

# First record of *Microbotryum marginale* (*Microbotryaceae*) on *Bistorta plumosa*

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**Abstract.** *Microbotryum marginale* is reported for the first time on *Bistorta plumosa*, based on a collection from the Yukon coast, Canadian Arctic, at 68°55'N. This locality is a new northern limit for *M. marginale* in North America.

**Key words:** Arctic fungi, *Bistorta plumosa*, Canada, *Microbotryaceae*, *Microbotryum marginale*, smut fungi, Yukon

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## Introduction

Two species of *Microbotryum* Lév. (*Microbotryaceae*) are known on leaves of *Bistorta* (*Polygonaceae*), viz. *M. marginale* (DC.) Vánky, in which the sori are as a continuous band round the leaf margin; and *M. pustulatum* (DC.) R. Bauer & Oberw., with sori scattered over the leaf surface. Both species were formerly considered as members of *Ustilago*, and until forty years ago, they were widely confused and often referred to the inflorescence smut, *Ustilago bistortarum* s. lat. (e.g. Fischer 1953; Savile 1953; Urban 1958; Lindeberg 1959; Jørstad 1963; Savile & Parmelee 1964; Jørstad & Gjørnum 1966; Parmelee 1969; Mordue & Ainsworth 1984; Far et al. 1989; Gjørnum 1991).

Savile (1953: 668) reported *Ustilago bistortarum* (DC.) Körn. on *Polygonum bistorta* subsp. *plumosum* (Small) Hultén from Canada, Yukon (c. 15 mi. west of Dawson, July 1949, leg. J.A. Calder & L.G. Billard no. 3833, DAOM 34060). This specimen is not revised by us. In the monograph of Vánky (2011), there is no information about a smut

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fungus on *Bistorta plumosa* (Small) Greene. In this paper, we present the first record of *Microbotryum marginale* on *Bistorta plumosa*.

### New record

*Microbotryum marginale* (DC.) Vánky, Mycotaxon 67: 45, 1998. – *Uredo bistortarum* var. *marginalis* DC., Fl. Franç., Ed. 3 (Paris) 5: 76, 1815. – *Ustilago marginalis* (DC.) Lév., in Orbigny, Dict. Univ. Hist. Nat. 12: 778, 1849. – *Ustilago bistortarum* var. *marginalis* (DC.) B. Lindeb., Symb. Bot. Upsal. 16(2): 110, 1959.

Fig. 1



Fig. 1. *Microbotryum marginale* on *Bistorta plumosa* (DAOM 115800)

On *Bistorta plumosa* (Small) Greene, CANADA, YUKON, DEW Line Site Shingle Point, small lake ½ mile east of site, approx. 68°55'16" N, 137°14'23" W, 14 Jul 1963, leg. J.A. Parmelee, no. 2787 (DAOM 115800, as '*Ustilago bistortarum*' on '*Polygonum bistorta* subsp. *plumosum*').

*Bistorta plumosa* (*Polygonum plumosum* Small, *P. bistorta* subsp. *plumosum*) is a new host plant for *Microbotryum marginale*. This collection represents a new northern limit for *Microbotryum marginale* in North America.

*Bistorta plumosa* is an Asian (NE)–amphi-Beringian species, distributed in Siberia, Far East of Russia, Alaska, and Canada (Yukon, Northwest Territories, and British Columbia) (Freeman & Hinds 2005; Elven et al. 2018).

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**Conflict of interest.** The authors declare that there is no conflict of interest.

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