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## Description of a new species of the genus *Neolucanus* Thomson, 1862 (Coleoptera: Lucanidae) from central Vietnam

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### Abstract

*Neolucanus baongocae* new species is described from Lam Dong Province (Central Vietnam) and compared to closely related *Neolucanus* taxa.

**Key words:** Taxonomy, Coleoptera, Lucanidae, *Neolucanus baongocae*, new species, *Neolucanus fuscus*, description, Vietnam

The genus *Neolucanus* Thomson, 1862 (Coleoptera: Lucanidae: Lucaninae), is distributed in the Oriental region and islands of Japan. Krajcik (2003) included 58 species within the genus. Fifteen additional species have been described since 2004:

*Neolucanus svenjae* Schenk, 2004  
*Neolucanus Chiangmaiensis* Schenk, 2006  
*Neolucanus fiedleri* Schenk, 2006  
*Neolucanus shaanxiensis* Schenk, 2008  
*Neolucanus inaharai* Okuda, 2009  
*Neolucanus benoiti* Schenk, 2009  
*Neolucanus quangxii* Schenk, 2009  
*Neolucanus suzumurai* Fujita, 2010  
*Neolucanus pseudovicinus* Fujita, 2010  
*Neolucanus hagiangensis* Fujita, 2010  
*Neolucanus iijimai* Fujita, 2010  
*Neolucanus guizhoui* Schenk, 2011  
*Neolucanus chongguo* Schenk, 2012  
*Neolucanus punctulatus* Quangthai & Schenk, 2013  
*Neolucanus latissimus* Schenk, 2013

Specimens of *Neolucanus* collected in May 2013 at Bidoup—Nui Ba National Park (Lam Dong Province, central Vietnam) were identified as a new species. A comparison of the habitus shows that the new species, *Neolucanus baongocae* **new species**, is different from all other species of *Neolucanus*. Each male mandible has a long, large carina protruded upward and inward along the upper side, which is not present in other species.

Collections examined:

**BNHM:** Natural History Museum, London, United Kingdom

**CMNO:** Canadian Museum of Nature, Ottawa, Canada.

**LBC:** Dr. Luca Bartolozzi's private collection, Italy

**LXC:** Le Xung's private collection, Hanoi, Vietnam

Dao, is instead *N. similis*. **The *Neolucanus maximus* group**, which has stout mandibles, a robust body and a broad canthus. Some species have two vertical teeth on upper side of each mandible. This group includes: *N. angulatus*, *N. baladeva*, *N. giganteus*, *N. insulicola*, *N. maedai*, *N. maximus*, *N. okinawanus*, *N. perarmatus*, *N. protogenetivus*, *N. saundersi*, and *N. tanakai*. (Fujita [2010] downgraded *N. spicatus* to a subspecies of *N. giganteus*). Tsukawaki (2011) described a new species *Neolucanus katsuraorum*, very close to *N. maedai*; very few characters differ between the two, and *N. katsuraorum* may be a synonym or subspecies of *N. maedai*.

I did not assign the species below to any above groups because of a lack of literature in my library: *Neolucanus lividus*, *Neolucanus maculosus*, and *Neolucanus palmatus*.

The female of *Neolucanus baongocae* can be easily distinguished from females of *N. lividus*, *N. palmatus*, and *N. maculosus* by the following characteristics: female of *N. baongocae* reddish black on disc and black at margins of pronotum, whereas body of female of *N. lividus* entirely black; pronotum of female of *N. palmatus* and *N. maculosus* entirely brownish black (Mizunuma & Nagai, 1994).

The new species, *Neolucanus baongocae*, possesses a long upward and inward carina on each mandible. It does not exhibit the characteristics of any of the above groups.

In comparing habitus with other species, the new species, *Neolucanus baongocae*, is closest to the medium form of *Neolucanus fuscus* Didier, 1926, from Tam Dao National Park (Vinh Phuc, Vietnam). *Neolucanus baongocae* can be distinguished from *N. fuscus* by the following combination of characters:

mandibles of large males of *Neolucanus baongocae* proportionally shorter than those of large males of *N. fuscus*; *N. baongocae* with an upraised carina inside the bend of male mandible

pronotum surface red with black margins (totally black in *N. fuscus*)

submentum strongly concave (flat in *N. fuscus*)

Lateral margin of pronotum slightly concave between anterior angle and lateral one (straight in *N. fuscus*)

**Note on the natural history and habitat.** The new species, *N. baongocae*, was found in an undisturbed forested mountain area of Bidoup—Nui Ba National Park, Lam Dong Province. Specimens were collected during the day and when walking around and at night by light traps. The elevation of the collection site was 1550–1623m. The new species was collected on dense, foggy days. The forests at collecting points are characterised by medium-sized trees and high humidity.

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