

Yoshihito OHMURA^{1,*} and Kento MIYAZAWA²: **Materials for the Distribution of Lichens in Japan (24) *Dyplolabia afzelii***

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Summary: *Dyplolabia afzelii* (Ach.) A.Massal. (*Graphidaceae*, lichenized *Ascomycota*) was confirmed to occur in Japan based on the taxonomic examination of herbarium specimens collected on Iriomote Island in 1995 and 2018. This species was recorded from Nagasaki Pref. in 1891, but it has never been reported in any other lichenological studies in Japan until this study.

During the course of studies of Japanese lichen mycota based on our field investigations and examinations of herbarium specimens housed in the National Museum of Nature and Science (TNS), the occurrence of *Dyplolabia afzelii* (Ach.) A.Massal. (*Graphidaceae*, lichenized *Ascomycota*) was confirmed by morphological and chemical examinations.

There was a very old record from Nagasaki Prefecture on the island of Kyushu in southwestern Japan, based on the collection of Dr. A.C. Maingay (Nylander 1891). After that, however, it has never been reported from Japan in any other lichenological studies (see Sato 1943, Nakanishi 1966, Nakanishi et al. 2003, Ohmura and Kashiwadani 2018). In addition, the location of voucher specimen examined by Nylander (1891) has been unknown, so the identification could not be re-checked.

The purpose of this study is to contribute to the knowledge of Japanese lichen mycota with a reliable voucher specimens of this species.

Morphological observations were made

using a dissecting microscope (Olympus SZX16) and a differential interference contrast microscope (Olympus BX51). Anatomical examinations were made on hand cut sections mounted in water. Measurement of ascospores is given as (minimum–) range including mean \pm standard deviation (–maximum) (n = number of measurements).

Color spot tests with K, C, KC, and Pd followed Orange et al. (2001). Chemical compounds were examined using high performance thin layer chromatography (HPTLC) following the method of Schumm and Elix (2015). Solvent systems B' (hexane: methyl tertbutyl ether: formic acid, 140:72:18) (Culberson and Johnson, 1982) was used for HPTLC. The spot color was checked under 254 nm and 366 nm wavelength of UV and visible light, before and after spraying the HPTLC plate with 10% sulfuric acid and charring at 90 °C for 20 minutes.

Dyplolabia afzelii (Ach.) A.Massal., Neogenea Lich.: 6 (1854). – *Graphis afzelii* Ach., Syn. Meth. Lich.: 85 (1814). **Type:** GUINEA. Supra arborum corticem, Afzelius s.n. (H-ACH 609– holotype, images available from <https://plants.jstor.org/stable/viewer/10.5555/al.ap.specimen.h9501582> [accessed on 9 May 2022]; USP–isotype, not seen). Chemistry: lecanoric acid (Staiger

C. iriomotensis having transversely 8–10-locular ascospores (25–30 × 5.0–7.5 μm) and stictic acid (Nakanishi 1981), and from *C. marcescens* having submuriform 4–5/1–2-locular ascospores (12–17 × 5.0–7.0 μm) and salazinic acid (Staiger 2002, Nakanishi et al. 2003).

The record of *D. afzelii* from Nagasaki by Nylander (1891) only mentioned the species name, and the location of the voucher specimen was unknown. Due to lack of information, it is impossible to confirm what the species really was. Without anatomical and chemical examinations, the distinction between *Dyplolabia* and *Carbacanthographis* might be difficult.

Dyplolabia afzelii is widely distributed from the tropical and subtropical regions of Asia, Oceania, North and South Americas, and Africa (Archer 2006). In Japan, two specimens were collected on Iriomote Island where they grew on the barks of *Adinandra yaeyamensis* and an unidentified tree at elevations between 20 and 221 m.

Specimens examined: **JAPAN**. Ryukyu. Yaeyama Island (Okinawa Pref.): Iriomote Island, Haeminaka, Taketomi-cho, Yaeyama-gun (N24°18'33", E123°50'27"), on bark of *Adinandra yaeyamensis*, elevation 221 m, 10 March 2018, Y.Ohmura 13119 (TNS); en route from landing place to Maryudo Waterfall, along Urauchi River, Iriomote Island, on tree bark, elevation 20–80 m, 13 February 1995, S.Arakawa 110 (TNS).

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大村嘉人¹, 宮澤研人²: 地衣類分布資料(24) オシロイクチビルモジゴケ

西表島で1995年と2018年にケナガエサカキなどの樹皮上から採集された標本に基づいてモジゴケ科オシロイクチビルモジゴケ属(新称)の *Dyplolabia afzelii* (オシロイクチビルモジゴケ, 新称)を報告する。本種は長崎から1891年に報告されているが、記載もなく証拠標本も不明であり、その後の研究でも一切報告がなかったた

め、日本に本種が産するのか疑わしい状態が続いていた。本種は白い粉霜が黒いラビア上を厚く覆っており、粉霜の呈色反応がC+ 赤色(レカノール酸)であることから類似種から容易に区別することができる。

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