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RESEARCH ARTICLE

A new species of *Cyllorhynchites* Voss from Libya (Coleoptera: Rhynchitidae)

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Abstract: *Cyllorhynchites sarahae* **sp. nov.** is described upon some specimens recently collected in Cyrenaica (Libya). The genus *Cyllorhynchites* Voss is new for the Mediterranean Basin: it was so far known only from Asia.

Key words: Coleoptera, Rhynchitidae, Libya, *Cyllorhynchites*, new species, *Quercus coccifera*.

Introduction

A new species of the genus *Cyllorhynchites* rather similar to the central and eastern Asian *C. ursulus* (Roelofs, 1874) was collected in Libya in 2003 and 2005. This finding is quite amazing since members of this genus were thus far known only from eastern Palaearctic, being eastern Afghanistan the closest locality to Libya from where this genus was reported so far (Legalov 2007; Alonso-Zarazaga 2011). A short taxonomic outline follows.

To date the genus *Cyllorhynchites* is composed of four subgenera, *Cyllorhynchites* Voss, 1930 (5 species from central and eastern Asia), *Hypocyllorhynus* Legalov, 2003 (3 species from southeastern Asia), *Hyporhynchites* Voss, 1935 (5 species from southeastern Asia) and *Pseudocyllorhynus* Legalov, 2003 (9 species from eastern Asia) (Legalov 2007).

Voss (1930: 73) erected the subgenus *Cyllorhynchites* for including some closely related species of *Rhynchites* Schneider, 1791. On pages 77 and 78 of the same paper Voss (1930) described *Rhynchites* (*Cyllorhynchites*) *rostralis* Voss, 1930 upon specimens from

China, although the characters he used to distinguish *C. rostralis* from *C. ursulus* (Roelofs, 1874) from Japan are too trivial, being both the integumental colour and the position of antennal insertion on rostrum quite variable, so that *C. rostralis* is now considered (Alonso-Zarazaga 2011) a subspecies of *C. ursulus*. Voss (1930) furthermore divided *Rhynchites* (*Cyllorhynchites*) in three "Gruppen", among the third of them he placed *R. rostralis* and *R. ursulus*, whose male pronotum bears lateral spines, and this taxonomic arrangement is reported as such in the first part of the monographic revision of Rhynchitini by Voss (1938). Some years later the same author (Voss 1949) resurrected the genus *Mecorhis* Billberg, 1820 (always misspelled *Mechoris*) misinterpreting it, and *Cyllorhynchites* was considered subgenus of *Mecorhis* sensu Voss not Billberg. One year later Ter-Minassian (1950: 105) promoted *Cyllorhynchites* to genus, not followed by Voss (1969: 309) who in the second part of his monography still subdivided his *Mecorhis* (again misspelled *Mechoris*) in three groups, the first being the nominotypical subgenus, and the remaining two forming the subgenus *Cyllorhynchites*. Voss comprised in the first group of this subgenus all the species whose males lack of thoracic spines, and in the second the ones with toothed pronotum. Sawada (1993: 66), not modifying the taxonomic arrangement by Voss (1969), gave a long description of *C. ursulus*, illustrating its habitus and aedeagus. Alonso-Zarazaga & Lyal (1999: 41) reinstated the generic rank of *Cyllorhynchites* and gave the new name of *Sawadaia* to the subgenus wrongly considered as *Mecorhis* by Voss (1969). Legalov (2003: 253) furthermore divided *Cyllorhynchites* in four subgenera, two of them described as new, *C.* (*Hypocyllorhynus*) Legalov, 2003 and *C.* (*Pseudocyllorhynus*) Legalov, 2003. *Cyllorhynchites ursulus*, comprised of three subspecies (*C. ursulus ursulus* from Japan and Korea, *C. ursulus rostralis* from China and *C. ursulus afghanus* Legalov, 2003 from Nuristan, eastern Afghanistan), was inserted by Legalov (2003) in the nominotypical subgenus. Furthermore, Legalov (2007: 170) gave subspecific rank under the name of *C. ursulus quercuphillus* Legalov, 2007 to the populations from Korea.

Results

***Cyllorhynchites* (*Cyllorhynchites*) *sarahae* sp. nov.**

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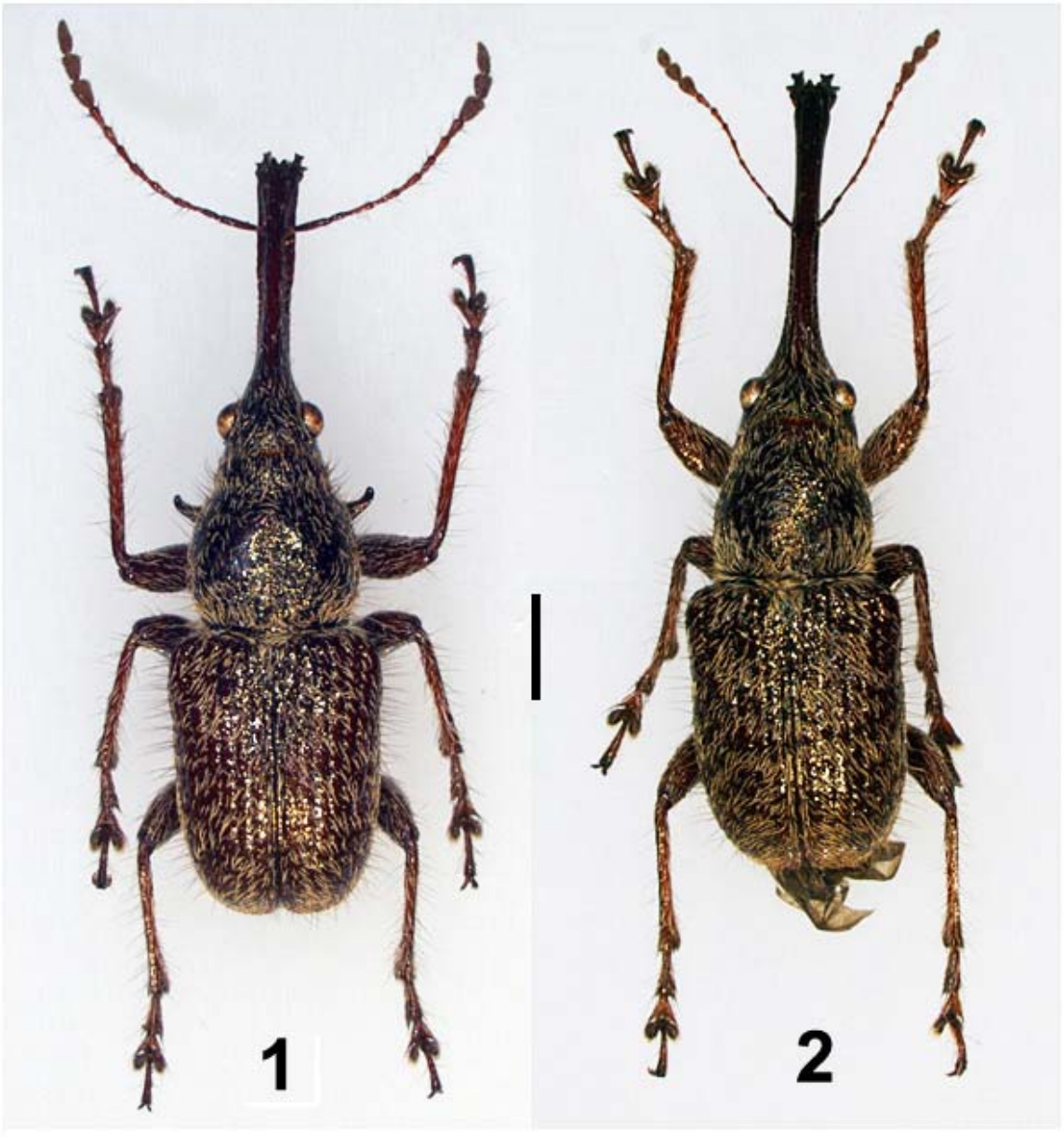
Diagnosis: A middle-sized *Cyllorhynchites* with rostrum longer than the combined length of head and pronotum, integument shining, golden-brownish and only in part hidden by the double pubescence (Figs 1 and 2).

Type locality: Libya, Cyrenaica: Ras' al Hilăl.

Holotypus ♂: Length (excluding rostrum): 4.9 mm. Rostral length: 3.2 mm. Integument shining, dark brown with golden tinge on pronotum and elytra. Tibiae and fore tarsi, middle of rostrum and antennal segments 2-7 lighter brown. Dorsal clothing of almost recumbent slanting shorter white setae generally distributed, and of long, erect setae of the same integumental colour which on elytra are inserted on strial punctures. Both kinds of scales point forward on pronotum and backward on elytra. Ventral clothing of rather thick recumbent white scales. Head transverse, frons wide, interocular distance more than twice the diameter of an eye. A shallow impression is at the level of rostral basis. Rostrum slender, rectangular, longer than the combined length of head and pronotum, almost straight in lateral view, and only slightly bent at antennal insertion; dorsum quite flat, shining, bare, longitudinally sulcate at antennal insertion, densely punctured on widening apical part,

concave on sides, ventral side denticulate medially. Antennae inserted at apical two-third of rostrum. Scape as long as width of rostrum between antennae; first segment of funiculus oval, about as long as half of scape, second as long as scape, 3-7 subequal and a little shorter than scape; segments of club opaque, all longer than wide, being the second the shortest, and the third slightly compressed and with sharp apex. Pronotum globose and clearly constricted just basad of anterior margin, longitudinally rugulose in the middle, with rather shallow and moderately dense punctures, sides rounded. Thoracic spiniform processes visible from above in the form of a rather blunt compressed hook curved forward. Elytra rectangular, one and a half times longer than wide, subparallel-sided. Striae rather shallowly punctate. Interstriae almost flat, impunctate, much wider than striae. Femora quite short, clubbed, tibiae straight, the anterior ones longer that others, tarsi short, first segment as long as the following ones, claws separate.



Figures 1-2. *Cyllorhynchites sarahae* **sp. nov.**: **1**. male paratype; **2**. female paratype. Scale bar = 1 mm.

Paratypes: Length (excluding rostrum): 4.6-5.2 mm. Integumental colour a little variable from dark to slightly paler brown, immatures excepted. Females lack of thoracic spines, their antennae are inserted close to or slightly apicad of midpoint of rostrum which is on average slightly thinner and longer than that of males, in addition of being less abruptly constricted at base so that the head appears more triangularly elongate in front of eyes which are les protruding from head sides that those of males.

Etymology: The new species is named after Sarah Ringenbach, young daughter of its first collector, Jean-Claude Ringenbach.

Type material: "Libya, Cyrenaica, Ras' al Hilăl [32° 52' N, 22° 10' E], 28.VI.2003, J.-C. Ringenbach", 1 ♂ holotypus (Muséum National d'Histoire Naturelle, Paris), and 1 ♂ and 3 ♀♀ paratypi (1 coll. Biondi, 3 coll. Ringenbach); "Road to al Qubba, Ras' al Hilăl, Cyrenaica, Libya, 27.VI.2003 J.-C. Ringenbach", 3 ♀♀ paratypes (1 coll. Biondi, 2 coll. Ringenbach); "Ras' al Hilăl, Libye, 22.V.2005, P. Weill", 1 ♂ e 2 ♀♀ paratypes (2 coll. Colonnelli, 1 coll. Weill); "Wadi al Kûf, Libye [32° 42' N, 21° 34' E], 24.V.2005, P. Weill", 2 ♂♂, 1 ♀ paratypes (coll. Weill).

Remarks: Among the species of the nominotypical subgenus *Cyllorhynchites* the closest to *C. sarahae* is *C. ursulus*, but the new species is easily distinguished by its smaller size (4.6-5.2 mm instead of 6.3-8.0 mm), shorter pronotum with more rounded sides, more shining integumental colour, and less dense clothing. Similarly sized species of *Cyllorhynchites* are only among the subgenera *Hypocyllorhynus* and *Pseudocyllorhynus*, immediately differing thus from *C. sarahae* by the lack of thoracic spines in males and by the black or blue colour of integument.

Ecology: The new species has been collected in a rather dry garrigue habitat (Fig. 3) on leaves of quite young *Quercus coccifera* L. (Fig. 4). This ecological record is in agreement with what we know on the biology of the close *Cyllorhynchites ursulus*, indicated as living on a number of oak species in Korea, China and Japan, and sometimes damaging oak forests. The biology of *C. ursulus* has been the object of some publications by applied entomologists exactly for it resulting sometime a pest (Fukumoto & Kajimura 2001; Fukumoto & Kajimura 2003; You *et al.*, 2001). Females of *C. ursulus* lay eggs inside the immature acorn, then cutting the petiole so that the acorn falls on the ground. Larvae breed inside the fruit, overwinter in the soil, and adults fly during the following spring.

Distribution: *Cyllorhynchites sarahae* is known only from the two above-mentioned localities of Cyrenaica. Since all other thus far described species of the genus occur in Asia one can wonder about the origin of the Libyan species. Probably *C. sarahae* is a remnant of a past wider range of the genus in North Africa and/or the Mediterranean. To shed light on this problem it will be necessary to determine distribution and precise biology of *C. sarahae*, in addition to make a new taxonomic revision of the genus *Cyllorhynchites* taking into account more the characters truly relating the species instead of proposing new questionable taxa by emphasizing sexual or integumental color features as hitherto done by Legalov (2003, 2007), author strongly criticized by Alonso-Zarazaga (2011) among others.

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Figure 3. Habitat of *Cyllorhynchites sarahae* **sp. nov.**: *Quercus coccifera* on the road to al Qubba, Ras' al Hilăl, Cyrenaica, Libya, 27.VI.2003, photo J.-C. Ringenbach.

Figure 4. Female of *Cyllorhynchites sarahae* **sp. nov.** on a leave of *Quercus coccifera*, road to al Qubba, Ras' al Hilăl, Cyrenaica, Libia, 27.VI.2003, photo J.-C. Ringenbach.

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