

Kensuke TADOME^{1,*}, Yoshihito OHMURA² and Momoka CHAKI³: *Spirographa pyramidalis* (*Spirographaceae*, *Ascomycota*), a Lichenicolous Fungus, New to Japan

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Summary: *Spirographa pyramidalis* (Etayo) Flakus, Etayo & Miadl. (*Spirographaceae*, *Ascomycota*), a lichenicolous fungus, is reported as new to Japan. It is characterized by immersed conidiomata and tetrahedral conidia. This parasitic fungus was found on *Menegazzia terebrata* growing on bark of *Cerasus* sp. in Hiroshima Pref., western Honshu, Japan at an elevation of ca. 250 m. *Menegazzia terebrata* is a new host for *S. pyramidalis*.

The genus *Spirographa* Zahlbr. belongs to *Spirographaceae* (*Ostropales*, *Ascomycota*) and contains 22 accepted species that are lichenicolous (and also fungicolous for some species) (Flakus et al. 2019). *Spirographa* in the sexual state is characterized by the brown to black apothecial or perithecial ascomata and the narrowly ellipsoidal to fusiform, sigmoid, 1-septate and hyaline ascospores (Nash et al. 2004, Hawksworth et al. 2010, Flakus et al. 2019). In contrast, the asexual state of *Spirographa*, known as *Cornutispora*, is characterized by the yellowish brown or dark brown pycnidial conidiomata and Y-shaped, tetrahedral to polyhedral and hyaline conidia (Flakus et al. 2019). The latter genus was synonymized into *Spirographa* based on the molecular phylogenetic analysis (Flakus et al. 2019).

In Japan, *Spirographa ciliata* (Kalb) Flakus, Etayo & Miadl., *S. fusisporella* (Nyl.) Zahlbr.,

S. herteliana (Knoph) Flakus, Etayo & Miadl., and *S. lichenicola* (D.Hawksw. & B.Sutton) Flakus, Etayo & Miadl. were reported before the present study (Knoph 2004, Zhurbenko et al. 2015).

As a part of our biotic studies of Japanese lichenicolous fungi, *S. pyramidalis* (Etayo) Flakus, Etayo & Miadl. was found on *Menegazzia terebrata* (Hoffm.) A.Massal. in Hiroshima Prefecture, western Honshu. The species has not been reported from Japan.

The purpose of this paper is to describe the morphological and anatomical features of the Japanese specimen of *S. pyramidalis* housed in the National Museum of Nature and Science (TNS), Tsukuba, Japan.

Morphological observations were made using a dissecting microscope (Olympus SZX12, Tokyo, Japan) and a differential interference contrast microscope (Olympus BX51, Tokyo, Japan). Anatomical examinations were made on hand-cut sections mounted in water. Measurements of conidia is given as (minimum–) range including mean \pm standard deviation (–maximum) (n = the number of measurements).

Spirographa pyramidalis (Etayo) Flakus, Etayo & Miadl. in Plant Fungal Syst. 64: 331 (2019). [Fig. 1]

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田留健介¹, 大村嘉人², 茶木桃華³: 日本新産の地衣生菌 *Spirographa pyramidalis* (スピログラファ科, 子囊菌門)

地衣生菌の一種 *Spirographa pyramidalis* (Etayo) Flakus, Etayo & Miadl. (スピログラファ科) が、広島県で採集されたウメノキゴケ科地衣類の *Menegazzia terebrata* (センシゴケ) の標本から確認された。本種の分生子果は宿主地衣体に埋没し、褐色で直径 70–90 μm。分生子果壁は黄褐色の異形菌糸組織で構成される。分生子形成細胞や分生子柄は透明で不明瞭。分生子は透明で四面体、内部に油滴があり、長辺と短辺は (3.9–)4.3–4.9(–5.2) ×

(2.6–)2.9–3.5(–4.1) μm であった。*Spirographa* 属は強い宿主特異性があるとされており、*S. pyramidalis* は南米で同じウメノキゴケ科の *Hypotrachyna* (ゴンゲンゴケ属) と *Remototrachyna* に寄生することが知られていたが、日本産は異なる宿主であった。

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