

Sciaphila yakushimensis (*Triuridaceae*), a New Mycoheterotrophic Plant from Yakushima Island, Japan

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A new species of *Sciaphila* (*Triuridaceae*), *S. yakushimensis* Suetsugu, Tsukaya & H. Ohashi, is described and illustrated from Yakushima Island, Kagoshima Pref., Japan. The new species is similar to *S. nana*, but it is clearly distinguishable by the blackish purple aerial parts, the clavate style with dense papillae, and the filaments not longer than the anthers. A key to the Japanese *Sciaphila* based on total flower characteristics and another based primarily on stylar characteristics are provided for convenience of easy identification of these rare mycoheterotrophic plants.

Key words: Distribution, Japan, mycoheterotrophic plants, new species, *Sciaphila*, *Triuridaceae*, Yakushima Island.

The *Triuridaceae* is a family of fully mycoheterotrophic plants containing approximately 50 species in 11 genera. It has a pantropical distribution spanning subtropical and temperate regions of Argentina, Paraguay, and Japan (van de Meerendonk 1984, Maas and Rübsamen 1986, Maas-van de Kamer and Weustenfeld 1998). A recent molecular phylogenetic study shows that the family is represented by a single clade within the *Pandanales* (Davis et al. 2004, Mennes et al. 2013). The genus *Sciaphila* consists of 30–40 species and is the largest group within the family. Its center of distribution is Borneo harboring eleven species, five of which are putative endemics of the island (van de Meerendonk 1984, Tsukaya and Okada 2013, Tsukaya and Suetsugu 2014). Five species of *Sciaphila* are

known in Japan (Ohashi et al. 2008).

One of the authors (KS) found unknown plants of *Sciaphila* in Yakushima Island, southern Kyushu, in October 2015. After examining the morphology of the plant and comparing it to previously recorded species, we are convinced that the plant is a new species. This paper aims to report the new species with two kinds of keys to all the Japanese species, including this new one for easy identification, and provide a note on the distribution and conservation of the new species on Yakushima Island.

Taxonomic treatment

As in the case of most mycoheterotrophs, *Sciaphila* plants occur in a small population and are very small in size, usually appearing only when they bear reproductive organs.

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末次健司^a, 塚谷裕一^b, 大橋広好^c: 屋久島において発見された新種の菌従属栄養植物ヤクシマソウ (ホンゴウソウ科)

菌従属栄養植物は植物体が非常に小さく、光合成を行う必要がないため開花・結実期にしか地上に現れないことから、その分布や多様性の全貌は世界的に明らかではない。そのため近年でも多くの新産地や新分類群の存在が報告されている。植物相の研究が比較的良好に進んだ日本においても、2008年にはタヌキノシヨクダイ科のヤクノヒナホシが鹿児島県屋久島で発見され、ホンゴウソウ科のイシガキソウが沖縄県石垣島に分布することが明らかにされた。

今回新たに、鹿児島県熊毛郡屋久島町の二又川流域と花揚川流域の低地照葉樹林で、ホンゴウソウ属の未記載種が発見された。本種は、単性花を持ち、雄花の裂片のうち3個は卵状披針形で大きく、他の3個は小さく、先が細長く伸びて、先端に球形の付属体をつける点で、ホンゴウソウに近縁と思われる。しかしながら、地

上部全体が黒紫色を呈すること、雄花の花糸が葯の高さを超えないこと、雌花の花柱が棍棒状で多数の乳頭状突起を持つことから容易にホンゴウソウと区別することができる。よって本種を新種として記載し、発見場所の地名を冠し、ヤクシマソウ *Sciaphila yakushimensis* Suetsugu, Tsukaya & H. Ohashi と命名した。

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