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## *Cryphaeus laticeps* sp. n. from the Middle East (Coleoptera, Tenebrionidae, Toxicini)

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### Abstract

A new species of the genus *Cryphaeus* KLUG, 1833 from the Middle East is described and illustrated. Specimens of *C. laticeps* sp. n. were found under the bark of *Quercus*-species in Lebanon, northern Israel: Upper Galilee, Mt. Carmel and the Golan Heights.

### Introduction

The tribe Toxicini is divided into the two subtribes Toxicina and Dysantina (DOYEN et al. 1989). The Toxicina contain the genera *Toxicum* LATREILLE, 1802 (some 30 species from the eastern Palaearctic, the Oriental region, Melanesia and Australia), *Cryphaeus* KLUG, 1833 (some 35 species from the Palaearctic, Afrotropical and Oriental regions, Australia and Melanesia), *Epitoxicum* BATES, 1873 (one species from India and Nepal) and *Taiwanocryphaeus* MASUMOTO, 1996 (one species from Taiwan). They are Tenebrionidae that are elongated and parallel-sided in form. The antennal clubs are three- or four-segmented and flat. The male head is usually characterised by the presence of two to four horns, whilst the females have supra-orbital protuberances (MASUMOTO 1996).

There was a long-standing confusion in differentiating between the genera *Toxicum* and *Cryphaeus* until MERKL (1989) redefined both genera. According to him, *Cryphaeus* has the eyes completely separated, unlike *Toxicum*, and also lacks the epistomal horns that are present in *Toxicum*.

The species of the tribe live in dead wood and probably feed on the fungi living there (DALMON 1993).

#### Acronyms:

ML: Private collection of Martin LILLIG, Saarbrücken, Germany  
 SMNS: Staatliches Museum für Naturkunde, Stuttgart, Germany  
 TAU: Zoological Collections, Tel-Aviv University, Israel  
 ZSM: Zoologische Staatssammlung München, Germany

### *Cryphaeus laticeps* sp. n.

(Figs. 1-5)

**Holotype:** ♂. Golan Heights, Mas'ada Forest, 33°12'40''N 35°45'N 40''E, 27.IV.2004, 315m NN, leg. M. LILLIG (ZSM).

**Paratypes:** Israel, Nahal Keziv, 6.ii.2000, L. FRIEDMANN (1 ♂, TAU, 1 ♂, ML); Israel, Sha'ar HaA'maqim, 9.ii.2000, E. & B. ORBACH (1 ♂, ML); Israel, Upper Galilee, 1 km N Granot Habalil, 14.IV.1998, E. & B. ORBACH (1 ♂, TAU); Israel, Upper Galilee, Nahal Ziv'on, on road Jish-Sasa, 10.iii.2000, E. ORBACH (1 ♂ 1 ♀, TAU); Israel, Upper Galilee, Nahal Ziv'on, on road between Jish-Sasa, 1.iv.2000, E. ORBACH, ex *Quercus* (1 ♂ 1 ♀, TAU); Israel, Mt. Carmel, 400m, 6 April 1993, E. ORBACH (1 ♂, TAU); Israel, Carmel, Basmat Ta'bun, 32°44'N 35°09'E, 6.V.2004 (1 ♂, ML); Nahal Oren, Mt. Carmel, Israel, 2.V.<19>96, leg. PAVLICEK & CHIKATUNOV (1 ♂, ML); Israel, Banias, 25.VIII.1985, A. FREIDBERG (1 ♀, TAU); Bug'ata, Golan, 15.VIII.200 (!), Y. KRAVZSHENKO (1 ♂, TAU); Israel – Odem forest, Golan Höhen 1.000m,

20.II.2002, leg. R. PREISES / coll. M. LANGER (1 ♂ 2 ♀♀, SMNS); Golan Heights, Mas'ada Forest, 33°12'40"N 35°45'N 40°E, 27.IV.2004, 315m NN, leg. M. LILLIG (11 ♂♂, 6 ♀♀, ML, 1 ♂ 1 ♀, ZSM); Lebanon, App. 1876 / alte Sammlung [old collection] Stuttgart (2 Ex., SMNS, 1 ♂ ML).

### Description

Form: Narrow, parallel-sided.

Size: Length: 6.5-9.3 mm. Width: 2.2-3.5 mm.

Colour: Matt black, labrum chestnut-brown, anterior margin of clypeus, mouth-parts and tarsi paler, brownish.

Pilosity: Underside with fine, yellowish, backwardly-directed hairs.

Head (Fig. 1): Broad. With coarse and dense punctures, these separated from each other by narrow spaces. Labrum transverse, weakly emarginate in front; with punctures, and with yellow bristles at the anterior corners. Clypeus in front broadly emarginate in male, somewhat flatter in female. Genae evenly rounded and leading round the eyes. Eyes completely divided, with coarse facets, much larger on the lower surface of the head than on the upper surface, the length to width ratio 3:5 on the lower surface and 2:1 on the upper surface. Frons sunken. Clypeus rather swollen. Mentum subcordiform. Antennae (Fig. 2): club consisting of 4 flattened apical segments. Male horns not haired, well separated from each other, very short to long, slender, distally convergent, at their bases directed obliquely forwards. Females with swellings instead of the horns.

Thorax: Pronotum convex, without any indication of a median furrow, weakly indented basally at middle. Length: width ratio is 3:4. Punctuation denser than on the head, the punctures separated by very narrow spaces. Anterior margin almost straight. Anterior corners distinctly projecting, rounded outside, inside with a right-angle. Posterior angles obtuse. Lateral margins variable individually, from almost straight to slightly sinuous. Base with a double indentation. Anterior and posterior margins not bordered. Scutellum small, flat, with punctures. Prosternum with coarse punctures. Prosternal apophysis curved down between the mid coxae. Mesosternum very short. Punctures coarse. Punctuation of metasternum becoming more sparse towards apex. Sternites with dense, large punctures.

Elytra: Convex, with parallel sides. More than twice as long as their combined width. Base of elytra somewhat narrower than that of pronotum. Shoulders right-angled. Interstitials very weakly arched and without punctures. Punctures of the inner rows much finer than those of the pronotum, becoming much coarser outside and behind. Alae fully developed.

Aedeagus: Narrow, triangular (Fig. 3).

**Diagnosis:** Very distinct from the other species with a four-segmented antennal club because of the indentation of the clypeus, the very dense punctuation of the pronotum, and the genae projecting far over the eyes. The new species can easily be separated from the only other species that occurs in the south-west Palaearctic, *C. cornutus* (FISCHER VON WALDHEIM, 1823), by the four-segmented antennal club, as *C. cornutus* has a three-segmented club. *C. cornutus* is not known to occur within the distribution area of the new species. The record by CHIKATUNOV et al. (2004) in fact refers to *C. laticeps* **sp. n.** In the Oriental species *C. fairmairei* (GEBIEN, 1911), the genae are parallel in front of the eyes, before they become narrow at the level of the anterior margin the eye. In another Oriental species, *C. tenuis* (FAIRMAIRE, 1896), the antennae are more delicate than in the new species. The elytral punctuation is irregular in *C. punctipennis* (GRAVELEY, 1915) from India and Nepal. In its habitus, *C. laticeps* **sp. nov.** resembles the African *C. taurus taurus* (FABRICIUS, 1801) and *C. t. densesculptus* GRIDELLI, 1940, but can be easily separated by the structure of its head. In *C. taurus* s. l. the cheeks are narrower and the anterior margin of the clypeus is straight; in addition, the prosternal apophysis projects horizontally behind the mid coxae.

**Distribution** (Fig. 5): Localities are known from the Lebanon (without more precise information), Upper Galilee, Mt. Carmel and the Golan Heights.

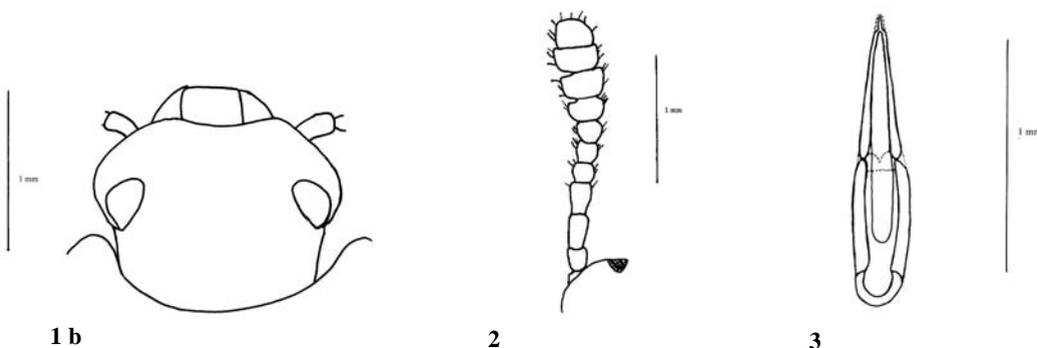
**Etymology:** *Latus*, -a, -um: broad (Latin), *ceps*: head (Latin).

	<i>C. taurus taurus</i>	<i>C. t. densesculptus</i>	<i>C. cornutus</i>	<i>C. laticeps</i> <b>sp. n.</b> <b>nov.</b>
Prosternal apophysis	horizontal	horizontal	curved down behind the coxae	curved down behind the coxae
Clypeus	truncated	truncated	emarginate	emarginate
Antennal club	4-segmented	4-segmented	3-segmented	4-segmented
Pronotal sculpture	interspaces present	very dense large punctures	very dense large punctures	very dense
Elytral rows	all rows with strong punctures	inner rows weaker than outer rows	inner rows distinctly weaker than outer rows	inner rows weaker than outer rows

**Tab. 1:** The characters differentiating *C. laticeps* **sp. n.** from similar taxa.

**Ecology:** The locality label of one of the specimens collected by ORBACH bears the comment “ex *Quercus*”. The holotype and the paratypes from the Mas’ada Forest were collected by day under loose oak bark, where they were resting singly or in groups of up to five individuals. It made no difference whether it was loose bark on dead twigs or on branches or on the trunks. The beetle from Basmat Ta’bun were from the pith of a twig of finger thickness. The search for this beetle on other species of trees was fruitless.

The distribution area of *C. laticeps* **sp. n.** appears to be relatively small. Because of its close association with oak forests, which have been substantially reduced in northern Israel over the last century (SCHWAB et al. 2004), its continued existence must be viewed as threatened.



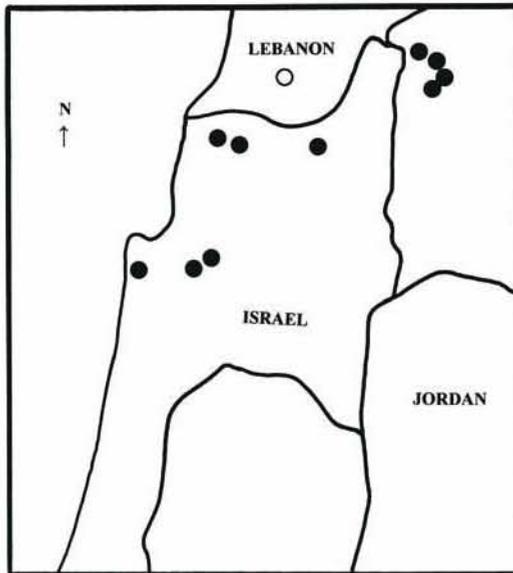
**Figs. 1b, 2 + 3 (scale 1 mm):** **Fig. 1b.** *C. laticeps* **sp. n.** sketch of the head; **fig. 2.** *C. laticeps* **sp. n.** antenna of the holotype; **fig. 3.** *C. laticeps* **sp. n.** aedeagus of the holotype.



1 a



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5

**Figs. 1a, 4 + 5:** Fig. 1a. *C. laticeps* sp. n., holotype; fig. 4. Locality of the paratype from Basmat Ta'bun; fig. 5. Distribution of *Cryphaeus laticeps* sp. n. The precise locality in Lebanon is unknown.

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I thank Dr. Martin BAEHR (München) and Dr. Wolfgang SCHAWALLER (Stuttgart) for the loan of comparative material. I am also very grateful to Prof. Dr. Amnon FREIDBERG, Prof. Dr. Vladimir CHIKATUNOV (Tel Aviv) and Dr. Tomáš PAVLÍČEK (Haifa) for inviting me to undertake a research study visit to the University of Tel-Aviv.

### Zusammenfassung

Eine neue Art des Genus *Cryphaeus* KLUG, 1833 aus dem Nahen Osten wird beschrieben und abgebildet. Die Exemplare des *C. laticeps* sp. n. aus dem Libanon, von den Golanhöhen, aus Oberlaililäa und vom Karmelgebirge wurden an *Quercus* spp. gefunden.

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