

Zeitschrift: Mitteilungen der Schweizerischen Entomologischen Gesellschaft =
Bulletin de la Société Entomologique Suisse = Journal of the Swiss
Entomological Society

Herausgeber: Schweizerische Entomologische Gesellschaft

Band: 85 (2012)

Heft: 1-2

Artikel: Echinodera samosa sp. n. from Greece (Coleoptera, Curculionidae)

Autor: Germann, Christoph

DOI: <https://doi.org/10.5169/seals-403041>

Nutzungsbedingungen

Die ETH-Bibliothek ist die Anbieterin der digitalisierten Zeitschriften. Sie besitzt keine Urheberrechte an den Zeitschriften und ist nicht verantwortlich für deren Inhalte. Die Rechte liegen in der Regel bei den Herausgebern beziehungsweise den externen Rechteinhabern. [Siehe Rechtliche Hinweise.](#)

Conditions d'utilisation

L'ETH Library est le fournisseur des revues numérisées. Elle ne détient aucun droit d'auteur sur les revues et n'est pas responsable de leur contenu. En règle générale, les droits sont détenus par les éditeurs ou les détenteurs de droits externes. [Voir Informations légales.](#)

Terms of use

The ETH Library is the provider of the digitised journals. It does not own any copyrights to the journals and is not responsible for their content. The rights usually lie with the publishers or the external rights holders. [See Legal notice.](#)

Download PDF: 02.04.2025

ETH-Bibliothek Zürich, E-Periodica, <https://www.e-periodica.ch>

Echinodera samosa sp. n. from Greece (Coleoptera, Curculionidae)

CHRISTOPH GERMANN

Natural History Museum of the Burgergemeinde Bern, Bernastrasse 15, CH-3005 Bern, and Natur-Museum Luzern, Kasernenplatz 6, CH-6003 Lucerne; germann.christoph@gmail.com

Echinodera samosa sp. n. is described from the Oros Ambelos mountains on Samos Island (Greece). The new species is compared with *E. ariadnae* Bahr & Bayer, 2005 from Crete Island.

Keywords: Cryptorhynchinae, Greece, Samos Island, endemism, new species, taxonomy

INTRODUCTION

During an excursion from 1st to 7th April 2010 the Aegean Island Samos was visited. At 22 locations 112 species of Curculionoidea were collected (Germann, in preparation). Samos is the ninth largest Greek island (478 km²), and is situated just 1.2 km west of the coast of Turkey. The highest peaks are the Oros Kerkis (1434 m a.s.l.) in the west, and the Oros Ambelos (1153 m a.s.l.) in the east. Samos Island is sparsely populated, and a big part of the landscape is still in its natural state.

Within Cryptorhynchinae, the genus *Echinodera* Wollaston, 1863 sensu Astrin & Stüben (2010) actually comprises 86 taxa according to the catalogue (Stüben 2011) within the main distribution area in the western Palaearctic. Most of them inhabit very restricted areas. The type species of *Echinodera* is *E. crenata* Wollaston, 1863 from the Canary Islands (Tenerife). *Echinodera* is divided into two subgenera, *Echinodera* s. str and *Ruteria* (with its type species *E. hypocrita* (Boheman, 1837)). Characteristic for all representatives of the genus is their hidden lifestyle in the leaf litter in (or on) deadwood in woodlands. All species are flightless and show a comparatively similar external shape (globular to oval), and their size rarely exceeds 6 mm. The aedeagus of *Echinodera* is characterised by its loss of sclerites in the internal sac.

Below I describe a new species of *Echinodera* s. str. discovered on the Oros Ambelos on Samos Island.

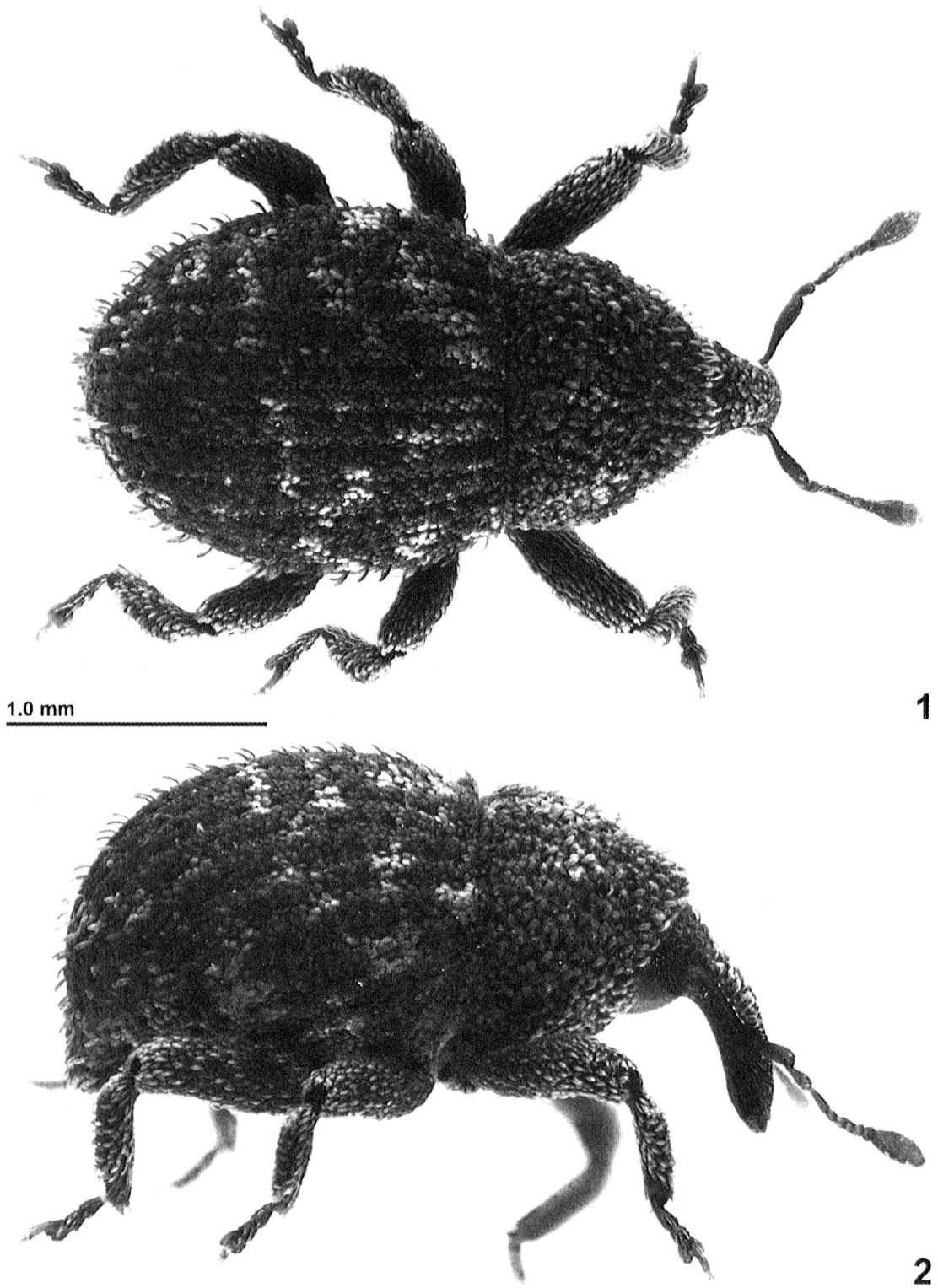
MATERIAL AND METHODS

For sifting litter, a beetle sifter after Reitter-Winkler with grid width of 8 mm was used.

Photographs were taken with a 5-megapixel digital camera (Leica DFC 420), the aedeagus was photographed in glycerine. Series of images were captured through a binocular (Leica MZ16) and processed by an Auto-Montage software (Imagic Image Access, Version 8).

All measurements were taken digitally with the measurement-tool of the above mentioned Auto-Montage software. Body length was measured from the anterior margin of the eye to the apex of the elytra.

The holotype is deposited in the Natural History Museum of the Burger-
gemeinde Bern (NMBE), paratypes are in the Museum- and in the author's collec-
tion (cCG, Thun).



Figs 1–2. — 1. Habitus (dorsal view) of *Echinodera samosa* sp. n., holotype; — 2. Ditto, lateral view.

DESCRIPTION

Echinodera samosa sp. n. (Figs 1–4)

Holotype: male: «099_10.6 GREECE, Samos Isl., Oros Ambelos, Lazarou, N-Seite // Felswand, N37°45'27"/ E26°50'36", 860m, GS Moos, // Laubstreu, Polsterpflanzen, 1.4.2010, leg. Ch. Germann». Red label: «Holotype *Echinodera samosa* sp. n. Germann des. 2012» (NMBE).

Paratypes: all labelled: Paratype *Echinodera samosa* sp. n. Germann des. 2012. 6 males, 7 females: same data as holotype. 1 female: «099_10.15 GREECE, Samos Isl., Oros Ambelos, Prof. Ilias, (SW // Lazarou), N37°44'39"/ 26°50'32", 980m, // GS Moos, Laubstreu, 3.4.2010, leg. Ch. Germann» (cCG, NMBE).

Remark: One (female) specimen is conserved in 90 % alcohol at -20 °C for potential molecular analyses.

Size (without rostrum): males: 2.8 mm (2.5–3.3 mm, N = 7); females: 2.9 mm (2.6–3.2 mm, N = 7).

Head: Eyes flattened, oval. Rostrum deeply punctate-striate; covered with small oval scales and hairs towards rostral apex. Antennae reddish brown, antennal scape: 4 to 5 x longer than wide, segments of antennal funiculus: 1st and 2nd: 2.5 to 3 x longer than wide, 3rd and 4th: slightly longer than wide, 5th to 7th: about as long as wide or transverse, club oval.

Elytra: very short oval (length/width: 1.1); widest in or just before the middle; without shoulders; base straight, elytral decline in lateral view rounded, vertical towards apex.

Integument: colour patterns variable, dark brown dominates, intermixed with spottily placed light brown scales. Consisting of roundish, almost circular, overlapping scales almost completely covering the intervals. Intervals at base densely covered with scales and therefore seemingly elevated. Striae narrow, about half the span of intervals; punctures with adjacent oval scale-like bristles. On intervals long (3 x longer than wide), scale-like and clubbed bristles rise, those are slightly bowed and inclined at an angle of about 60° from surface.

Pronotum: transverse (length/width: 0.8); maximal width just before base in the first fourth, slightly rounded towards base; regularly narrowed to front margin.

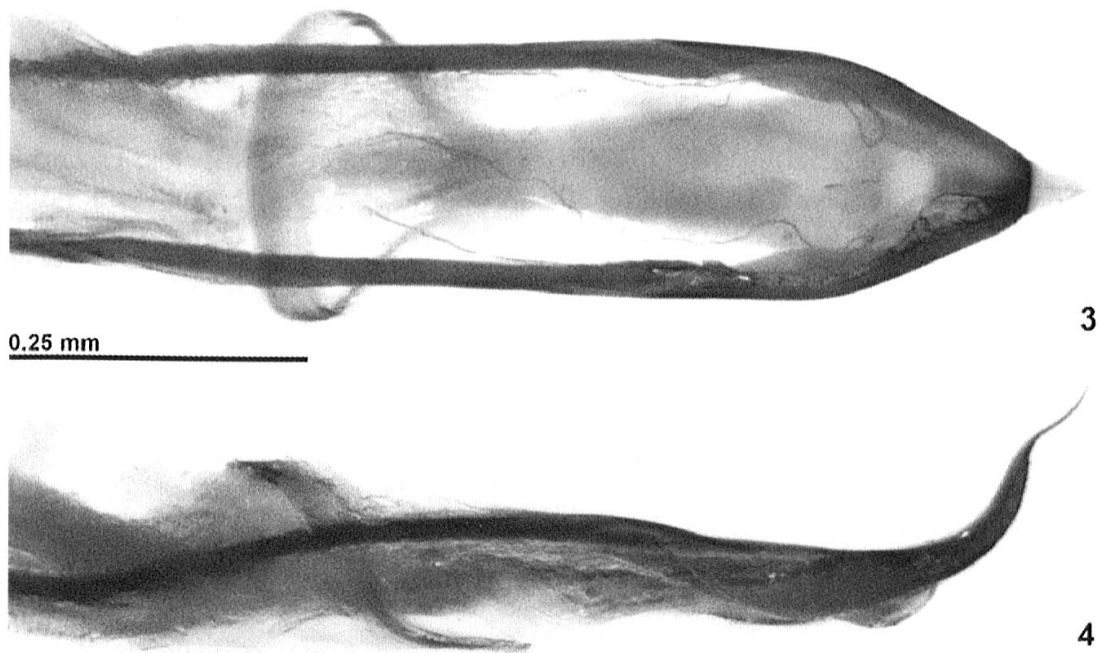
Integument: colour patterns as elytra; deeply and coarsely punctate. The integument consists of overlapping, almost circular scales. Long (2.5 to 3 x longer than wide), scale-like, clubbed and slightly bowed bristles arise from punctures.

Legs: brown, densely covered with elongated light brown scales.

Aedeagus: apex of medianlobus waved, first turn strong, with three pairs of fine, long sensillae just before second turn (tip) (Figs 3 & 4).

Ethymology: The new species is named after Samos Island, where it was discovered.

Differential diagnosis: *Echinodera samosa* sp. n. is most similar to *E. ariadnae* Bahr & Bayer, 2005 from western Crete Island (Bahr & Bayer 2005) following the identification key by Stüben (2008) based on the following traits: i) very short oval elytra, ii) pronotum with maximal width just in front of base, and iii) long scale-



Figs 3–4. — 3. Medianlobus of the aedeagus (ventral view) of *Echinodera samosa* sp. n., holotype; — 4. Ditto, lateral view.

like setae on the intervals. *E. samosa* differs from *E. ariadnae* in the following characters: i) scale-like setae on pronotum and elytra longer (up to three times longer than wide), and more strongly bowed, ii) shape of the aedeagus; first turn more strongly bent (Figs 3 & 4).

Bionomy: The new species was sifted together with a new *Brachysomus* (Yunakov & Germann, in preparation), an *Entomoderus* sp., *Otiorhynchus* cf. *magnicollis* Stierlin, 1888, and *Omius sandneri* (Reitter, 1906) from solely two (of totally 15) litter samples taken on Samos Island. Both samples were taken from leaf litter, cushion plants and mosses under evergreen *Quercus* shrubs in *Pinus* forests near the highest peaks of the Oros Ambelos between 860 and 980 m a. s. l. (Fig. 5). *Echinodera samosa* sp. n. is supposed to be endemic on Samos Island.

ACKNOWLEDGEMENTS

Many thanks to Martin Albrecht (Bolligen), Dani Bolt (Zurich), Bernhard Jost (Münsigen), Thomas Kissling (Zurich), Josef Kolleger (Chur), Peter Sonderegger (Brügg near Biel), Hans-Peter and Sebastian Wymann (Jegenstorf), and to Heiner Ziegler (Chur) – who organized everything – for their manifold support during the Samos-expedition 2010 of the Entomologischer Verein Bern. Many thanks to Friedhelm Bahr (Viersen) and Christoph Bayer (Berlin) for providing the paratype specimen of *Echinodera ariadnae*, to Roman Borovec (Sloupno) for the determination of *Omius sandneri* and to Charles Huber (NMBE) for checking an earlier version of the manuscript.

REFERENCES

- Astrin, J.J. & Stüben, P. 2010. Molecular phylogeny of *Echinodera* and *Ruteria* (Coleoptera: Curculionidae: Cryptorhynchinae) and the parallel speciation of Canary Island weevils along replicate environmental gradients. — *Invertebrate Systematics* 24: 434–455.
- Bahr, F. & Bayer, C. 2005. In: Stüben, P.E., Bahr, F., Germann, C., Behne, L. & Bayer, C. Beschreibung neuer Cryptorhynchinae aus dem mediterranen Raum (Coleoptera: Curculionidae: Cryp-

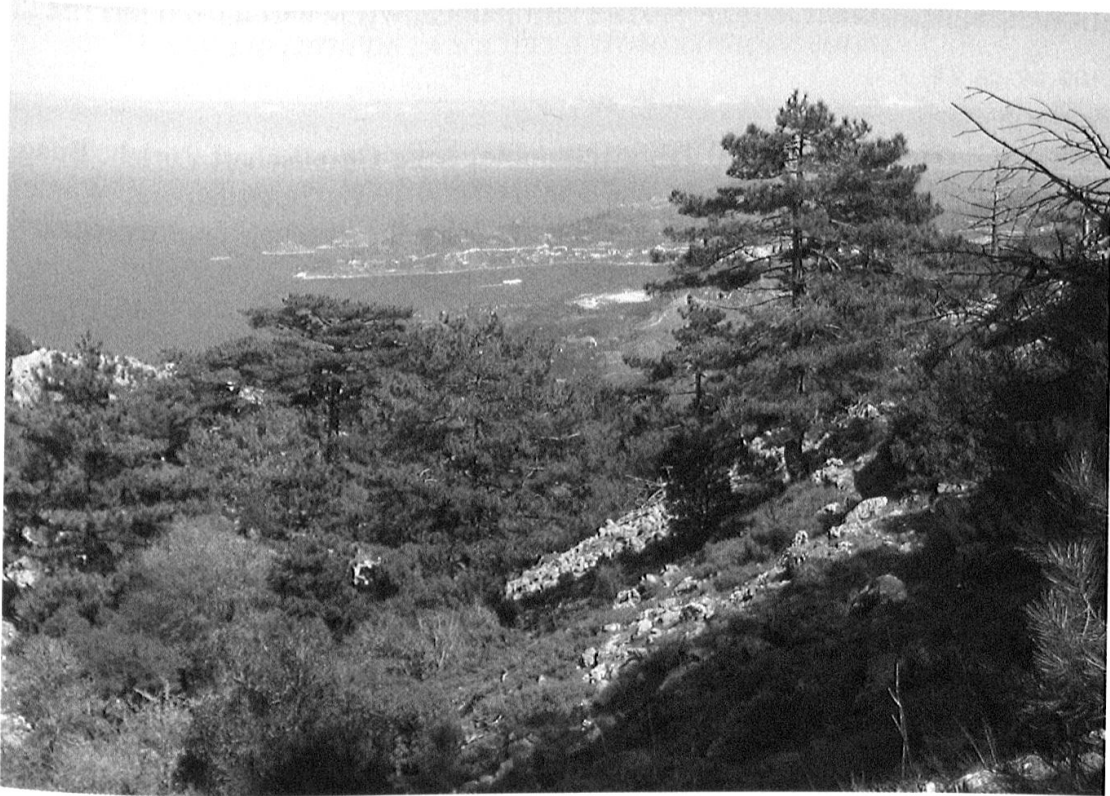


Fig. 5. Habitat on Oros Ambelos on Samos Island where *Echinodera samosa* sp. n. was discovered (photo: C. Germann).

torhynchinae). — Snudebiller 6: 84–113.

Stüben, P.E. 2008. Neubeschreibungen westpaläarktischer Cryptorhynchinae II - Key to the species of the genus *Echinodera* of the Westpalaearctic. — Snudebiller 9: 80–112.

Stüben, P.E. 2011. An illustrated Up-to-date Catalogue of Westpalaearctic Cryptorhynchinae. — Le Charançon: Catalogue & Keys, No. 1. http://www.curci.de/illustrated_catalogue/ (accessed: 2. March 2012).

(received March 10, 2012; accepted April 20, 2012; published June 30, 2012)