

EPISTOLA BOTANICA

**THE OCCURENCE OF CAUSAL FUNGUS
OF BANANA LEAF SPECKLE, ON
PSEUDOSTEM OF *MUSA X PARADISIACA*
IN INDONESIA**

Chloridium musae was first described from Surinam by Stahel (*J. Imp. Coll. Trop. Agric.* 14: 43. 1937) but invalidly published because without a latin diagnoses. Almost four decades later, Ellis (*More Dematiaceous Hyphomycetes*: 209. 1976) validly described *Veronea musae* M.B. Ellis based on Stahel's species. A research conducted by Arzanlou et al. (*Studies in Mycology* 58: 72. 2007) on phylogenetic and morpho taxonomic revision of *Ramichloridium* and allied genera considered that this species should be classified as *Ramichloridium musae* (Stahel ex M.B. Ellis) de Hoog.

Ramichloridium musae (Stahel ex M.B. Ellis) de Hoog has been known as the causal fungus of banana speckle attacking the leaf of *Musa* and its cultivars in some tropical countries such as Papua and Sarawak (*More Dematiaceous Hyphomycetes*: 209. 1976), and also in Australia (Shivas et al., *Australasian Plant Pathology* 40: 61–65. 2011), Panama and Taiwan (Kirschner & Piepenbring, *Mycoscience* 55: 260–267. 2014). Their colonization showed particular symptoms described by Jones (*Disease of Banana, Abaca and*

Enset: 116–120. 2000) as “circular, chlorotic blotches with dense pintpoint-sized specks on the upper surfaces of the leaf and as tan coloured blotches underneath”. This is in contrast with Kirschner & Piepenbring who found that the symptoms were not conspicuous from Panama and Taiwan specimen so that it could not be assumed as a single causative fungus.

During an investigation of hyphomycetes on cultivated banana in Java, a collection of hyphomycetes on decaying pseudostem of *Musa x paradisiaca* was collected in Bogor, on February 4 2015, *D.M. Panjaitan* 39 (BO). Upon a careful examination, it is identified as *Ramichloridium musae* (Fig.1). On its natural substrate, the fungus forms brown to dark brown and hairy colony. Conidiophores unbranched, erect, straight to flexuous, length up to 120 μm and 2.8–3.1 μm wide, swollen or inflated at the base 5–6–7.5 μm wide, golden-brown and becoming pale or subhyaline at apex, septate becoming indistinct near apex. Conidiogenous cell polyblastic, integrated, scattered, originally terminal then because of sympodial growth it forms denticulate elongation, subhyaline to hyaline. Conidia aseptate, obovoid with papillate base, 6.6–(8)–9.2 x 2.8–3–4 μm (n=30), smooth, pale brown to subhyaline, hilum at the base.

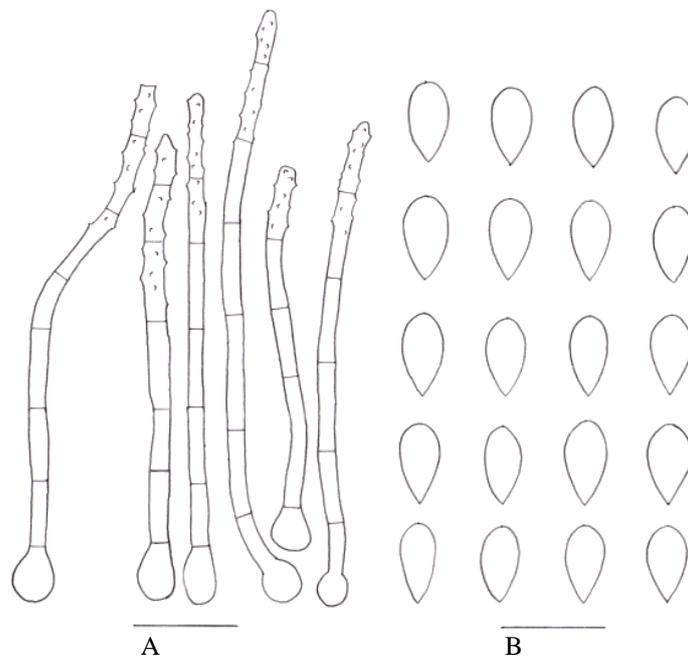


Figure 1. Morphology of *Ramichloridium musae*: A. Conidiophore; B. *Conidia* (scale bar: A = 20 μm ; B = 10 μm).

Unlike the colonies of *R. musae* reported by previous authors which grow on banana leaf, the Javanese specimen reported here was found on decaying and dry pseudostem of banana so that it does not show the particular symptoms such as yellow or brown streaks compared with record from others sources. This phenomenon shows that

this fungus could persist as saprobes on the dead banana tissues. This kind of adaptation may lead to the disease dispersal and threatened the banana and its cultivars in Indonesia.—**Desi M. Panjaitan, Nampiah Sukarno & Mien A. Rifai**, Bogor Agricultural University, Bogor.