

CONTRIBUTION TO THE KNOWLEDGE OF THE MOROCCAN FAUNA OF *STERNOCOELIS* LEWIS, 1888 AND *ERETMOTUS* LACORDAIRE, 1854 (COLEOPTERA: HISTERIDAE)

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ABSTRACT

Contribution to the knowledge of the Moroccan fauna of *Sternocoelis* Lewis, 1888 and *Eretmotus* Lacordaire, 1854 (Coleoptera: Histeridae).

After several years of field research on Moroccan myrmecophilous Histeridae new data are given for the genera *Sternocoelis* Lewis, 1888 and *Eretmotus* Lacordaire, 1854. *Sternocoelis berberus*, a remarkable new species from the Moroccan High Atlas, is described and figured. *Sternocoelis atlantis* Théry, 1921 is recognized as a junior synonym of *Sternocoelis hispanus* Rosenhauer, 1856. *Sternocoelis bedeli* Lewis, 1884, *Sternocoelis setulosus* Reitter, 1872 and *Eretmotus eurysternus* Yélamos, 1992 are recorded for the first time from Morocco.

Key words: Coleoptera, Histeridae, *Sternocoelis*, *Eretmotus*, new species, synonymy, new data.

RESUMEN

Después de varios años de trabajo de campo sobre los Histeridae mirmecófilos de Marruecos, se aportan nuevos datos sobre los géneros *Sternocoelis* Lewis, 1888 y *Eretmotus* Lacordaire, 1854. Se describe y figura *Sternocoelis berberus*, una nueva y muy interesante especie del Alto Atlas. *Sternocoelis atlantis* Théry, 1921 es pasada a sinonimia de *Sternocoelis hispanus* Rosenhauer, 1856. *Sternocoelis bedeli* Lewis, 1884, *Sternocoelis setulosus* Reitter, 1872 y *Eretmotus eurysternus* Yélamos, 1992 son citadas por primera vez de este país.

Palabras clave: Coleoptera, Histeridae, *Sternocoelis*, *Eretmotus*, nueva especie, sinonimia, nueva cita.

INTRODUCTION

The Moroccan fauna of *Sternocoelis* Lewis, 1888 and *Eretmotus* Lacordaire, 1854 was largely studied by Lewis, Walker, Théry, Escalera and Peyerimhoff (all the bibliographical references could be found in Yélamos, 1992 and 1995). The present study is mainly based on new material, collected between 1995 and 2001. Yélamos in his revision of the genera *Sternocoelis* Rosenhauer, 1888 (YÉLAMOS, 1995) and *Eretmotus* Lacordaire, 1854 (YÉLAMOS, 1992) mainly studied the type material. He recognized in his revision 10 species of the genus *Sternocoelis* Lewis, 1888 and 3 species of the genus *Eretmotus* Lacordaire, 1854 from the Moroccan territory.

In the present study many new data on several species are given, as well as the description of a new species.

SYSTEMATIC PART

Genus *Sternocoelis* Lewis, 1888

Sternocoelis otini Peyerimhoff, 1949

NEW RECORDS: 2 ex., "Ifrane env, 2.5.1995, T. Lackner leg.; 7 ex., Boulemane, 7.9.2000, nests of *Cataglyphis mauritanica*, A. Tinaut leg."

It is only known from the Ifrane area in the Moroccan Middle Atlas (Ifrane, Azrou and Boulemane).

Sternocoelis fuscus Schmidt, 1888

NEW RECORDS: 8 ex., "Morocco North, Rif mountains, Bab Berred, 1.300 m, 2-3.6.1998, T. Lackner and I. Smatana leg."; 7 ex., "Morocco central, Middle Atlas, Ifrane env., 1.800 m, 2.5.1995, P. Prudek and T. Lackner leg."; 10 ex., same locality but 12.5.2000, T. Lackner leg.; 2 ex., "Middle Atlas, Ifrane, Tizi-n-Tretten, 13.5.2000"; 3 ex., "Middle Atlas, Aguelmame Azizga, T. Lackner leg., 10.5.1997".

Until now it was only known from the North of Morocco: Tangiers and Larache and one record from Beni Mellal, Middle Atlas. Now it extends its previously known distribution to the Rif mountains and other areas from of the Middle Atlas mountains.

Sternocoelis alluaudi Théry, 1921

NEW RECORDS: 13 ex., "Morocco central, Middle Atlas, Ifrane env., 1.800 m, 2.5.1995, T. Lackner leg."; 10 ex., same locality, but 18-19.5.1999, P. Prudek and I. Smatana leg. and other 20 ex. collected on 12.5.2000, T. Lackner leg."; 4 ex., "Ifrane env., Tizi-n-Tretten, 13.5.2000, T. Lackner leg."; 2 ex., "Ifrane, 17-21.6.1998, T. Lackner leg."; 2 ex., "Morocco North, Taza National Park, Gouffre du Friouato env, 13.6.1998, T. Lackner leg."; 1 ex., same locality, but Djebel Tazzeke, 14-16.6.1998, T. Lackner leg.

Until now it is only known from the Middle Atlas, the Rif mountains and the environs of Salé.

***Sternocoelis acutangulus* Lewis, 1887**

NEW RECORDS: 10 ex., "Morocco North, Taza National Park, Gouffre du Friouato env., 14-16.6.1998, T. Lackner & I. Smatana leg."; 3 ex., same locality, but Djebel Tazzeke, 14-16.6.1998, T. Lackner leg.; 4 ex., "Morocco central, Middle Atlas mountains, Ifrane env., 1.800 m, 1-3.5.1995, T. Lackner & P. Prudek leg."; 7 ex., same locality, but 12.5.2000, T. Lackner leg.; 2 ex., "Morocco central, Middle Atlas, Aguelamame Azigza, 1.600 m, 30 km East of Khenifra, 15-17.5.2000, T. Lackner leg."; 6 ex., "Morocco North, Rif mountains, Bab Berred, 1.300 m, 2-3.6.1998, T. Lackner & I. Smatana leg."; 9 ex., "Morocco North, Ksar-es-Seghir env., road Tanger-Sebta, 17-18.3.1999, T. Lackner leg."

The specimens from the Middle Atlas are somewhat different from those from the North of the country regarding the inner prosternal striae (the specimens from northern Morocco have the inner prosternal striae more distinctly marked and more elevated).

In Morocco it was known until now only from the North of the country: Rif mountains and environs of Tangiers. The present records from the Middle Atlas mountains extend its distribution more southwards and eastwards than previously thought.

***Sternocoelis bedeli* Lewis, 1884**

NEW RECORDS: 1 ex., "Morocco North-east, Beni Snassen mountains, Taforhalt, 1.200 m, 15.12.1997, T. Lackner leg."; 1 ex., same locality, but 25.3.1998, T. Lackner leg.

So far known only from Algeria. It is a new species for Morocco.

***Sternocoelis setulosus* Reitter, 1872**

NEW RECORDS: 7 ex., "Morocco North-east, Beni Snassen mountains, Taforhalt, 1.200 m, 15.12.1997, T. Lackner leg."; 3 ex., same locality, but 24-25.3.1998, T. Lackner leg.

So far known only from Algeria and Tunisia. It is a new species for Morocco.

***Sternocoelis hispanus* Rosenhauer, 1856**

Sternocoelis atlantis Théry, 1921, n. syn.

After the study of the type material and comparing it with a large series of *Sternocoelis* sp. c. f. *atlantis* Théry, 1921, collected in the Middle Atlas we came to the conclusion that *S. atlantis* should be considered as synonymus with *S. hispanus*. This species shows a broad range of variation in several morphological characteristics: structure of the inner prosternal striae (they can be obsolete, or distinct); the prosternal lobe and keel can have a shallow excavation, or lack this excavation completely, with the space between the prosternal lobe and the keel flat; meso- and metatibiae can be variably expanded. The specimens from southern Spain and northern Morocco (Rif mountains) are somewhat different from those from the Middle Atlas.

New records: 44 ex., "Morocco North, Rif Mts., Bab Besen, 1.600 m, 4-7.6.1998; T. Lackner & I. Smatana leg."; 7 ex., "Morocco central, Middle Atlas, Ifrane env., 1.800 m, 22.4.1995, T. Lackner leg."; 1 ex., same data, but 17-21.6.1998; 1 ex., same data but 10.5.1999; 2 ex., same locality, but 9.5.1997, 1.500 m, P. Koniar. leg.; 10 ex., same locality, but 11.5.1997, T. Lackner & P. Koniar leg.; 60 ex., same locality, but 12-13.5.2000, T. Lackner leg.; 5

ex., "Morocco central, Middle Atlas, Aguelmame Azigza, 1.600 m, 12.5.1997, T. Lackner leg."; 1 ex., "Morocco central, Middle Atlas, Khenifra region, Djebel Irhoud, 1.800 m, 17-18.5.2000, T. Lackner leg."

Up to now it was only known from the region of the Rif mountains in Morocco. This species has been observed to be the most frequent Moroccan representative of the genus. Numerous specimens have been found in the Rif mountains as well as in the Middle Atlas mountains, reaching as far South as Djebel Irhoud, near Ajdir, East of Khenifra.

***Sternocoelis arachnoides* Fairmaire, 1877**

NEW RECORDS: 1 ex., "Morocco North, Ksar-es-Seghir, road Tangiers-Sebta, 18.3.1999, T. Lackner leg."; 5 ex., "Morocco North, Tangiers, 3.2.2001, T. Lackner leg." Rare in Morocco.

It is only known from the North of Morocco.

***Sternocoelis espadaleri* Yélamos, 1995**

NEW RECORD: 7 ex., "Morocco central, Middle Atlas, Djebel Irhoud, 1.800 m, near Ajdir, East of Khenifra, 17-18.5.2000, T. Lackner leg."

This species was erroneously reported from the Anti Atlas instead of the Middle Atlas (YÉLAMOS, 1995). The proper locality should be: "Morocco central, Middle Atlas: Djebel Irhoud, 1.800 m, near Ajdir, East of Khenifra". It was also recorded from Aghbala, East of El-Ksiba.

***Sternocoelis berberus* sp. n.**

Figure 1

DESCRIPTION

Colour reddish brown, shiny, weakly convex, oval; dorsal surface with sparse and long yellow setae, ventrally these setae are shorter.

Frons wide, with dense and long setae; frontal stria cariniform, evanescent on epistoma; labrum slightly depressed; mandibles large, convex and finely punctulate; eyes distinct; antennae pubescent; antennal scape very enlarged, with a very characteristic; antennal club very enlarged, cylindrical.

Pronotum smooth, only with setigerous foveae and long yellow setae; sides well separated from the disc, explanate; marginal stria complete; anterior angles truncate, not elevated; posterior angles not produced. Elytra weakly convex, with setigerous foveae and very long setae, lacking punctuation; first dorsal stria complete, well impressed; second stria fine and longer than half the length of the elytra; third stria very fine, only reaching the middle; outer subhumeral and marginal striae well impressed, complete, joined on the apical 2/3; an epipleural stria well impressed, only interrupted on the base.

Propygidium and pygidium very long, convex, with very long yellow setae.

Prosternal keel depressed, finely punctulate, setose, with inner striae cariniform, separated on the base and parallel in the remaining surface, suddenly approximate apically, not joined; outer prosternal striae cariniform, diverging apically; prosternal lobe at a lower level than the keel, rugose and setose.

Mesosternum smooth, without lateral foveae; meso-metasternal excavation deep. Metasternum only with sparse puncticles, sparsely setose, with 3 oblique striae, the inner reaching the middle, sides with more setae.

First abdominal sternite smooth, with long fine setae, with lateral striae very oblique, complete.

Legs relatively short, strong, densely setose and very expanded.

Eighth abdominal segment of male, spiculum gastrale and aedeagus with the common morphology of the genus. Eighth abdominal segment of male wide and slightly sclerotized. Spiculum gastrale very fine and short, Y-shaped. Basal piece of the aedeagus short and wide; parameres wide, relatively short, distally separated.

Length: 1,4 - 1,6 mm. Width: 1,2 - 1,3 mm (males smaller than females)

TYPE SERIES

Holotype, male labelled "MAROCCO centr. Haut Atlas, 25.4.95, Tizi-n-Tichka env., T. Lackner leg., 2.100 m". In T. Lackner collection.

Paratypes, 1 male and 1 female labelled as the holotype, in T. Lackner Coll. and T. Yélamos coll. 47 specimens labelled "MAROC central, HAUT ATLAS, 2800 m, Oukaïmeden region, 19-20.V.2000, T. Lackner leg. 40 specimens in T. Lackner coll., 6 specimens in T. Yélamos coll. and another in J. de Ferrer coll. 3 specimens labelled "MAROC, Grand Atlas central, Plateau d'Oukaïmeden, 2.650 m, 3.V.83, dans nid d'Aphaenogaster testaceopilosa", 2 specimens in Y. Gomy coll. and another in P. Poneil coll.

ETYMOLOGY

The name of this new species "berberus" is adopted from the origin of the people inhabiting the High Atlas mountains, the Berber people.

DIAGNOSIS

The present new species belongs to the group with the sides of pronotum clearly separated from the disc by a complete oblique impression, and prosternal a lobe at lower level than the keel. In this group it seems to be related to *St. laevidorsis* (Fairmaire, 1976) from Algeria and Tunisia, but can be clearly distinguished from this species by: size, colour, puncturation, setae, antennal scape, prosternal keel, metasternal striae, elytral surface... On the other hand, excepting the explanate pronotal sides, in the remaining characteristics it resembles very much *St. marseulii* (Brisout de Barneville, 1866) from Spain (also the antennal scape with a "hook"). Maybe they are closely related. Without any doubt, the new species is one of the most easily distinguishable species from Morocco.

COMMENTS

Up to now this species was only known from the High Atlas region (Morocco), Tizi-n-Tichka (Taddert) at 2.100 m, and Oukaïmeden, 2.800 m, in nests of an unknown species of ants, on clay soils.

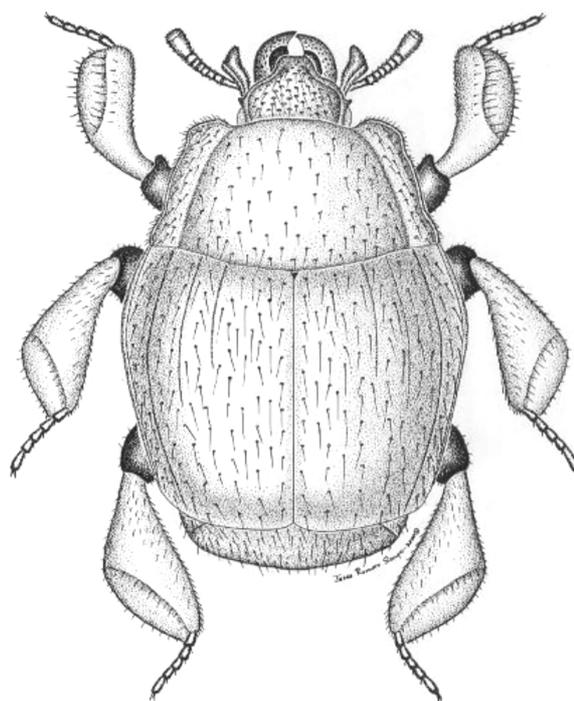


Figure 1. Male, habitus of *Sternocoelis berberus* sp. n.

According to our records this is the first *Sternocoelis* known from the High Atlas. The *Sternocoelis* have many species in northern Morocco (also in the Middle Atlas) and Algeria, but up to now in the High Atlas there were only records of *Eretmotus* (*E. alluaudi*).

Genus *Eretmotus* Lacordaire, 1854

Eretmotus tangerianus Marseul, 1862.

NEW RECORDS: 3 ex., "Morocco North, Taza National Park, env. Djebel Tazzeke, 1.800 m, 14-16.6.1998, T. Lackner & I. Smatana leg."; 2 ex., "Morocco central, Middle Atlas, Ifrane env, 1.800 m, 30.4.1995, T. Lackner leg."; 1 ex., same locality, but 17-21.6.1998, T. Lackner leg.; 8 ex., same locality, but 12.5.2000, T. Lackner leg.; 7 ex., "Morocco central, Middle Atlas, reg. Khenifra, Djebel Irhoud, 1.800 m, near Ajdir, Cedar Forest, 17-18.5.2000, T. Lackner leg."; 1 ex., "Morocco central, Middle Atlas, Aguelmame Azigza, 1.600 m, 15.5.2000, T. Lackner leg."; 3 ex., "Morocco North, Rif Mts., Bab Berred, 1.300 m, 2-3.6.1998, T. Lackner & I. Smatana leg."; 1 ex., "Tanger, 3.2.2001, T. Lackner leg."; 1 ex., "Morocco North, Ksar-es-Seghir, 4.2.2001, T. Lackner leg.".

This species was previously known only from the North of Morocco. Distributed much more southwards and eastwards (Middle Atlas) than previously thought. Not rare.

Eretmotus alluaudi Théry, 1925

NEW RECORDS: 55 ex., "Morocco central, High Atlas, Oukaïmeden env., 2.800 m, 19-20.5. 2000, T. Lackner leg."; 1 ex., "High Atlas, Tizi-n-Melloul, Djebel Siroua, 2.506 m, 20.4.2001, C. Hernando leg.".

It is only known from the High Atlas, living in nests of *Aphaenogaster*, sometimes together with *Sternocoelis berberus*.

***Eretmotus eurysternus* Yélamos, 1992**

NEW RECORD: 1 ex., "Morocco North-east, Beni Snassen Mts., Taforhalt env., 1.200 m, 12.6.1998, T. Lackner leg."

So far known only from Algeria. New to Morocco. Very rare.

RESULTS

After the study of the newly recorded material *Sternocoelis berberus* is described as new for science. It is also clear that *Sternocoelis atlantis* Théry, 1921 is a synonym of *Sternocoelis hispanus* Rosenhauer, 1856.

Three species: *Sternocoelis bedeli* Lewis, 1884, *Sternocoelis setulosus* Reitter, 1872 and *Eretmotus eurysternus* Yélamos, 1992 are recorded for the first time from Morocco.

The following species (previously recorded from Morocco) were not found during our field studies: *Sternocoelis vaucheri* Lewis, 1896, *Sternocoelis slaoui*

Théry, 1921 and *Eretmotus peyerimhoffi* Théry, 1917. We consider them extremely rare. For more detailed distribution of the species see YÉLAMOS, 1992 and 1995.

ACKNOWLEDGEMENTS

We would like to thank all our colleagues that have helped us with the collecting of the material as well as with the preparing of the manuscript, specially to Mr. Joan de Ferrer (Algeciras), Mr. Carles Hernando (Barcelona), Mr. Jesús Romero Samper and Dr. Alberto Tinaut (Granada).

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