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## A new species of *Otiorhynchus* (*Aranihus*) from northern Morocco (Coleoptera, Curculionidae, Entiminae)

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*Otiorhynchus* (*Aranihus*) *ketamaensis* sp. n. is described from the Rif Mountains of Morocco. The new species is compared with *O. (Aranihus) kaci* Peyerimhoff, 1908 from Algeria.

Keywords: Coleoptera, Curculionidae, Entiminae, *Otiorhynchus*, *Aranihus*, *ketamaensis* sp. n., Morocco, Rif Mountains.

### INTRODUCTION

Among the material collected by the junior author in Morocco during a study trip in December 2001, a new species of *Otiorhynchus* was discovered belonging to the subgenus *Aranihus* Reitter, 1912. The subgenus *Aranihus* contains about 21 species distributed from the Iberian Peninsula to Northern Africa (Morocco, Algeria and Tunisia), among them many endemic species in mostly mountainous regions. At present the subgenus is under revision (Alonso-Zarazaga & Magnano, in preparation).

At the same locality near Ketama in the Rif Mountains, where the new species described here originates, already the new weevil species *Acalles parasierrae* Stüben, 2002, *Echinodera ketamaensis* Stüben, 2002, and *Kykliacalles tidiquinensis* Stüben, 2002, were discovered during the same excursion (Stüben 2002). In the following the new *Otiorhynchus* species is described.

### MATERIAL & METHODS

The nomenclature used here follows Van den Berg (1972). The male and female genital structures are extracted and stored in glycerine containing glass vials, pinned under the mounted exemplars. The genital structures were photographed beneath glycerine with a 4 MB camera under a stereomicroscope. The same camera was used for depicting the habitus. The images were modified with the program Auto-Montage for best results in depth of sharpness and then reworked using Adobe Photoshop. Body size was measured dorsally from the apex of the elytra to the front margin of the thorax.

The holotype is deposited in the Natural History Museum Bern (NMBE). The paratype is deposited in the Luigi Magnano collection, Poggibonsi (cLM).

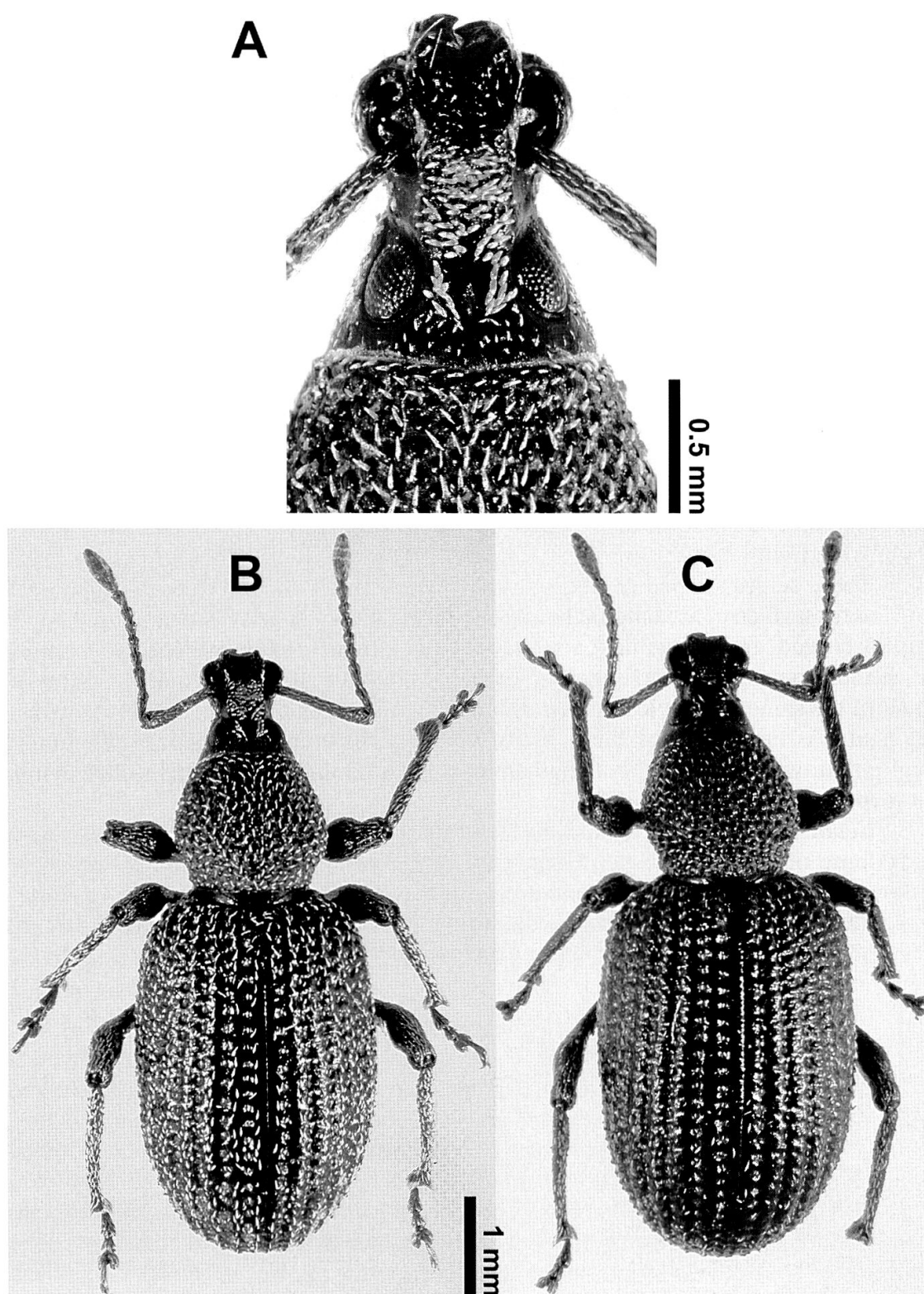


Fig. 1. Head (A) and habitus of the male holotype (B); habitus of the female paratype (C) of *Otiorhynchus ketamaensis* sp. n...

## DESCRIPTION

*Otiorhynchus (Aranihus) ketamaensis* Magnano & Germann sp. n.  
(Figs 1 and 3)

*Holotype*: 1 male: «Morocco, Rif Mountains, 10 km W Ketama (= Issaguen), 1600 m, unter *Prunus lusitanica* in Zedernwald, N34°57'40"/ W04°40'51", 26.12.2001, leg. Ch. Germann». Red label: Holotype *Otiorhynchus (Aranihus) ketamaensis* des. Magnano & Germann 2008 (NMBE).

*Paratype*: 1 female: Same indications as the holotype. Red Label: Paratype *Otiorhynchus (Aranihus) ketamaensis* des. Magnano & Germann 2008 (cLM).

*Locus typicus*: Morocco, Rif Mountains, Ketama.

*Holotype*

*Size*: Length: 5.6 mm, maximum width: 2.6 mm. Body color: Dark auburn, antenna and legs light auburn.

*Rostrum and antenna*: Epistome triangular, labrum with bulged U-shaped back margin which is elevated above the surface of the epifrons. The surface is bright with dense punctures. The antennal scrobes are closed anteriorly, the rostrum is at this point as broad as at the level of the eyes. The epifrons with parallel sides and covered with dense, umbilicated punctures from which oval elongated scales arise. These scales are pedunculated at the base and not adherent to the integument. The lateral surface of the antennal scrobes near the eyes is glossy and shining. Scape weakly curved, gradually thickened from the base to the apex, with dense punctures. From these punctures arise slightly elevated hair-like scales. Funicular segments 1 and 2 of the same size, twice as long as wide. The segments 3–6 are as long as wide, segment 7 is little longer than wide (L/W: 1.2). The club of antenna is 2.3 times longer than wide with the first segment cone shaped and as long as the following segments.

*Head*: Twice as wide as long, forming a cone with the rostrum. The cone ends at the base of the antennal scrobes. Eyes scarcely convex, oval shaped, encircled with a faint groove. The interocular space is a little bit narrower than the epifrons at the level of the insertion of the antenna. The integument is covered with the same scales as the epifrons, except that they are raised, and towards the front margin of the thorax they are very slender. Vertex with an elongated groove.

*Thorax*: Convex, as long as wide, the maximal width is shortly after the middle. The surface is granulated. The granuli are oval shaped, transverse, faintly flattened, on the top bright, with a puncture at the distal margin. In the punctures arise slightly spatulate scales, approximately as long as the diameter of the granuli. The space in between the granuli is almost as wide as their diameter.

*Elytra*: Elliptical, 1.6 times longer than wide with parallel sides in the middle. Striae with punctures, these are faintly rectangular, distinct and deep, distant from each other by half of their length. Punctures with minute, slightly spatulate scales, which are half as long as the diameter of the punctures. The scales arise from the anterior margin of the punctures. Interspaces as large as the striae, covered by disordered series of 1–2 fine, radula toothed granuli. From the radula toothed granuli on the interspaces arise spatulate scales. These are raised and curved towards the integument. The scales arise from the posterior margin of the radula toothed granuli.

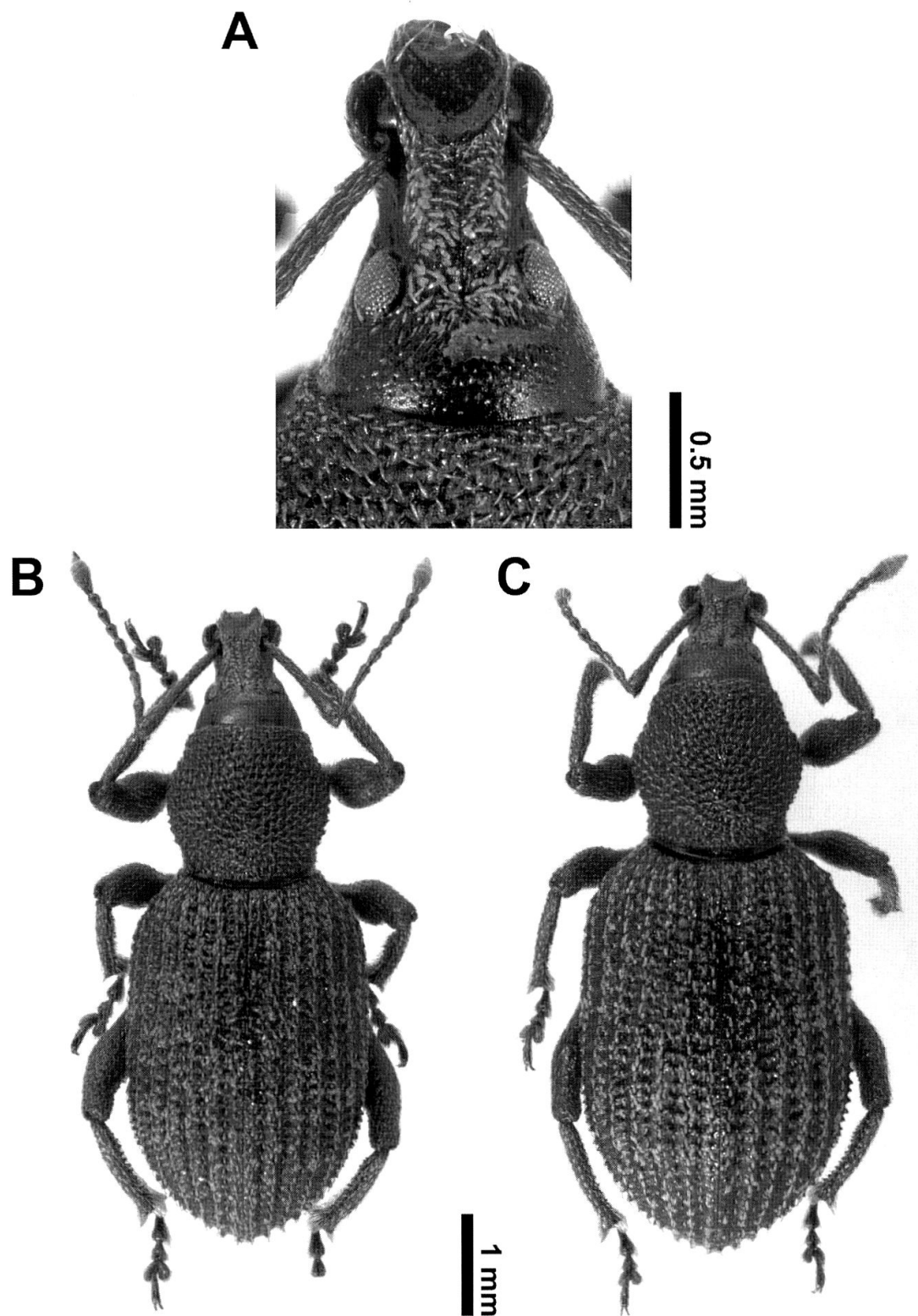


Fig. 2. Head (A) and habitus of the male (B) and female (C) of *Otiorhynchus kaci* Peyerimhoff, 1908.

Tab. 1: The most conspicuous characters to separate *Otiorhynchus ketamaensis* sp. n. from *O. kaci* Peyerimhoff, 1908.

<i>Otiorhynchus ketamaensis</i>	<i>Otiorhynchus kaci</i>
Frons distinctly elevated over epifrons.	Frons not or slightly elevated over epifrons.
Sides of the epifrons are parallel.	Sides of the epifrons are slightly convergent towards the eyes.
Interocular space a little narrower than the epifrons at the level of the insertion of the antenna.	Interocular space as wide as the epifrons at the level of the insertion of the antenna.
Funiculus of the antenna thicker, funicular segments 3-6 shorter.	Funiculus of the antenna slender, funicular segments longer.
Elytral intervals with series of fine radula toothed granuli.	Elytral intervals with a series of elevated, prominent radula toothed granuli, so that the intervals seem to be carinate.
Scales of the elytra are thinner.	Scales on the elytra are bigger and longer, especially the ones in the punctures of the striae.
Apex of aedeagus is blunt (Fig. 3A).	Apex of aedeagus is attenuate (Fig. 4A).

On the sides and at the decline of the elytra the integument is sparsely covered with oval, pale-gray colored and pearly shimmering scales which are longer than wide.

*Sternites*: 1–5 (L/W): 0.52, 0.43, 0.27, 0.25 and 0.56. Sternite 1 is extensively impressed in the middle; sternite 2 is inclined towards its front margin and granulate in the middle. Slightly spatulate, weakly raised scales arise from the integument.

*Legs*: Femora claviform, tibia straight, covered with hair-like scales, similar to those on the antennal scape.

*Head*: Fig. 1A.

*Habitus*: Fig. 1B

*Aedeagus*: Fig. 3A.

*Internal sac*: Fig. 3B.

*Remark*: The left front tibia and tarsus as well as the claws of the left middle leg of the holotype are missing.

### Paratype

The female paratype differs from the male holotype by its slightly wider elytra and by its bigger appearance. Body length: 6.5 mm, maximum width: 3.1 mm, elytra 1.4 times longer than wide. The sternites 1–5 are as follows (L/W): 0.53, 0.5, 0.25, 0.24 and 0.6. Sternites 1 and 2 are flattened and not impressed, granuli on sternite 2 are absent.

*Habitus*: Fig. 1C.

*Spermatheca*: Fig. 3C.

*Spiculum ventrale*: Fig. 3D.

*Remark*: The ovipositor of the paratype is missing.



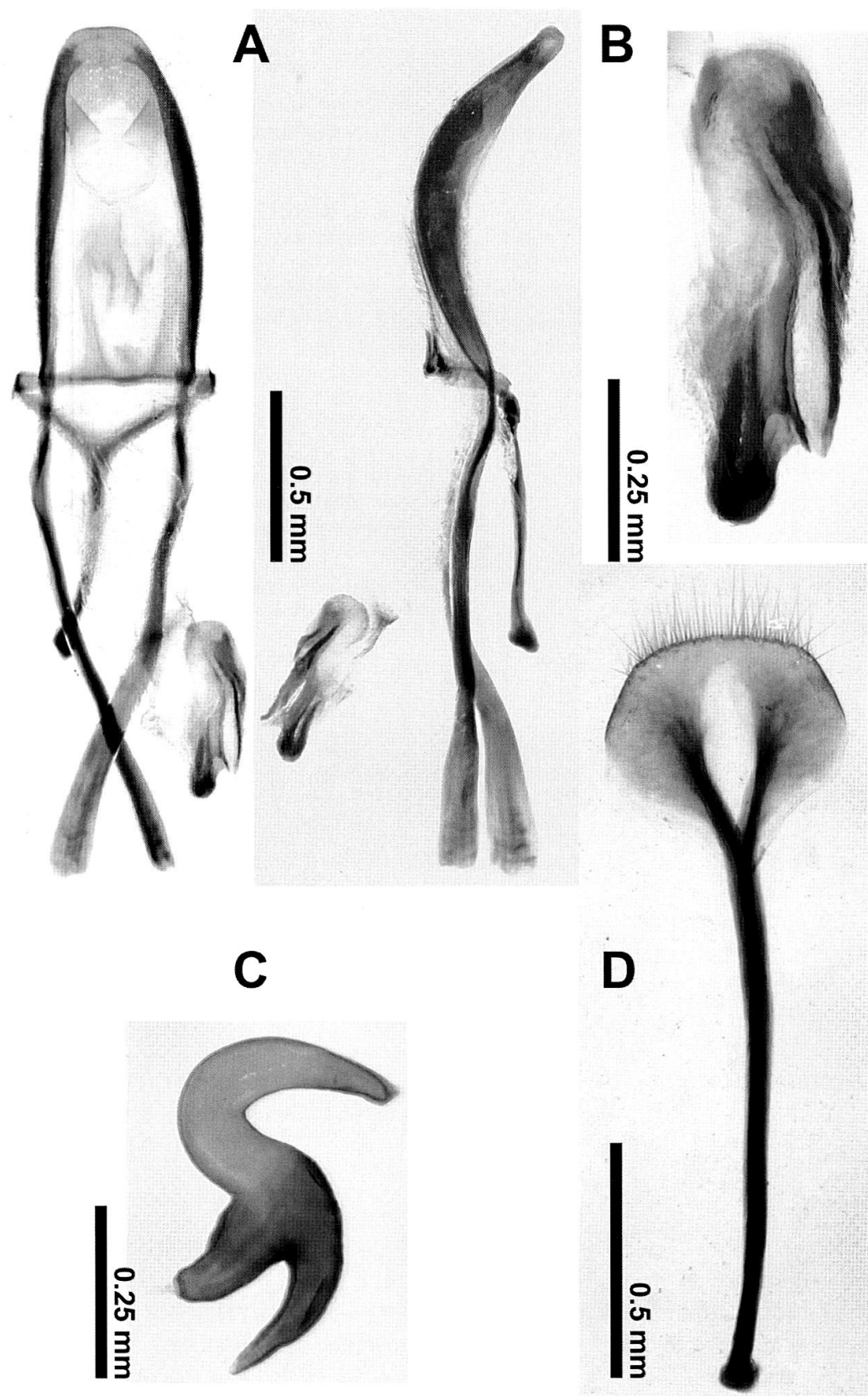


Fig. 3. Aedeagus (A) dorsal (left) and lateral (right); internal sac (B); spermatheca (C) and spiculum ventrale (D) of *Otiorhynchus ketamaensis* sp. n.

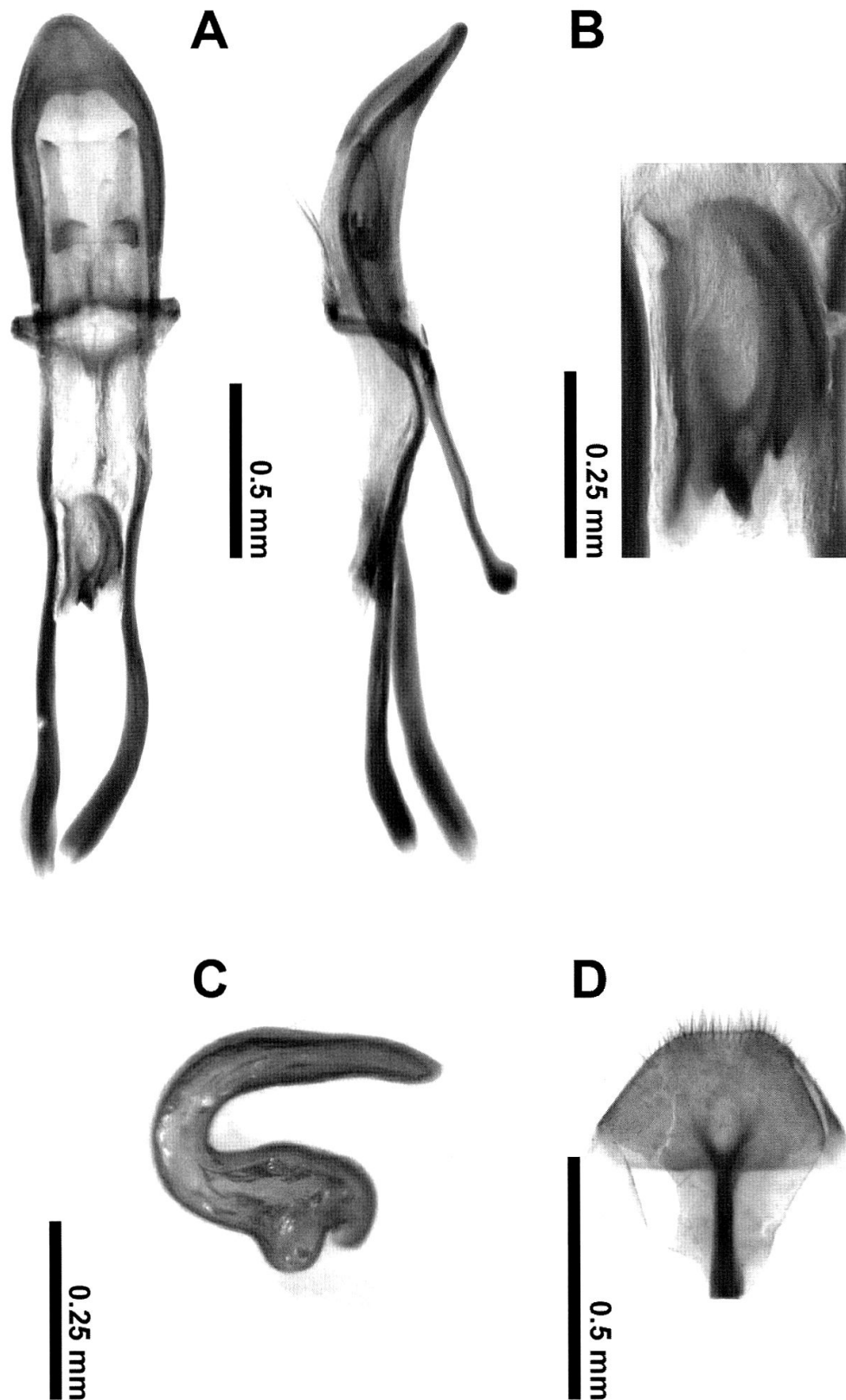


Fig. 4. Aedeagus (A) dorsal (left) and lateral (right); internal sac (B); spermatheca (C) and spiculum ventrale (stem omitted) (D) of *Otiorhynchus kaki* Peyerimhoff, 1908.



### *Differential diagnosis*

Because of their similarity concerning external and genital morphology, *O. ketamaensis* sp. n. is compared with its supposedly closest relative *O. kaci* Peyerimhoff, 1908. *O. ketamaensis* sp. n. differs from *O. kaci* Peyerimhoff, 1908, by the shorter and thicker funiculus of the antenna, by the slender interocular space, by the thinner scales on the elytra, by the less pronounced radula toothed granuli on the interspaces of the elytra and the blunt apex of the aedeagus (Tab. 1; Figs 2 & 4). The two individuals (1 male, 1 female) of *O. kaci* used for comparison were indicated as follows: «Algerie – Djourjiura 5. v. 1983 – 2180 m Brandmayr leg.» (cLM).

### *Bionomy*

The new species was found along the road from Chefchaouen towards Ketama, approximately 6 km west of Ketama by sieving the leaf litter under *Prunus lusitanica* L. in a *Cedrus atlantica* forest. There were typical *Otiorhynchus*-feeding traces at the margins of the leaves of *P. lusitanica*, so probably *O. ketamaensis* sp. n. was feeding on this tree. Pictures from the biotope are presented in Stüben (2002).

### *Etymology*

The new species is named after its place of discovery, the small village Ketama.

### ACKNOWLEDGMENTS

We thank Charles Huber (NMBE) who provided technical equipment for taking the photos and the referee Enzo Colonnelli (I, Roma) for his helpful comments.

### ZUSAMMENFASSUNG

Eine neue Art der Gattung *Otiorhynchus* (*Aranihus*) aus Marokko (Coleoptera, Curculionidae, Entiminae). Mit *Otiorhynchus* (*Aranihus*) *ketamaensis* sp. n. wird eine neue Art aus dem Rif-Gebirge Marokkos beschrieben, sie wird mit *O. (Aranihus) kaci* Peyerimhoff, 1908 aus Algerien verglichen.

### LITERATURE

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