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Additional finds of *Microbotryum violaceo-verrucosum* (Ustilaginales)

Abstract

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Microbotryum violaceo-verrucosum is reported as new to Spain (on *Silene nevadensis*), Serbia (on *S. bupleuroides*), Macedonia (on *S. gallinyi*), Bulgaria, Greece and Turkey (on *S. italica*). *S. bupleuroides*, *S. gallinyi* and *S. nevadensis* are new hosts for this smut fungus.

Introduction

Microbotryum violaceo-verrucosum (Brandenb. & Schwinn) Vánky is an anthericolous smut fungus found on *Silene* species. It is macroscopically identical with *M. violaceum* (Pers. : Pers.) G. Deml & Oberw., but the latter has a reticulate exospore.

Microbotryum violaceo-verrucosum has previously been reported only from Italy (Brandenburger & Schwinn 1974) and France (Durrieu 1972). Recently I found it in Austria, too (Denchev 1994). Revision of *Microbotryum* material from DAOM, M and SOM, and field studies in Bulgaria, brought to light additional finds of *Microbotryum violaceo-verrucosum*.

Material and methods

The material listed below was studied in lactophenol (heated to boiling, then cooled), by oil immersion at a magnification of 1250×. The measurements of ustilospores (N = 100) are given in the form (smallest observed-) mean $\pm$ standard deviation (-largest observed) (Denchev 1993).

Results

Microbotryum violaceo-verrucosum (Brandenb. & Schwinn) Vánky in Mycotaxon 33: 372. 1988 $\equiv$ *Ustilago violaceo-verrucosa* Brandenb. & Schwinn in Nova Hedwigia 22:

883. 1974. – Type: Italy, Alassio, Vegliasco, on *Silene italica* (L.) Pers., 18 May 1969, W. Brandenburger & W. Brandenburger (HUV).

Sori in the anthers, powdery, dark purple, occasionally livid purple to livid vinaceous, or dark vinaceous (according to Rayner 1970). Ustilospores globose, subglobose, ovoid or broadly ellipsoidal, $5\text{--}10.5 \times 5\text{--}8\text{ }\mu\text{m}$, light brownish-violet; exospore verruculose, the warts c. $0.3\text{--}0.5\text{ }\mu\text{m}$ high.

Specimens examined

On *Silene bupleuroides* L. (matrix nova): Serbia, Raška, 23 Jun 1948, V. Lindtner (M; sub "*Ustilago violacea*", on "*S. longiflora*"; spores: $(5.5\text{--})\ 6.8 \pm 0.6\text{ (} -9) \times (5.5\text{--})\ 6.2 \pm 0.5\text{ (} -7.5)\text{ }\mu\text{m}$).

On *Silene gallinyi* Heuff. ex Rchb. (matrix nova): Macedonia, Mt Šar, inter urbem Tetovo et pagum Lisec, c.700 m s.m., 22 Aug 1948, B. Kitanov (SOM No. 20993-M; spores: $(5\text{--})\ 5.9 \pm 0.7\text{ (} -8) \times (5\text{--})\ 5.5 \pm 0.5\text{ (} -8)\text{ }\mu\text{m}$).

On *Silene italica* (L.) Pers. subsp. *italica*: France, Var, Massif de Ste.-Baume, Vallée des Cèdres, 03 Jun 1959, E. Müller (M; sub "*Ustilago violacea*", on "*Saponaria ocymoides*"; spores: $(5.5\text{--})\ 6.6 \pm 0.6\text{ (} -9) \times (5\text{--})\ 6.2 \pm 0.5\text{ (} -7.5)\text{ }\mu\text{m}$). Bulgaria, vallis Strumae, l.d. Kresnensko Defile, 07 May 1982, C. Denchev (SOM No. 21013-M; spores: $(5.5\text{--})\ 6.3 \pm 0.5\text{ (} -8) \times (5\text{--})\ 5.9 \pm 0.5\text{ (} -6.5)\text{ }\mu\text{m}$). Bulgaria, Mt Pirin, prope refugium Sinanica, c.

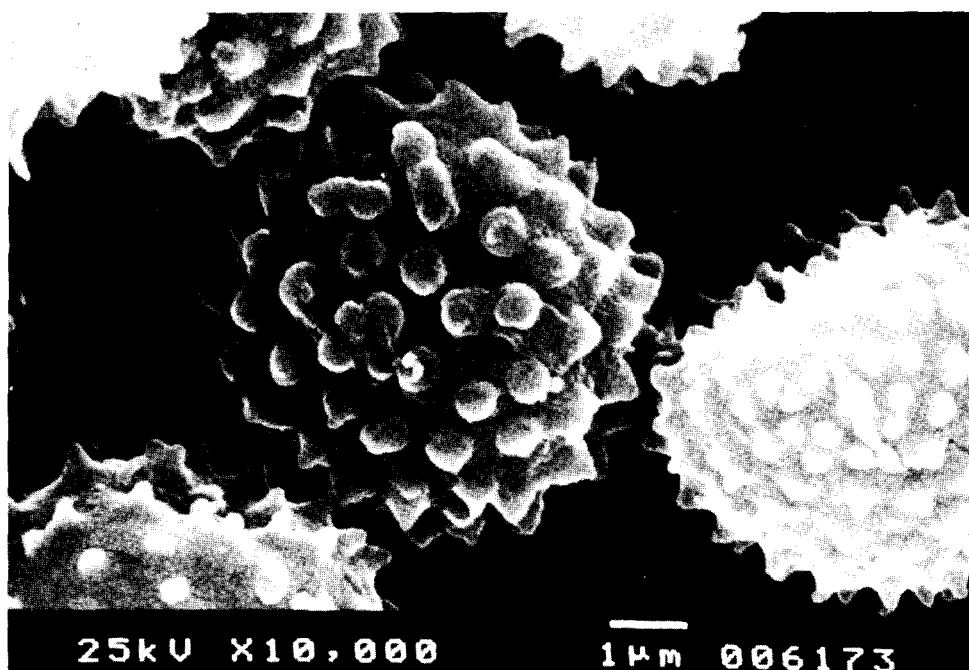


Fig. 1. Scanning electron micrograph of ustilospores of *Microbotryum violaceo-verrucosum* on *Silene italica* (Scale bar = $1\text{ }\mu\text{m}$).

1050 m s.m., 30 May 1992, *C. Denchev*, (SOM No. 21012-M; spores: $(5.5-) 7.5 \pm 0.9$ $(-10.5) \times (5.5-) 6.6 \pm 0.9$ $(-8) \mu\text{m}$ – Fig. 1). Greece, Nomos Grevenon, Eparhia Grevenon, Mt Smolikas, 1-2 km S of Samarina, c. 1400 m s.m., 28 Jun 1976, *P. Hartwig*, *C. Baden* & *S. G. Christiansen* (SOM No. 21010-M; spores: $(5-) 6.4 \pm 0.5$ $(-8) \times (5-) 5.8 \pm 0.5$ $(-6.5) \mu\text{m}$). European Turkey, Losengrad, 7 Nov 1912, *I. Nejčev* (SOM No. 21009-M; spores: $(5.5-) 6.3 \pm 0.5$ $(-8) \times (5-) 5.8 \pm 0.5$ $(-7) \mu\text{m}$).

On *Silene nevadensis* (Boiss.) Boiss. (matrix nova): Spain, Provincia de Granada, Capileira in clivo herbido australi, c. 1700 m s.m., 18 Jun 1952, *H. Roivainen* (DAOM No. 134268; sub "*Ustilago violacea*"; spores: $(5.5-) 6.0 \pm 0.4$ $(-8) \times (5-) 5.7 \pm 0.4$ $(-6.5) \mu\text{m}$ – Fig. 2).

Acknowledgements

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References

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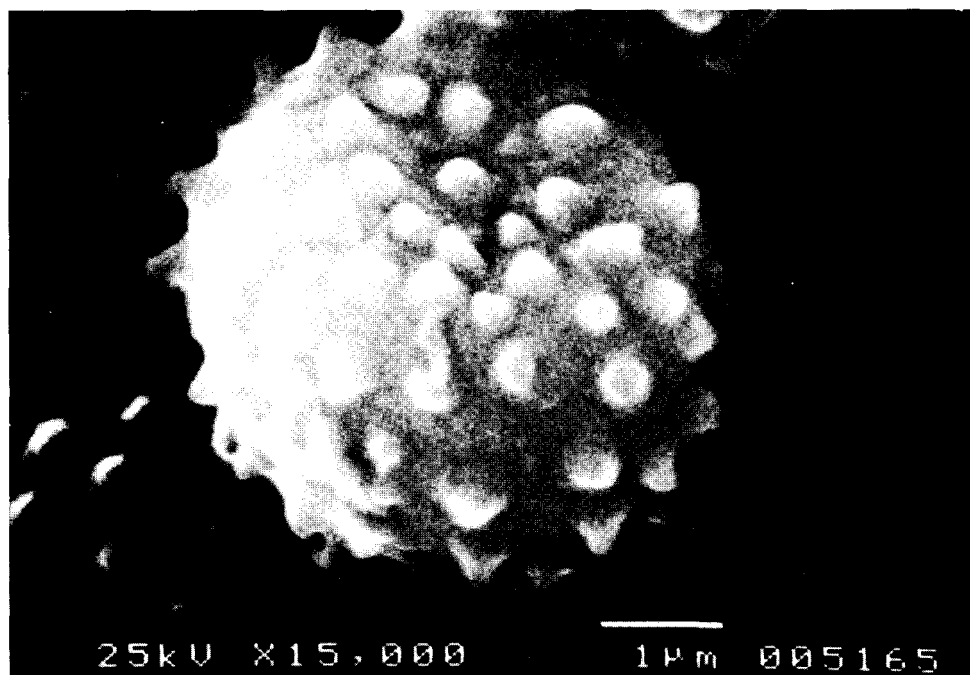


Fig. 2. Scanning electron micrograph of ustilospores of *Microbotryum violaceo-verrucosum* on *Silene nevadensis* (Scale bar = 1 μm).

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