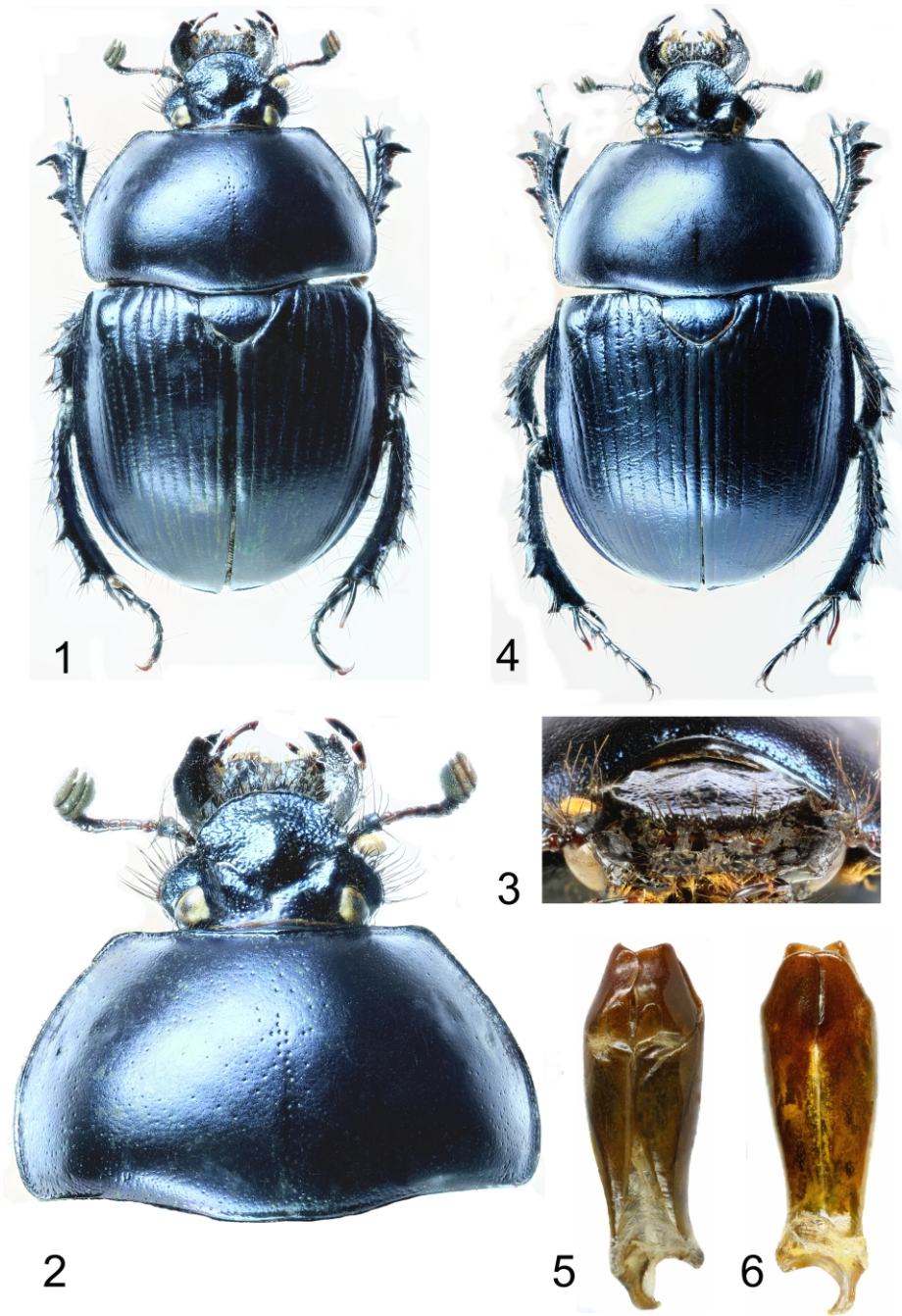
Aedeagus as in Figs. 5-6.

**Variability in males.** Both males show slight individual variation in size (paratype No. 1: 23 mm) and shape and situation of pronotal punctures.

**Sexual dimorphism.** Female (Fig. 4) differs from male as follows: clypeal tubercle more developed; anterior pronotal marginal carina more developed; anterior pronotal concavity present, shallowly impressed; metafemur not armed; protibial denticles vague.

**Measurements.** Total body length: 22-25 mm (holotype - 22 mm, allotype 25 mm).

**Differential diagnosis.** The new species is classified to the *Phelotrupes (Sinogeotrupes)* by having medial club antennomere not markedly narrow, free, distinctly visible in ventral aspect; pronotum in both sexes not armed; protibia in male simple apically; male metafemur with more or less developed denticle posteriorly and phallobasis distinctly projecting caudad ventrally,



Figs. 1-6. *Phelotrupes* [*Sinogeotrupes*] *annamiticus* sp. nov. 1-3, 5-6- holotype (♂), 4- allotype (♀). 1, 4- habitus, 2- head and pronotum, 3- head, 5-6- aedeagus. 1-2, 4-5 dorsal aspect; 3- frontal aspect, 6- ventral aspect. Not to scale.

reaching approximately level of parameres (for details see also Král et al. 2001). In the key to species, *Sinogeotrupes* (Král et al. 2001) will key to the couplet with *P. (S.) jendeki* Král, Malý & Schneider, 2001. For differentiation from this species see the complex of diagnostic characters in Table 1. These two species also have widely separated ranges: *Phelotrupes (S.) jendeki* occurs in Guizhou, China.

Table 1. Differential characters of *Phelotrupes (Sinogeotrupes) annamiticus* sp. nov., and *P. (S.) jendeki* Král, Malý et Schneider, 2001

species / character	<i>Phelotrupes (Sinogeotrupes) annamiticus</i> sp. nov.	<i>Phelotrupes (Sinogeotrupes) jendeki</i>
head tubercles	less prominent, obtuse (Figs. 2-3)	more prominent, acute (Král et al. 2001: fig. 245)
clypeus surface	finer punctate (Figs. 2-3)	coarser punctate
pronotum disc	semialutaceous, with very sparse, shallow punctation (Figs. 2, 4)	glassy, absent from punctation (Král et al. 2001: fig. 245)
elytron intervals	flat (Figs. 1, 4)	slightly convex (Král et al. 2001: fig. 245)
ventromedial edge of protibia in male	with eight denticles situated along entire length of protibia, denticles 4 and 7 only slightly more developed.	with eight denticles situated along entire length of protibia, denticles 4 and 7 distinctly more developed.
parameres	differently shaped (Figs. 5-6)	differently shaped (see Král et al. 2001: figs. 154-155)
body size	22-25 mm	19-24 mm
distribution	Central Vietnam: Kontum Prov., Ngoc Linh Mt.	China: Guizhou Prov.: Yuntaishan Mts.

**Collection circumstances.** Collected from pitfall traps.

**Etymology.** Toponymic; an adjective derived from the name the Annam Mountains (Annamese Cordilleres) where the new species was collected.

**Distribution.** So far only known from the type locality, Ngoc Linh Mt. in the Kon Tum Prov., Central Vietnam.

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