

Occurrence of *Entorrhiza casparyana* (Ustilaginomycetes) in Austria

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Received: June 13, 2003 / Accepted: June 19, 2003

Abstract. *Entorrhiza casparyana* is reported as new for Austria. This is the third report of this smut on *Juncus tenuis*.

Key words: Austria, *Entorrhiza*, *Juncus*, smut fungi

Introduction

Entorrhiza belongs to the order Entorrhizales (Ustilaginomycetes). The genus has been reported only once from Austria, namely *E. aschersoniana* (Magnus) Lagerh. (Scholz & Scholz 1988: 102) but without any additional information. During the “29 Mykologische Dreiländertagung”, organized in Graz in September 9–14, 2002, *Entorrhiza casparyana* (Magnus) Lagerh. was collected. It is not only a new species record for the smut fungi of Austria but also the first confirmation of *Entorrhiza* for that country. This new record is reported herein.

Material and Methods

Ustilospores from a dried specimen were examined under a light microscope after mounting in lactophenol solution, gently heating to the boiling point, and then cooling. The measurements of ustilospores are given in the form: min–max (mean \pm 1 standard deviation). The surface of the ustilospores was observed and photographed with SEM.

New record

Entorrhiza casparyana (Magnus) Lagerh., Hedwigia 27: 262, 1888 (Sept.–Oct.). — *Schinzia casparyana* Magnus, Ber. Deutsch. Bot. Ges. 6: 103, 1888. — *Entorrhiza casparyana* (Magnus) De Toni in Sacc., Syll. fung. 7(2): 497, 1888

(Oct. 28). — *Entorrhiza digitata* Lagerh., Hedwigia 27: 264, 1888. (Figs 1–2)

Sori in the roots forming elongated, often branched, dark brown galls 1.2–3 mm long. **Ustilospores** mostly globose, 13–21.5 \times 12.5–21.5 (16.8 \pm 1.5 \times 16.1 \pm 1.7) μ m ($n = 100$), L/w = 1.04, light yellow to yellowish-brown; wall two-layered, the inner layer 0.5–1 μ m thick, the outer layer variable in thickness (1–6 μ m, including the ornamentations) and ornamentation (tuberculate or verrucose, seldom smooth).

Specimen examined: On *Juncus tenuis* Willd. **AUSTRIA:** Steiermark, Grazer Bergland N von Graz, ca 3.5 km ENE Gratkorn, b. ‘Alpengarten Rannach’, 47°08’N, 15°23’E, alt. ca 600 m, 13 Sep 2002, C.M. Denchev (GZU).

Known hosts and distribution: on *Juncus alpinus* Vill., *J. arcticus* Willd., *J. articulatus* L., *J. bufonius* L., *J. bulbosus* L., *J. compressus* Jacq., *J. ?conglomeratus* L., *J. effusus* L., *J. geniculatus* Schrank, *J. gregiflorus* L.A.S. Johnson, *J. inflexus* L., *J. tenageia* Ehrh., *J. tenuis* Willd., and *J. thomasi* Ten. — Europe, North America, New Zealand (Fineran 1978; Vánky 1994; Azbukina & Karatygin 1995; Piepenbring 1996; Denchev 2001; Vánky & McKenzie 2002).

Entorrhiza casparyana has been previously reported on *Juncus tenuis* only from Romania, Mt Căliman (Vánky 1985) and Costa Rica (Piepenbring 1996). Vánky (op. cit.) noted that “on *Juncus tenuis*, the apparently mature galls and spores are somewhat smaller than those produced on *J. articulatus* L.”. The measurements of the ustilospores of the Austrian material on *Juncus tenuis* confirmed that conclusion. For comparison, the ustilospores of *E. casparyana* on *Juncus thomasi* from

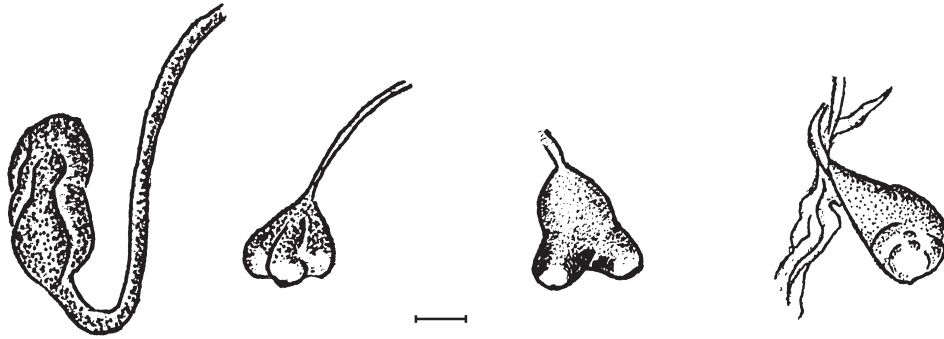


Fig. 1. Sori of *Entorrhiza casparyana* (Magnus) Lagerh. on the roots of *Juncus tenuis* Willd. (GZU). Bar = 0.75 cm

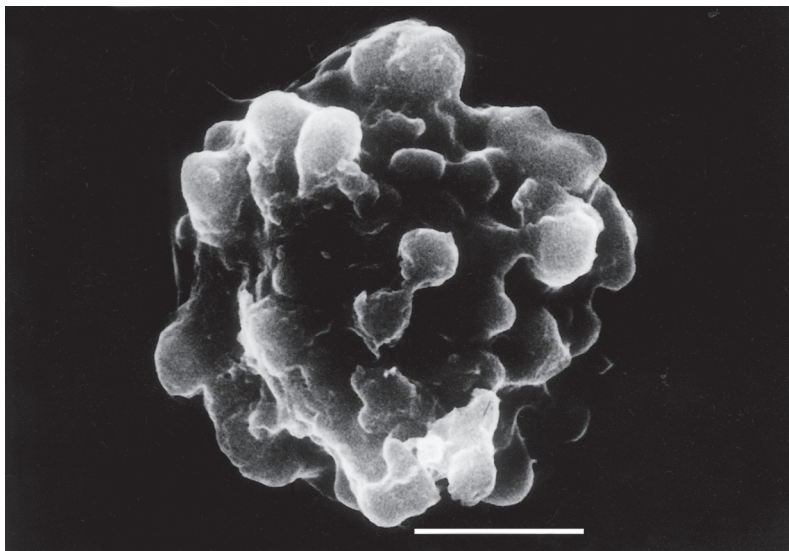


Fig. 2. An ustilospore of *Entorrhiza casparyana* on *Juncus tenuis* (GZU) in SEM. Bar = 5 μ m

Bulgaria measure 13-28 \times 12.5-25.5 (17.9 \pm 2.6 \times 17.1 \pm 2.5) μ m ($n = 100$) (Denchev 2001).

Acknowledgements. The author would like to thank Dr Kálmán Vánky (Tübingen, Germany) for critically reading the manuscript, as well as Profs Paul Blanz and Helmut Mayrhofer, and Drs Christian Scheuer and Peter Zwetko (Institute of Botany, Graz) for the kind invitation and help during his visit of the Institute of Botany in Graz. Financial support by the Austrian Academy and Karl-Franzens-University, Graz is gratefully acknowledged.

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