Abstract

*Septoria eferdingensis* Plekn, a new species collected on *Aesculus hippocastanum* L. differs from other species of *Septoria* on this host in the diameter of the pycnidia, length, width and number of septa of the conidia.

**Key words:** *Septoria eferdingensis* Plekn, *Aesculus hippocastanum* L., symptoms, systematics, new species

Introduction

Infections of *Septoria* on horse-chestnut have been found at Gstöttenau (a small village near Eferding/Upper-Austria) every year since 1995. From literature we know four different *Septoria*-species occurring on this common tree, *Septoria aesculi*, *S. aesculina*, *S. aesculicola* and *S. hippocastani*.

All of these fungi cause small, white or grey leafspots, which are scattered all over the leaf surface (Fig. 1, 2). Typically, they are surrounded by a thin red or dark brown margin. In the centre of these spots the pycnidia can be found, often single, up to three at the most (Fig. 3). The pycnidia are visible with the naked eye and are dark brown or black. Via the ostiolum the typical filiform, hyaline conidia (Fig. 4) are set free. The pycnidia occur on both sides of the leaf.

Under the microscope, significant differences in the diameter of the pycnidia, the length and the width and the number of septa of the conidia were found compared to the well known species on horse-chestnut trees.

Astrid Plekn (1998) published the finding and the original diagnosis of this *Septoria* species. This original diagnosis is invalid, because not written in Latin. Therefore the original diagnosis follows below in Latin and I recommend to name this new fungus *Septoria eferdingensis* Plekn.

Results

For identification and comparison the following material, mostly borrowed from herbarium collections of the Natural History Museum in Vienna, was examined:


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The pycnidia and conidia were measured with the electronical image analysis system „Kontron Image Analyses“ Model KS 400 Version 1.2 and 2.0.

The main difference between *Septoria aesculina*, *S. hippocastani*, *S. aesculicola* and the new species was the lack of septa in the conidia of the first three species. Furthermore they differ in length and width. According to literature (RABENHORST, 1901) the conidia of *S. aesculina* were found to be 35,57 – 63,71 µm long and 3,13 – 4,57 µm thick. PASSERINI (RABENHORST, 1901) says that the conidia are only about 32 µm long. The diameter of the pycnidia of *Septoria aesculina* ranges from 66 to 168,3 µm. The diameter of the pycnidia of the new species is 125 – 252 µm. The conidia are 40 – 80 µm long, 1,7 – 2,8 µm wide and have 1 – 4 septa. The width of the pycnidia wall amounts to 10,36 – 17,06 µm (Tab. 1).

*Septoria eferdingensis* PLENK sp. nov.

Maculae parvae, orbiculatae incano-albicantes, pycnidia 1-3, epi- et hypophylla, fusco-nigricantia; Pycnidia 125 – 252 diam., pariete 10 – 17 µm crasso.

Conidia filiformia, hyalina recta vel curvata, utrimumque obtusiuscula, ± attenuata, 1 – 4 septata, 40 – 80 µm × 1,7 – 2,8 µm.

Type: Austria, Gstöttenau/Oberösterreich (Upper Austria). On living leaves of *Aesculus hippocastanum* L. 17 08 1997. A. PLENK (holotype, hb W)
The type specimen has been deposited at the Department of Botany, Natural History Museum, Vienna.

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References


