

## New and interesting records of bryophytes from Crete

Michael LÜTH & Jan-Peter FRAHM

**Abstract:** LÜTH, M. & FRAHM, J.-P. 2008. New and interesting records of bryophytes from Crete. – *Herzogia* 21: x–x.

*Bryum dunense* is recorded as new to Crete, *Pottia caespitosa* and *Scleropodium cespitans* are recorded as new to Greece. Moreover there is a first relevé from *Oncophorus dendrophilus* and a new state report of the location of *Trematodon longicollis* and *Jungermannia handelii*.

**Zusammenfassung:** LÜTH, M. & FRAHM, J.-P. 2008. Neue und interessante Bryophytenfunde von Kreta. – *Herzogia* 21: x–x.

*Bryum dunense* wird neu für Kreta, *Pottia caespitosa* und *Scleropodium cespitans* werden neu für Griechenland nachgewiesen. Außerdem gibt es eine erste Vegetationsaufnahme von *Oncophorus dendrophilus* und einen neuen Zustandsbericht über die Lokalität von *Trematodon longicollis* und *Jungermannia handelii*.

**Key words:** Mosses, liverworts, new records, distribution, Greece, Crete.

### Introduction

The last complete survey of the bryophytes of Crete dates back to DUELL (1979). Since that time only a few additions have been made to the bryoflora of this island (BISCHLER & JOVET-AST 1979, BLOCKEEL 2007, PAPP 2003, PAPP et al. 1999, TURLAND & WILSON 1995, WERNER 1998). Further additions are included in the checklist of the bryophytes of Greece (DUELL 1995) and the paper by BLOCKEEL et al. (2002).

During a fieldtrip to Crete in March 2007, the authors collected in the westernmost part of the island in the province of Chania. During this trip, some species were found, which have so far not been reported from this island (marked \*) or are even new records for Greece (marked \*\*). In addition, some records of rare or interesting species are included in this survey.

The specimens cited are deposited in the herbaria of the authors.

### Liverworts

*Jungermannia handelii* (Schiffn.) Amak.

**Distr. Chania:** Fassas Valley between Skines and Nea Roumata, W Langos, small to large mats on wet rocks along the main road and in adjoining valley with small road, 300–350 m, 15 March 2007, leg. M. Lüth 5357 and J.-P. Frahm K-125, K-130.

See the comment on *Trematodon longicollis* below.

## Mosses

### \**Bryum dunense* A. J. E. Sm. & H. Whitehouse

**Distr. Chania:** Limni Kournas, on soil in an olive orchard, 50 m, 14 March 2007, leg. M. Lüth 5327; Fassas valley W Langos between Skines and Nea Roumata, frequent on rocks and slopes at roadside, 280–400 m, 14 March 2007, leg. M. Lüth 5333 and 5348; Along the road from Skines to Nea Roumata shortly before Nea Roumata, on roadside bank, 400 m, 15 March 2007, leg. M. Lüth 5360 & J.-P. Frahm K-252; Elafonisi, on soil in stony pasture near the coast, 10 m, 19 March 2007, leg. M. Lüth 5415.

So far, the species was known from Greece only from Sterea Ellas and the North East. It is the first record from Crete. *Bryum dunense* is known as a coastal species and accordingly, we found it on the coast of Elafonisi, but also in the mountains at 400 m altitude. This taxon is considered a synonym of *B. dichotomum* Hedw. in the new European check-list (HILL et al. 2006).

### *Grimmia anodon* Bruch & Schimp.

**Distr. Chania:** Trail from Xyloskalo to Ginglios, on limestone rock in phrygana with scattered *Cupressus sempervirens* and *Acer sempervirens*, 1450 m, March 18, 2007, leg. J.-P. Frahm K-137.

Second record for Crete.

### *Leptobarbula berica* (De Not.) Schimp.

**Distr. Chania:** Limni Kournas, frequent and fruiting on limestone rocks around the lake, 50 m, March 14, 2007, leg. M. Lüth 5331 and J.-P. Frahm K-168.

Second record for Crete.

### *Oncophorus dendrophilus* Hedderson & Blockeel

**Distr. Chania:** Samaria Gorge, close to chapel Agios Nikolaos, epiphytic on *Platanus* and on rotten logs beside river bed, 590 m, 16 March 2007, leg. M. Lüth 5385 and J.-P. Frahm K-143.

This species was recently described from the same locality (HEDDERSON & BLOCKEEL 2006), where Blockeel discovered it in 2004. Here is the first published photograph (Fig. 1) and the first relevé for this new species:

Stem base of *Platanus*, 12 dm<sup>2</sup>, cover bryophytes 70 %.

2 *Oncophorus dendrophilus*, 1 *Homalothecium sericeum*, 1 *Hypnum cupressiforme*, 2 *Leucodon sciuroides* var. *morensis*, 2 *Pterogonium gracile*, + *Orthotrichum rupestre*, 1 *Zygodon rupestris* (+ = single plant or a few single plants, cover <1 %, 1 = 1–5%, 2 = 5–25 %)

### \*\**Pottia caespitosa* (Brid.) Müll. Hal.

**Distr. Chania:** Elafonisi, on soil in stony pasture near the coast, 10 m, 19 March 2007, leg. M. Lüth 5412, det. M. Ahrens.

Scattered through S, C, and W Europe. First record for Greece.

### \**Rhynchostegiella teneriffae* (Mont.) Dirkse & Bouman

**Distr. Chania:** Kefali, valley above Moni Chrissiskalitissas, spring and small waterfall near the road, 400 m, 20 March 2007, leg. J.-P. Frahm K-244.

According to DÜLL (1995) the only previous record is mentioned under the name of *R. teesdalei* and has to be verified.

### \*\**Scleropodium cespitans* (Müll. Hal.) L.F. Koch

**Distr. Chania:** Agia Irina, small park at the beginning of the Agia Irina Gorge, on rocks beside stream, 600 m, 18 March 2007, leg. M. Lüth 5402, conf. M. Ahrens.

First record for Greece. It is mentioned from Crete in DUELL (1995) as a very doubtful record of BAUMGARTNER (1943). It could be sometimes difficult, to distinguish *S. cespitans* and *S. tourettii* (Brid.) L.F. Koch just by vegetative characters, because both are very variable. Luckily, we found both species together, and both with sporophytes, which happens only rarely. The nearly erect capsules of *S. cespitans* differ clear from the nearly horizontal capsules of *S. tourettii*.

### *Tortula virescens* (De Not.) De Not.

**Distr. Chania:** Prases near Nea Roumata, on old *Platanus* tree in village, 500 m, 15 March 2007, leg. J.-P. Frahm K-154.

Second record for Crete.



Fig. 1: *Oncophorus dendrophilus* on a stump of *Platanus* in the deep Samaria gorge.



Fig. 2: *Trematodon longicollis* on a wet roadside bank.

***Trematodon longicollis* Michx.**

**Distr. Chania:** Fassas Valley between Skines and Nea Roumata, W Langos, adjoining valley with small road, small springs with seeping water, on wet roadside bank, 35°40'23"N/23°87'52"E, 350 m, 15 March 2007, leg. M. Lüth 5357 and J.-P. Frahm K-126, (Fig. 2).

This species was reported by GRADSTEIN (1971) from a single locality in the valley between Skines and Nea Roumata 250–300 m. This locality is famous for the occurrence of *Rhamphidium purpuratum* Mitt. and *Jungermannia handelii*, possible relicts from the Tertiary. This assumption is confirmed by the

occurrence of the fern *Woodwardia radicans*, which is found in the same locality. The distribution map of *Trematodon longicollis* provided by GRADSTEIN (1971) shows a tropical-subtropical range in the northern part of South America, the Caribbean and SE North America, in the Indian subcontinent and in E-Asia (Philippines to Japan). A long distance dispersal from there seems to be unlikely. The locality, where Gradstein found this species, was in the village Langos. The habitat is now dry and he could not confirm the record on visits in 1995 and 2005 (pers. comm.). Also the localities of *Jungermannia handelii* and *Rhamphidium purpuratum* cited by him were destroyed in 2005 by road constructions. In 1997, Bernd Haisch (†) could not confirm the old record but found a new locality above the old, in a small adjoining valley with many small springs, together with *Jungermannia handelii* and *Rhamphidium purpuratum* (pers. comm.). The first author visited this valley in the same year and confirmed the presence of any of the species. Now 10 years later, *Trematodon longicollis* and *Jungermannia handelii* could be confirmed again. This is interesting, because the habitat of *Trematodon*, a wet roadside bank, is not a stable habitat, *Rhamphidium purpuratum* was not found by us in 2007. BLOCKEEL (2007) visited this place 2004 and found *R. purpuratum* sparse and sterile and *T. longicollis* abundant over a small area above the road. It was not clear, if this part is also destroyed now by the new advanced road constructions.

## Acknowledgements

We wish to thank M. Ahrens, Germany, for determination and confirmation of some critical specimens and T. L. Blockeel, UK, for many helpful hints in the text.

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Manuscript accepted: 18 April 2008.

## Addresses of the authors

Michael Lüth, Emmendinger Str. 32, D-79106 Freiburg, Germany.

E-mail: umweltplanung@milueth.de

Jan-Peter Frahm, Nees-Institut für Biodiversität der Pflanzen, Meckenheimer Allee 170, D-53115 Bonn, Germany. E-mail: frahm@uni-bonn.de