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**New data on the Xantholinini of the Oriental Region  
31. New species and new records from Laos  
of the Zoological Museum of Copenhagen <sup>(1)</sup>**

(Insecta Coleoptera Staphylinidae)

**Riassunto**

[Nuovi dati sugli Xantholinini della Regione Orientale. 31. Nuove specie e nuovi reperti del Laos dal Museo di Zoologia di Copenhagen]

*Pachycorynus phou* **sp. n.**, *Achmonia solodovnikovi* **sp. n.**, *Metosina laotiana* **sp. n.**, *Indomorphus laotianus* **sp. n.** sono descritti del Laos; *Pachycorynus thai* Bordoni, 2002 è specie nuova per il Laos; nuovi dati geonemici sono forniti per altre due specie. Sono esposte osservazioni sul genere *Achmonia* Bordoni, 2004 e sono proposte le seguenti sinonimie: *Achmonia* Bordoni, 2004 = *Daolus* Bordoni, 2004, **syn. n.**, essendo *Daolus* un sinonimo recente di *Achmonia*; *Thyreoecephalus sondaicus* Bernhauer, 1915 = *Achmonia doloc* Bordoni, 2004, **syn. n.**: per cui il taxon prende il nome di *Achmonia sondaica* (Bernhauer, 1915) ed è la specie tipo del genere. Le seguenti specie sono trasferite dal genere *Thyreoecephalus* al genere *Achmonia*: *A. gestroi* (Fauvel, 1895) **comb. n.** (Burma, Thailand), *A. nigra* (Bordoni, 2009a) **comb. n.** (China: Zhejiang), *A. shibatai* (Bordoni, 2010) **comb. n.** (Taiwan), *A. wogwog* (Bordoni, 2005) **comb. n.** (Australia), *A. cyanoptera* (Erichson, 1839) **comb. n.** (Australia).

**Abstract**

*Pachycorynus phou* **sp. n.**, *Achmonia solodovnikovi* **sp. n.**, *Metosina laotiana* **sp. n.**, *Indomorphus laotianus* **sp. n.** are described from Laos; *Pachycorynus thai* Bordoni, 2002 is new to Laos; new records are listed for other two species. Notes are provided on the genus *Achmonia* Bordoni, 2004 and the following synonymies are proposed: *Achmonia* Bordoni, 2004 = *Daolus* Bordoni, 2004, **syn. n.**, *Daolus* being a junior synonym of *Achmonia*; *Thyreoecephalus sondaicus* Bernhauer, 1915 = *Achmonia doloc* Bordoni, 2004, **syn. n.**: the taxon takes the name *Achmonia sondaica* (Bernhauer, 1915) and is the type species of the genus. The following species are transferred from genus *Thyreoecephalus* to genus *Achmonia*: *A. gestroi* (Fauvel, 1895) **comb. n.** (Burma, Thailand), *A. nigra* (Bordoni, 2009a) **comb. n.** (China: Zhejiang), *A. shibatai* (Bordoni, 2010) **comb. n.** (Taiwan), *A. wogwog* (Bordoni, 2005) **comb. n.** (Australia), *A. cyanoptera* (Erichson, 1839) **comb. n.** (Australia).

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<sup>1</sup> 237<sup>th</sup> contribution to the knowledge of the Staphylinidae.

Key words: Coleoptera, Staphylinidae, Xantholinini, *Pachycorynus*, *Metosina*, *Achmonia*, *Indomorphus*, new species, new synonymies.

## Introduction

In the past I have studied some species from Laos (BORDONI, 2002, 2010) and cited isolated species from this region in other contributions (BORDONI, 2003, 2004a, 2009), but the taxa known from this area are very few, because of past geopolitical and environmental reasons.

In particular the following species are cited in the above listed papers from Laos (with \* the apparently endemic taxa): *Ulisseus dispilus* (Erichson, 1839), *Thyrecephalus annulatus* (Fauvel, 1895), *T. tonkinensis* BORDONI, 2002, *T. feae* (Fauvel, 1895), *Oculolabrus laotianus* BORDONI, 2003\*, *Paratesba laotiana* BORDONI, 2002\*, *P. schillhammeri* BORDONI, 2002\*, *Metolinus laotianus* BORDONI, 2010\*, *M. gardneri* (Cameron, 1945), *Mahavana anomala* BORDONI, 2010\*, *Indolinus mitomorphoides* (Coiffait, 1984), *Phacophallus japonicus* (Cameron, 1933), *Erymus puphan* BORDONI, 2010\*, *Xanthophius filum* (Kraatz, 1859), *Atopolinus sulcatus* BORDONI, 2003\*.

Thanks to the kindness of my friend Alexey Solodovnikov of the Zoological Museum of Copenhagen, I was able to study specimens collected in Laos, especially during May-June 2008, and thus contribute to increase the knowledge of the Staphylinids in the region. This paper reports the results of this study with the descriptions of very interesting species of *Pachycorynus* Motschulsky, 1858, *Achmonia* BORDONI, 2004, *Metosina* BORDONI, 2002, and *Indomorphus* BORDONI, 2002.

I take also the opportunity to provide some general observations on the genus *Achmonia* and to indicate new synonymies related to the genera *Achmonia* BORDONI and *Daolus* BORDONI, and to the species *Thyrecephalus sondaicus* Bernhauer, 1915 and *Achmonia doloc* BORDONI, 2004. I also provide a preliminary list of species belonging to the genus *Achmonia*, some of them previously included in the genus *Thyrecephalus* Guérin-Méneville, 1844.

## Acronyms

cB: coll. BORDONI, Firenze, Italy;

ZMUC: Zoological Museum, University, Copenhagen, Denmark.

## Species

### *Pachycorynus phou* sp. n.

Material examined. Holotype ♂: Laos, Vientiane Prov., Phou Khao Khouay, 700-800 m, 18°20.369'N, 101°48.523'E, A. Solodovnikov & J. Pedersen leg. 25-30.V.2008; paratypes: same data, 2 ♀ (ZMUC), 1 ♂, 1 ♀ (cB).

Description. Body length 5.3 mm; length from anterior margin of head to posterior margin of elytra 2.5 mm. Brown with head black and posterior margin of elytra

yellowish. Similar to *Pachycorynus thai* Bordoni, 2002 but shorter and darker, with deeper puncturation on the head. Pronotum shorter and wider than in *P. thai*, with deeper puncturation.

Tergite and sternite of the male genital segment as in figs 1-2. Aedeagus (figs 3-4) very long, narrow and membranous, with shorter ovoidal basal portion (0.25 mm long), and sub-triangular distal mini-sclerite.

Etymology. The specific epithet, a noun in apposition, refers to the type locality.

Distribution. It is known to me only from the type locality.

Bionomics. The specimens was collected in “disturbed primary rain forest”.

### ***Pachycorynus thai* Bordoni, 2002**

Material examined. Laos, Khammouane Prov., Ban Khounkham (Nahin), 300 m, 18°13.027'N, 104°30.880'E, A. Solodovnikov & J. Pedersen leg. 3.V.2008, 1 ♀ (ZMUC), 1 ♂ (cB).

Distribution. This species was known from Thailand and Malaysia (BORDONI , 2002). New record for Laos.

Bionomics. The specimens were collected in “primary rain forest”.

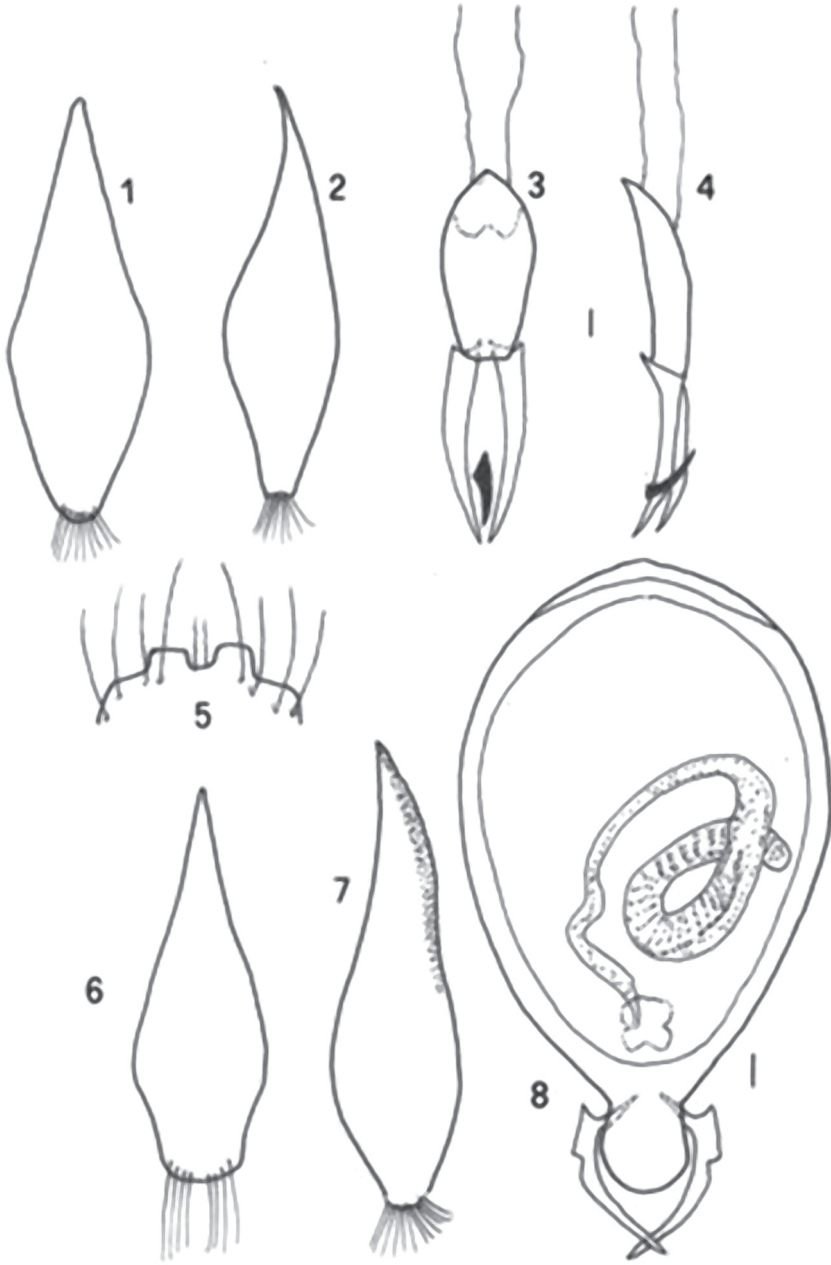
### **Synonymic notes on the genus *Achmonia* Bordoni, 2004**

In June 2004 I described the new genus *Achmonia* differing from genus *Thyreocephalus* by the following characters: labrum narrow, with only two evident median protrusions (fig. 5), very superficial frontal and ocular grooves, female genital segment of different shape (fig. 9), and primarily superior epipleural line of pronotum not jointed with the inferior line (BORDONI, 2004). The type species of genus *Achmonia* was *Achmonia doloc* Bordoni, 2004, from Java, by monotypy.

I had the opportunity to study *Thyreocephalus sondaicus* Bernhauer, 1915 (specimens from Java: Mt Gede, 2000 m, H. Fruhstorfer VIII.1892; Cibodas, 50 km E Bogor, Agosti, Löbl & Burckhardt 3-6.XI.1989; Mt Tengger, 4000'; Java, 1905) and discovered that its external and sexual characters are identical to those of *Achmonia doloc*, so I recognized that the two species are in fact the same taxon, with the following consequences:

- *Thyreocephalus sondaicus* Bernhauer, 1915 is transferred to genus *Achmonia* and becomes *Achmonia sondaica* (Bernhauer, 1915)
- *Achmonia doloc* Bordoni, 2004 becomes a junior synonym of *Achmonia sondaica* (Bernhauer, 1915)
- *Achmonia sondaica* (Bernhauer, 1915) becomes the type species of genus *Achmonia*.

In October 2004 I published the description of *Daolus hromadkai* n. gen. and n. sp. from Nepal., based on a single female with generic characters apparently differing from both *Thyreocephalus* and *Achmonia*. That diagnosis was a mistake. When I thoroughly studied again the types of *Achmonia doloc* Bordoni, 2004 from Java



Figs 1-4. *Pachycorynus phou* sp. n.: 1- tergite and 2- sternite of the male genital segment, 3 and 4- distal portion of the aedeagus in dorsal and lateral view.

Figs 5-8. *Achmonia solodovnikovi* sp. n.: 5- labrum, 6- tergite and 7- sternite of the male genital segment, 8- aedeagus. (bar scale: 0.1 mm).

and *Daolus hromadkai* Bordoni, 2004a from Nepal, the result left no doubt that the two species belong to the same genus. Since *Achmonia* takes priority over *Daolus*, the latter should be considered a junior synonym of *Achmonia*.

Later I discovered a male assignable to *Daolus* (now *Achmonia*) *hromadkai*. I studied its characters and found that *hromadkai* is not a good species, but on the contrary a synonym of *Achmonia eppelsheimi* (Bernhauer & Schubert, 1914) until then included in *Thyreocephalus*. So I concluded that *Daolus hromadkai* Bordoni, 2004a is a junior synonym of *Achmonia eppelsheimi* (Bernhauer & Schubert, 1914) (BORDONI, 2008).

By studying other species of *Thyreocephalus* I realized that some of them should be transferred to genus *Achmonia*. The genus *Achmonia* seems to have a distribution similar to that of *Thyreocephalus*, even if the currently known species are still few.

I propose a preliminary list of species to be assigned to *Achmonia*, including also a new species that will be described here below:

*Achmonia sondaica* (Bernhauer, 1915) **comb. n.** (Malaysia, Java) (= *doloc* Bordoni, 2004), type species

*A. eppelsheimi* (Bernhauer & Schubert, 1914) **comb. n.** (NE India, Nepal, Sikkim, Bhutan) (= *Daolus hromadkai* Bordoni, 2004a)

*A. gestroi* (Fauvel, 1895) **comb. n.** (Burma, Thailand)

*A. solodovnikovi* sp. n. (Laos)

*A. nigra* (Bordoni, 2009a) **comb. n.** (China: Zhejiang)

*A. shibatai* (Bordoni, 2010) **comb. n.** (Taiwan)

*A. wogwog* (Bordoni, 2005) **comb. n.** (Australia)

*A. cyanoptera* (Erichson, 1839) **comb. n.** (Australia)

### ***Achmonia solodovnikovi* sp. n.**

Material examined. Holotype ♂: Laos, Champasak Prov., Bolaven Plt., Muang Paxong, Ban Thongvay, 15°14.054'N, 106°3.867'E, A. Solodovnikov & J. Pedersen leg. 8-16.VI.2008 (ZMUC); paratype: sama data, 1 ♀ (cB).

Description. Body length 11.5 mm; length from anterior margin of head to posterior margin of elytra 6.5 mm. Brown with black head and yellowish elytra (yellow reddish in the paratype). Head narrow, sub-rectangular, with slightly rounded sides and largely rounded posterior angles. Eyes large and scarcely protruding. Surface shiny, with one puncture near the frontal grooves, a large puncture near the anterior internal margin of eyes and two punctures near the posterior margin of eyes; some punctures near the posterior margin of head, arranged in horizontal line. Labrum as in fig. 5. Pronotum narrow, longer and narrower than head, with marked anterior angles, and sinuate lateral sides. Surface shiny, with one puncture near the anterior angles. Elytra visibly longer and wider than pronotum, with marked humeral angles. Surface with 5-6 series of superficial punctures. Abdomen with traces of transverse micro-striation and dense, fine puncturation.

Tergite and sternite of the male genital segment as in figs 6-7. Aedeagus (fig. 8)

large, 2.3 mm long, with short distal lobule, symmetrical parameres; inner sac ribbon-like, covered by scales and spinules.

Etymology. Patronymic. Dedicated to my friend and colleague Alexey Solodovnikov.

Bionomics. This species was collected in “edge of disturbed primary forest, near clearing, FIT”.

Distribution. It is known to me only from the type locality.

Note. This species differs from all the known *Achmonia* by dimension, colour, and sexual characters.

### ***Metosina laotiana* sp. n.**

Material examined. Holotype ♀: Laos, Champasak Prov., Bolaven Plt., Muang Paxong, Ban Thongvay, 15°4.054'N, 106°3.867'E, A. Solodovnikov & J. Pedersen leg. 8-16.VI.2008 (ZMUC).

Description. Body length 6 mm; length from anterior margin of head to posterior margin of elytra 2.8 mm. Reddish brown with black head, Head oblong and narrow, with scarcely protruding eyes. Surface shiny, with deep punctures which almost form a groove under the eyes; a series of punctures under the ocular grooves; some other punctures between the two series. Pronotum shorter than head and as wide as head anteriorly, where it is dilated, with largely rounded anterior angles. Surface shiny, with dorsal series of 5-6 punctures and lateral series of 5 large and superficial punctures. Elytra long, longer and scarcely wider than pronotum, with sub-rectilinear and sub-parallel sides, and marked humeral angles. Surface almost rugose, with some spaced series of fine punctures. Abdomen with polygonal micro-recticulation and fine and sparse puncturation.

Male unknown.

Etymology. The specific epithet refers to Laos.

Distribution. It is known to me only from the type locality.

Note. The genus *Metosina* Bordoni 2002 was described for only one species from Yunnan: *Metosina sinica* Bordoni, 2002. The new species differs from it by lighter colour, larger dimensions, by the puncturation of the head, the pronotum shorter than head and elytra with less series of punctures.

### ***Phacophallus japonicus* (Cameron, 1933)**

Material examined. Laos, Vientiane Prov., Vientiane, 160 m, 17°57.597'N, 102°36.18'E, A. Solodovnikov & J. Pedersen leg. 22.VI.2008, 6 exx. (ZMUC), 3 exx. (cB); same data, Phou Khao Khouay, 700-800 m, 18°20.369'N, 101°48.523'E, A. Solodovnikov & J. Pedersen leg. 25-30.V.2008, 2 exx. (ZMUC), 2 exx. (cB).

Distribution. This species is known from Thailand to South China, Sumatra, Java, Bali, and was already cited from Laos (BORDONI, 2002).

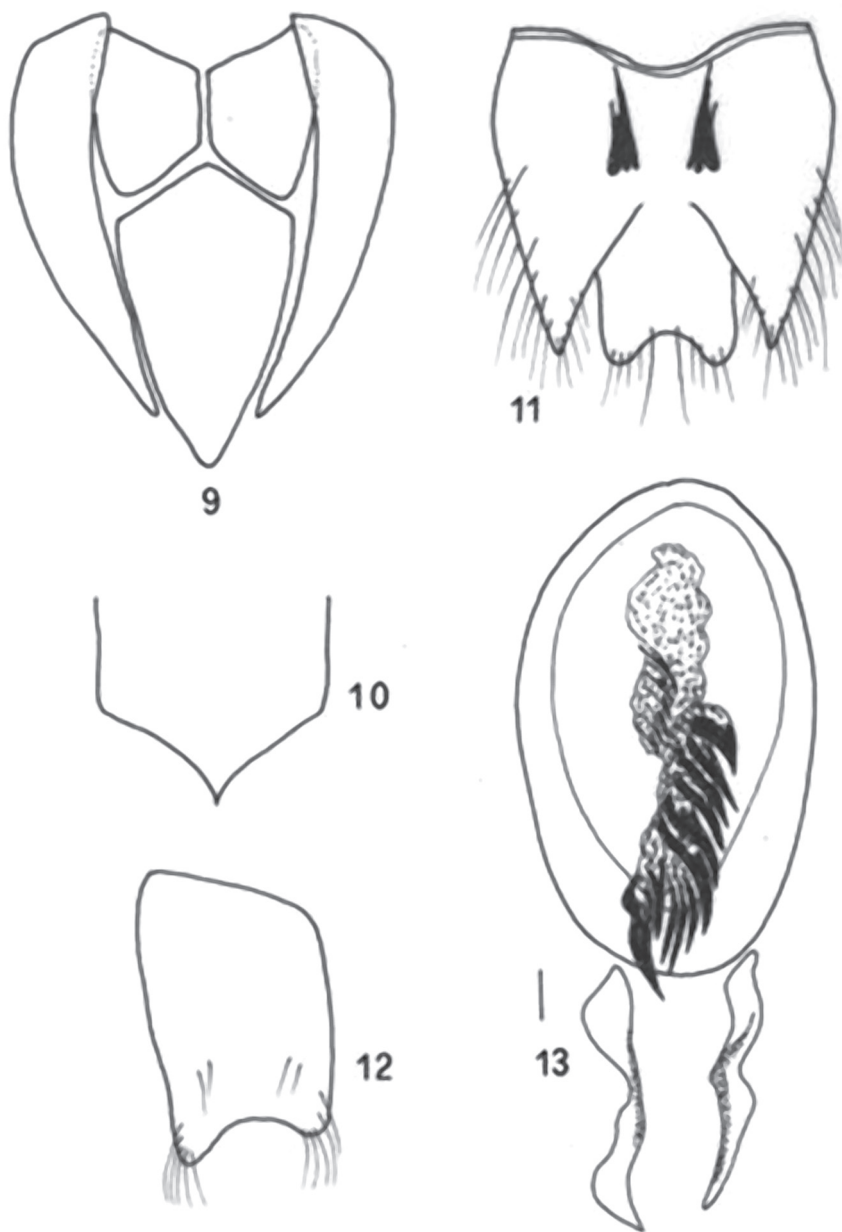


Fig. 9. *Achmonia solodovnikovi* sp. n.: female genital segment in ventral view; Figs 10-13. *Indomorphus laotianus* sp. n.: 10- 6<sup>th</sup> visible tergite, 11- male genital segment in dorsal view, 12- sternite of the male genital segment, 13- aedeagus (bar scale: 0.1 mm).

***Erymus gracilis*** (Fauvel, 1895)

Material examined. Laos, Champasak Prov., Bolaven Plt., Muang Paxong, Ban Thongvay, 1200 m, 15°14.054'N, 106°3.867'E, A. Solodovnikov & J. Pedersen leg. 8-16.VI.2008, 15 exx. (ZMUC), 6 exx. (cB); same data, 8-16.V.2008, 135 exx. (ZMUC), 24 exx. (cB); Vientiane Prov., Phou Khao Khouay, 700-800 m, 18°20.369'N, 101°48.523'E, 700-800 m, A. Solodovnikov & J. Pedersen leg. 26-31.V.2008, 64 exx. (ZMUC), 15 exx. (cB); Khammouane Prov., Ban Khounkham (Nahin), 300 m, 18°13.027'N, 104°30.880'E, A. Solodovnikov & J. Pedersen leg. 3.V.2008, 4 exx. (ZMUC).

Distribution. Turkmenistan, Azerbaijan, and from India to Sumba, including China, and already cited from Laos (BORDONI, 2002).

Bionomics. The specimens were collected in "edge of disturbed primary rain forest, near clearing FIT".

***Indomorphus laotianus* sp. n.**

Material examined. Holotype ♂: Laos, Vientiane Prov., Phou Khao Khouay, 700-800 m, 18°20.369'N, 101°48.523'E, 700-800 m, A. Solodovnikov & J. Pedersen leg. 26-31.V.2008 (MZUC); paratypes: same data, 1 ♀ (MZUC), 1 ♂ (cB).

Description. Body length 5.5 mm; length from anterior margin of head to posterior margin of elytra 3 mm. Reddish brown. Body shiny. Head sub-rectangular, with almost sub-rectilinear and sub-parallel sides. Eyes small and not protruding. Surface with two parallel series of three punctures between the eyes; some spaced punctures near the margins. Pronotum sub-rectangular, narrow, longer than head, as wide as head, with strictly rounded anterior angles. Surface with dorsal series of 6 punctures and lateral series of 5 punctures. Elytra as long as pronotum, wider than pronotum, with marked humeral angles. Surface with 6-7 series of fine and deep punctures. Abdomen with some regular series of fine punctures.

Sixth visible male tergite as in fig. 10. Male genital segment as in fig. 11, with the characteristic denticulate black protrusions on the pleurae that are fused in the proximal portion; tergite partially membranous and fused with the pleurae; sternite as in fig. 12. Aedeagus (fig. 13) ovoidal, 1.4 mm long, with asymmetrical pseudo-parameres; inner sac with numerous big spines.

Etymology. The specific epithet refers to Laos.

Distribution. It is known to me only from the type locality.

Note. This new species is similar to *Indomorphus mirificus* Bordoni, 2002 from Thailand, but differs by the following characters: shorter and lighter body, elytra shorter than pronotum, abdomen without polygonal micro-reticulation and by the shape of pseudo-parameres and inner sac of the aedeagus.

A paratype has darker body and oblong and narrow head.



## Acknowledgements

I wish to thank my colleagues Alexey Solodovnikov (Zoological Museum of Copenhagen) for the loan of the interesting material which this study is based on, and Fernando Pederzani for the useful suggestions.

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