

On the new plant pathogenic fungus attacking *Miscanthus sinensis* at Japan Alps

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We clarified a taxonomic status of a new fungal plant pathogen attacking *Miscanthus sinensis*, a dominant plant species in a grassland community at SMRC on the Sugadaira plateau, c. 1300m alt., Nagano, central Japan. The 35hr of grassland has been maintained by artificial removes of all of the aboveground plant parts, every autumn since 75 years ago. In the study site, *M. sinensis* was mainly infected by two plant pathogenic fungi; smut fungus, *Ustilago kusanoi* (Basidiomycota) and an unidentified species of Ascomycota. Both of the diseases remarkably decrease the growths and sizes of the hosts. Latter unidentified fungus causes leaf blight-like disease with characteristic symptoms on living leaves of *M. sinensis*. Initially white lesions emerge at the center of leaves in the end of May, and gradually they increase in length and width. Finally many minute fruiting bodies (lip-shaped apothecia) are produced on lesions (in July to August). The incidence of the fungus emerged early in June, and peaked at July. We recorded the incidence of the fungus observed in 2708 subplots, among 6000 1 x 1-m subplots within a 60 x 100-m area in the study site. Based on the result of the molecular phylogenetic analyses, observations on ecological and morphological characters, the present causal agent of *Miscanthus* is identified as a species of genus *Naemacyclus*, Rhytismatales (Ascomycota).

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