

Gerhard Bedlan

Didymella michaelii sp. nov., a new pathogen on *Impatiens parviflora* DC.

Didymella michaelii sp. nov.,
ein neues Pathogen an
Impatiens parviflora DC.

Abstract

Didymella michaelii sp. nov., a new species collected on *Impatiens parviflora* DC., differs from other species of *Didymella* on this host in the diameter of the pycnidia and in length and width of the conidia.

Key words: *Didymella michaelii* sp. nov., *Impatiens parviflora*, symptoms, systematics, new species

Zusammenfassung

Didymella michaelii sp. nov., eine neue Art an *Impatiens parviflora* DC., unterscheidet sich von anderen Arten der Gattung *Didymella* auf diesem Wirt im Durchmesser der Pyknidien und in Länge und Breite der Konidien.

Stichwörter: *Didymella michaelii* sp. nov., *Impatiens parviflora*, Symptome, Systematik, neue Art

Introduction

On *Impatiens parviflora* we know three different species of the asexual state of *Didymella*, as there are *Ascochyta impatientis* Bres., *A. weissiana* Allesch., and *A. phaseolorum* Sacc. On leaves of *Impatiens parviflora* originating from

the littoral zone under trees of a windbreak of the rivulet Lafnitz at Eltendorf in Burgenland an asexual state of *Didymella* was identified which differs in the diameter of the pycnidia, length and width of conidia to the well-known species on *Impatiens parviflora* (Table 1).

Methods

For the determination of the fungus the usual mycological routine methods of light microscopy were adopted. Pycnidia and conidia of the fungus were stained with Wittmann's Blue (WITTMANN, 1970). Both have been measured using the programme labSens by Olympus.

Results

The conidia of the new species differ in length and width from the above mentioned three species. The diameter of the pycnidia of the new species varies from 75.75–158.72 μm with an average of 101 μm . The ostioles measure 9.73–24.97 μm (average 16.31 μm). The conidia are 6.2–10.2 μm long (average 8.11 μm) and 1.58–3.04 μm wide (average 2.31 μm) and show one septum in the middle of the conidia.

Infected leaves dropped down and later in the year no further infections could be observed.

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Table 1. On *Impatiens* spp. up to now described species of *Ascochyta* (in chronological order) according to the original descriptions

Species	Host	Synonyms and remarks	Diameter of pycnidia in μm	Length of conidia in μm	Width of conidia in μm	Characteristics of the conidia
<i>Ascochyta phaseolorum</i> Sacc. (SACCARDO, 1878)	<i>Phaseolus vulgaris</i>	Current name: <i>Boeremia exigua</i> (Desm.) AVESKAMP, GRUYTER and VERKLEY (2010)	100–200 ¹⁾	10–12 ¹⁾	3–4 ¹⁾	Hyaline, oblong, rounded at both ends, 1-septate, constricted at the septum, biguttulate.
<i>Ascochyta impatientis</i> Bres. (BRESADOLA, 1900)	<i>Impatiens parviflora</i>	<i>Diplodina impatientis</i> BUBÁK and KABÁT (1912) <i>Diplodina richteriana</i> STARITZ (1913)	160–200	8–11	3–4	Hyaline, mostly elliptical, only 1-septate.
<i>Ascochyta weissiana</i> Allesch. (ALLESCHER, 1901)	<i>Impatiens balsamina</i>			10–16	3–4.5	Hyaline, oblong, rounded at both ends, 1-septate, scarcely constricted at the septum.

¹⁾ according to the description in MEL'NIK (2000)

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On leaves greyish, roundish or sometimes irregular shaped spots which are dark brown to purple-brown surrounded (Fig. 1). Conidiomata (pycnidia) on the upper side of the leaf spots (Fig. 2). Pycnidia semi-immersed, brown, globose, 75.75–158.72 μm diameter (average 101 μm). The ostioles measure 9.73–24.97 μm (average 16.31 μm). The conidia are hyaline, oblong-cylindrical, rounded at the ends, sometimes bent, 6.2–10.2 μm long with an average of 8.11 μm and 1.58–3.04 μm wide with

an average of 2.31 μm and 1 septum in the midth (young conidia aseptate) and few are 2-septate, biguttulate. At the septum sometimes scarcely constricted (Fig. 3).

On living leaves of *Impatiens parviflora* DC.

Type: Austria, Eltendorf (Burgenland, district of Jennersdorf), under trees of a windbreak in the littoral zone of the rivulet Lafnitz (N 46° 59.929', O 16° 12.152'). On living leaves of *Impatiens parviflora* DC., 12 June 2015, leg. et det. G. BEDLAN (holotype, hb W).

The type specimen has been deposited at the department of Botany, Natural History Museum, Vienna (hb W).



Fig. 1. Symptoms on upper side of leaf.



Fig. 2. Leaf spot.



Fig. 3. Pycnidia and conidia (stained with Wittmann's Blue).

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