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Oidium oxalidis, a Powdery Mildew Fungus New to Korea

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韓國產 未記錄 흰가루病菌 *Oidium oxalidis*에 대하여

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Key words: Powdery mildew, *Oxalis corniculata*, *Oidium oxalidis*.

Powdery mildew-infected *Oxalis corniculata* L. was found by chance in Suweon in June 1982. The disease was common on wild *Oxalis* growing in the field and occurred until late October. Both upper and lower surface of the leaves and inflorescence were infected. Mycelial density was generally thin and evanescent, sometimes became dense during the dry weather. The severely infected host plants seem to wither earlier than the healthy ones. Morphological characteristics were examined to identify the causal fungus of the disease. Each microscopic observation and size measurement of the fungus was performed with fresh and well-ripen materials which were water-mounted on the clean slide glass.

The morphological characteristics of the fungus examined are as follows: Hyphae very thin, 3~5μ; appressoria multilobed or moderately lobed, single or opposite in pairs, 3~6×2~4μ; conidiophores straight, 112.4×5.1μ, producing conidia singly; conidia ellipsoid to lemon-shaped, 34.0×16.1μ, without conspicuous fibrosin bodies; microconidia not

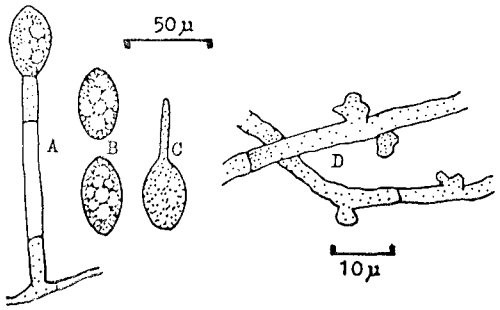

Fig. 1. *Oidium oxalidis* McAlp. A. conidiophore, B. conidia, C. germinating conidium, D. hyphae with appressoria.

Table I. Size measurements of conidia and conidiophores of *Oidium oxalidis* McAlp. reported by Homma and Boesewinkel as compared with authors'.

Researchers	Conidia	Conidiophores
Homma (1937)	31.2~40.8×14.4~19.2 μ	not measured
Boesewinkel (1979)	35.0×13.7	92×5 μ
Authors	34.0×16.1*	112.4×5.1*

* Each value for authors' collection is the average of 50 measurements.

produced; germ tubes on end, simple, straight.

The morphological characteristics and size measurement of the fungus are given in Figure 1 and Table I respectively. On the basis of the morphological characteristics and host specificity, the causal fungus was identified as *Oidium oxalidis* McAlp. which was found to be new to Korea. The perithecial state of the fungus has not been collected in Korea.

摘　要

흰가루病에 感染된 괭이밥(*Oxalis corniculata* L.)을 1982年 6月 水原에서 多數 採集하였다. 病原菌의 形態的 特徵을 檢鏡한 結果, 韓國產 未記錄 흰가루病菌인 *Oidium oxalidis* McAlp.로 同定되었다. 罹病植物은 10月末頃 거의 枯死하였으며, 이 病原菌의 完全世代는 觀察되지 않았다.

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