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Lambertella pyrolae (Rutstroemiaceae, Ascomycota), a new species from Japan

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Abstract

Lambertella pyrolae sp. nov. occurring on decayed leaves of *Pyrola incarnata* is described, illustrated, and compared with morphologically similar taxa. The diagnostic characters of *L. pyrolae* are: elongate-elliptic to fusoid ascospores, the ascal apex not stained by Melzer's reagent, presence of hairs, and ascospore pigmentation occurring before discharge.

Key words: Foliicolous, Morphology, Substratal stroma, Taxonomy

Introduction

The genus *Lambertella* Höhnel was erected by von Höhnel (1918) for the single species *Lambertella corni-maris* Höhn. The genus remained monotypic for a long time until monographed by Whetzel (1943) who recognized eight species. The number of species increased to 29 when Dumont (1971) monographed the genus based upon a larger number of specimens. These two monographs were the basis for recognition of additional species by various subsequent authors. As the species number in *Lambertella* kept increasing, Korf and Zhuang (1985) constructed a synoptic key to the 47 species recognized by that time. Currently, *Lambertella* is one of the largest genera in the family Rutstroemiaceae which comprises 83 species according to Index Fungorum (http://www.indexfungorum.org/names/Names.asp) and 63 species in Kirk et al. (2008).

Lambertella is characterized by the presence of a substratal stroma with epidermoid cells; an ectal excipulum composed of thin-walled prismatic cells; and ascospores pigmented either within the ascus before discharge or after discharge (Dumont 1971; Korf and Zhuang 1985). It appears to be most closely allied to genus *Lanzia* Sacc. (1884: 218), which differs from *Lambertella* in having hyaline ascospores. Species of *Lambertella* predominantly occur on leaves and fruits, less commonly on roots, twigs, herbaceous stems, and fruit bodies of other fungi. Apothecia usually occur during rainy seasons in tropical regions and in the spring, late summer, or fall in temperate regions. Although *Lambertella* seems well circumscribed morphologically, phylogenetic heterogeneity has been suggested (Holst-Jensen et al. 1997; Zhao et al. 2012).

In Japan, *Lambertella* and other rutstroemiaceous fungi have received little attention, and only seven *Lambertella* species have been reported (Korf 1958; Terui et al. 1969; Dumont 1971; Hosoya et al. 1993; Hosoya and Otani 1997; Korf and Zhuang 1985). Because the climate in Japan is diverse, it is expected that further species occur and remain to be documented.

A species of *Lambertella* occurred on the leaves and petioles of *Pyrola incarnata* Fisch. ex DC. (1839: 773) was collected in Sugadaira, Nagano Pref., Japan. In our previous molecular phylogenetic analysis (Zhao et al. 2012), the present fungus (cited as *Lambertella* sp. 3) was positioned with *L. corni-maris* forming a highly supported clade. Because it represents an undescribed species, the present paper provides the description of its morphological characteristics, and the discussion on related species.

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