

Laemophloeidae of the ACP Panguana of the Amazon Area of Peru (Insecta: Coleoptera)

Part 2: Description of a new species of *Cryptolestes* GANGLBAUER, 1899 (Col., Laemophloeidae)

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Abstract

A new species of *Cryptolestes* GANGLBAUER, 1899 from the Amazon Area of Peru is described and illustrated: *Cryptolestes thomasi* sp. n.

Introduction

The genus *Cryptolestes* GANGLBAUER 1899 is nearly worldwide distributed, and several of its species are pests in stored grains. Many species are occurring on the American Continent. These species have been revised by THOMAS (1988, 2002a). An additional species was described from Bolivia (THOMAS 2002b). A great number of specimens of *Cryptolestes* have been collected in the primary rain forest of Panguana, a private nature reserve area (Área de Conservación Privada, ACP), which is located in the Amazon lowlands of Peru. Most of them were trapped by light traps. Besides two species already described, several undescribed specimens were found (BREMER & HAUTH 2020). One small species with a few specimens is described here. It was collected exclusively by sifting the upper layer of soil. Males and females of this species are both morphologically well characterized and differ from all other *Cryptolestes* species.

Abbreviations

MHNSM = Museo de Historia Natural Javier Prado of the University San Marcos, Lima, Peru.

ZSM = Zoologische Staatssammlung, München, Germany.

Cryptolestes thomasi sp. n.

Holotype: female specimen: Peru, Dept. Huánuco, Panguana ACP, Río Yuyapichis, 9°37'S-74°56'W, 230 m, Winkler sifter from upper layer of soil, 22.IX.-10.X.2017, leg. S. FRIEDRICH, F. WACHTEL & D. HAUTH (MHNSM).

Paratypes: Ditto (1 ♀, ZSM); Peru, Dept. Huánuco, ACP Panguana, Río Yuyapichis, 9°37'S-74°56'W, 230 m, Berlese, 20.IX.-7.X.2013, leg. S. FRIEDRICH & F. WACHTEL (1 ♂, with only one elytron, ZSM).

Short diagnosis. Besides its small size (max. 1.4 mm), this taxon is characterized by distinctly protruding mandibles in both sexes and – in males – by a thickened anterior part of scape on ventral side (well recognizable only in frontal and transverse view). It exhibits also short elytra and two parallel sublateral lines in form of weakly raised ridges on pronotum. These sublateral lines are not very distinct. Furthermore, this species has small eyes which laterally do not really bulge outwards.

Diagnosis of the Holotype (♀): Frons and epistome are not separated by an incised epistomal suture, but the epistome is situated on a slightly lower level. Frons flat, covered with distinct, well separated punctures of medium size. The epistome is conspicuously brilliant and nearly impunctate. On the lateral sides of frons there are very narrow, slightly upraising borders from the mid of the eyes towards the start of the epistome. The lateral sides of the epistome are narrowing anteriorly towards its acutely angled and somewhat protruding tops. The mandibles are sturdy, protruding distinctly beyond the anterior part of the

labrum and are suddenly bent in their middle; anteriorly they are tripartite. The scape is slightly longer than wide and transversely round, the pedicel is somewhat wider than the following antennomeres; the antennomeres three to eight are moniliform, the antennomeres nine to eleven are slightly thicker and longer than the preceding antennomeres, the longest antennomere is the last one.

Pronotum rectangular, with two parallel sublateral lines in form of weakly raised ridges. Between these sublateral lines the surface is slightly convex transversely; lateral of inner lines the sides are sloping downwards, and lateral of the second line it is stronger sloping downwards (but not perpendicularly); the two sublateral lines are parallel; the inner line reaches the pronotum's basis, the lateral one terminates shortly in front of the base; surface of pronotum slightly micro reticulate and punctured alike frons.

Elytra are nearly oval and widest somewhat behind middle, apex rounded; upper side flat, with a sharp subhumeral carina on each side; a lateral "cell" present, but not well recognizable, inside of lateral "cell" there are three weak striae; upper side impunctate.

Underside. A large, flat chitinous shield on underside of the head is representing the neck; anteriorly it exhibits sharply angled and markedly protruding corners on each side, in between a pursed margin is found; the anterior part includes the gula, this part is closely punctured and shows anteriorly directed setae; the hind three fourths have only widely separated small punctures. The prosternal process is wide between the procoxae, and the prosternal coxae are narrowly open posteriorly. The ventrite III has anteriorly a straight margin between metacoxae, and is not acuminate anteriorly. The ventrites III to VII exhibit widely separated punctures and short, mostly oblique setae.

The head and the pronotum are brown, elytra light brown, underside brown; upper side and underside moderately lustrous.

Body length: 1.3 mm. Body width: 0.4 mm. Ratios. Length/width elytra 1.6, width/length pronotum 1.3, length elytra/length pronotum 2.4

Paratypes: The female paratype shows the same characteristics as the holotype. The male paratype has longer antennae than the females. Antennae of females specimens are overlapping one third of elytra; antennae of the male specimens are overlapping two third of elytra. Its scape is markedly broader and longer than the following antennomeres. It is thickened in its anterior 40 percent on the ventral side with an edge-like transverse maximum just at start of thickness; anteriorly the thickening is sloping, in lateral view the thickened part resembles a wide triangle. The pedicel is smaller and shorter, but thicker than the following antennomeres. The antennomeres three and four are slightly longer than wide, the fifth to the eighth are clearly longer than wide. The last three antennomeres are conspicuously longer than wide.

Body length of all specimens: 1.3-1.4 mm. Body width: 0.4 mm. Ratios. Length/width elytra 1.6-1.8; width/length pronotum 1.3-1.4; length elytra/length pronotum 2.4-2.7.

Usually preparations of genitalia are demanded for characterization of *Cryptolestes* species. We did not do these preparations because the specimens had been stored in alcohol and are very rigid, and we did not want to damage these few specimens, especially the single male with the only one elytron. As our *Cryptolestes* clearly differs from other species of the genus by its external characters and the fact that we have only one male specimen, a genital preparation is not urgently needed.

Differential diagnosis. In males the shape of the scape of *C. thomasi* **sp. n.** with its thickened ventral side is analogous with the shape of the scape of males of *Cryptolestes trinidadensis* THOMAS, 1888. *C. trinidadensis* is the only described species with thickened ventral sides of scape in males. *C. trinidadensis* exhibits a small tooth on the ventral side of scape, and *C. thomasi* **sp. n.** presents a broadening of the anterior part of scape; furthermore the eyes of *C. thomasi* **sp. n.** are small and within the contour of the head while the eyes of *C. trinidadensis* are large and asymmetrically bulging outside the contour of the head; moreover the second sublateral line of pronotum of *C. trinidadensis* is formed as a sharp edge and laterad of it the pronotum descends nearly perpendicularly to the lateral margins; the second sublateral line of pronotum of *C. thomasi* **sp. n.** is not formed like a sharp edge, and lateral of it the pronotum does not descend nearly perpendicularly to the lateral margin.

Specimens of *C. thomasi* **sp. n.** have only been collected by sifting upper layer of soil inside primary lowland rain forest. This is unusual for Laemophloeidae, as they are usually collected at light.

Etymology. Our species is named honouring the late MICHAEL C. THOMAS (1948-2019), former administrator of the entomology section, Florida Department of Agriculture, Gainesville. He was the eminent specialist on Laemophloeidae for decades, and he published outstanding revisional works on Laemophloeidae of America, among them also about the American species of the genus *Cryptolestes*.



Fig. 1: *Cryptolestes thomasi* sp. n., holotype, ♀ (body length 1.31 mm).



Fig. 2: *Cryptolestes thomasi* sp. n., paratype, ♂ (body length: 1.23 mm).



Fig. 3: *Cryptolestes thomasi* sp. n., ♂, head, slightly tilted frontal view. Note, thickened anterior part of scape on ventral side.

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References

- BREMER, H. J. & D. HAUTH 2020: Laemophloeidae of the Amazon Area of Peru (Insecta; Coleoptera). Part 1: Biodiversity. – *Mitteilungen der Münchner Entomologischen Gesellschaft* **120**: 5-47.
- THOMAS, M. C. 1988: A revision of the New World species of *Cryptolestes* GANGLBAUER (Coleoptera: Cucujidae: Laemophloeinae). – *Insecta Mundi* **2**: 43-65.
- THOMAS, M. C. 2002a: Description of four species of *Cryptolestes* GANGLBAUER, with a revised key to the New World species and notes on other species (Coleoptera: Laemophloeidae). – *Insecta Mundi* **16**: 147-155.
- THOMAS, M. C. 2002b: A new species of *Cryptolestes* GANGLBAUER (Coleoptera: Laemophloeidae) from Bolivia. – *Insecta Mundi* **16**: 251-253.

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