

Occurrence of *Microbotryum violaceo-irregulare* and *M. violaceo-verrucosum* (Ustilaginales) in Austria

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Two rare anthericolous smut fungi, previously unreported in Austria, are reported.

DENCHEV C. M., 1994: Zwei seltene Brandpilze (*Microbotryum violaceo-irregulare* und *M. violaceo-verrucosum* [Ustilaginales]) werden für Österreich erstmals nachgewiesen.

Keywords: taxonomy, Ustilaginales, *Microbotryum*, flora of Austria.

Introduction

The species of *Microbotryum* are purple-spored, anthericolous smut fungi on different host families, but mainly on Caryophyllaceae. They have a spore germination of the "*Ustilago* type" with a three- to four-celled promycelium which commonly separates during sporidia formation (VÁNKY 1987). Five species are distributed in Austria: *M. major* (SCHROET.) DEML & OBERW., *M. scabiosae* (SOW.) DEML & PRILLINGER, *M. scorzonerae* (ALB. & SCHW.) DEML & PRILLINGER, *M. vinosum* (L.-R. & C. TUL.) DENCHEV, and *M. violaceum* (PERS.: PERS.) DEML & OBERW. s. lat. In this paper new records of Austrian *Microbotryum* are reported.

Material and Methods

The information given here is based on the revision of specimens of *Microbotryum* from GZU. In each collection 100 ustilospores have been measured in lactophenol (heated to boiling point and then cooled). Measurements of ustilospores are given in this form (DENCHEV 1993):

(smallest observed -) mean $\pm$ standard deviation (- largest observed)

Results

1. *Microbotryum violaceo-irregulare* (BRANDENB. & SCHWINN) DEML & OBERW. — *Phytopathol. Z.* 104: 354 (1982).

Sori: in the anthers, powdery, dark purple. Ustilospores: globose, subglobose, ovoid or broadly ellipsoidal, $(6.5 -) 7.5 \pm 0.6 (- 10) \times (5.5 -) 6.9 \pm 0.5 (- 8) \mu\text{m}$, light purple; the exospore incompletely reticulate.

Specimen examined: On *Silene vulgaris* (MOENCH) GARCKE: Kärnten, Hohe Tauern, Goldberggruppe, in etwa 2400 m, 27.IX.1989, MELZER [as *Ustilago violacea* (PERS.) TUL. on *Silene cucubalus*], GZU (Fig. 1).

This smut has previously been reported from Germany, Slovakia and Switzerland (BRANDENBURGER & SCHWINN 1974, VÁNKY 1985, SCHOLZ & SCHOLZ 1988).

2. *Microbotryum violaceo-verrucosum* (BRANDENB. & SCHWINN) VÁNKY — *Mycotaxon* 33: 372 (1988)

Syn.: *Ustilago gausseni* DURRIEU — Bull. soc. nat. hist. Toulouse 108 (3/4): 435 (1972) (nom. illeg. according to Art. 37.1.).

Sori: in the anthers, powdery, dark purple. Ustilospores: globose, subglobose, ovoid or broadly ellipsoidal, $(5 -) 6.8 \pm 0.5 (- 9) \times (5 -) 6.4 \pm 0.5 (- 8) \mu\text{m}$, light purple; the exospore verruculose, warts c. 0.3-0.5 μm high.

Specimens examined: On *Silene italica* (L.) PERS. subsp. *nemoralis* (WALDST. & KIT.) NYMAN: Steiermark, Grazer Bergland, bei Stübing am Fuß des Pfaffenkogels, 23.V.1989, MELZER [as *Ustilago violacea* (PERS.) TUL. on *Silene nemoralis*], GZU (Fig. 2). — On *Silene multiflora* (WALDST. & KIT.) PERS.: Burgenland, Neusiedler See-Gebiet, Seewinkel bei Illmitz, 22.X.1984, MELZER (as *Microbotryum violaceum*), GZU (Fig. 3).

M. violaceo-verrucosum has previously been reported only from Italy (BRANDENBURGER & SCHWINN 1974) and France (DURRIEU 1972). *Silene italica* subsp. *nemoralis* and *S. multiflora* are new hosts for this smut fungus.

Both species are macroscopically identical with *M. violaceum* (PERS.: PERS.) DEML & OBERW. but the latter has a reticulate exospore.

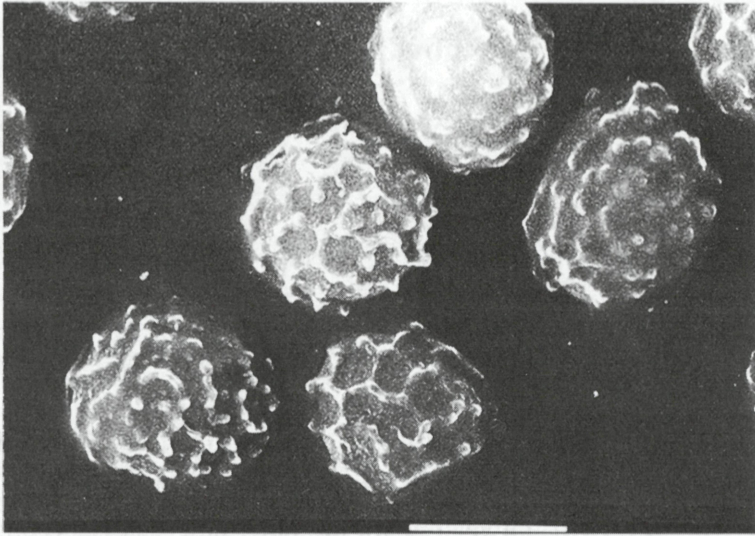


Fig. 1: *Microbotryum violaceo-irregulare* on *Silene vulgaris* (SEM; bar = 5 μ m).

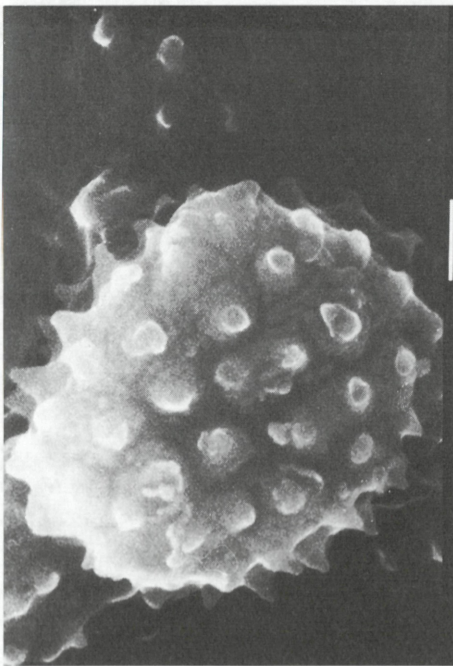


Fig. 2: *Microbotryum violaceo-verrucosum* on *Silene italica* subsp. *nemoralis* (SEM; bar = 1 μ m).

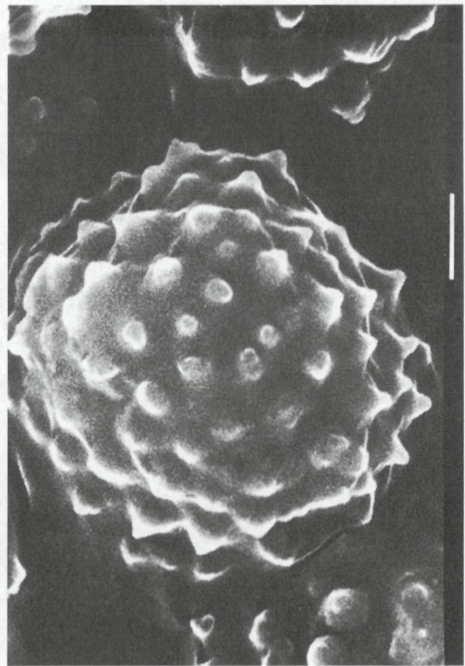


Fig. 3: *Microbotryum violaceo-verrucosum* on *Silene multiflora* (SEM; bar = 1 μ m).

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