

3RD WORLD PLANT GENOMICS AND PLANT SCIENCE CONGRESS & 4TH WORLD MYCOLOGY AND MUSHROOM CONGRESS

July 15-16, 2019
Osaka, Japan

A new polyporus macrofungi parasite from Tanzania elucidated using four gene datasets

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There are few studies on Polyporales that have been undertaken in Tanzania¹. Recently wilting and death of cashew trees, Eucalyptus, cassava, and some indigenous trees in the Southern regions of Tanzania was observed to be caused by unknown polyporoid parasitic macrofungus. The aim of the present work is to describe a parasitic macrofungus (Fig 1) from Tanzania using both morphological and molecular features. Superficially its fruitbodies are quite similar to those of *Laetiporus sulphureus*. Some of the differences versus *L. sulphureus* include: *Laetiporus* causes a brown rot in the host plant that takes a long time to harm the host; the new species causes wilting and rapidly kills the plant; Old fruitbodies of *Laetiporus* are perennial, turn pale and brittle while of this species darken to brown tints then complete self-digestion within 3-4 weeks;

Fruitbodies of the new species are huge weighing up to 10 kg; Microscopically the new species has a sarcotrititic hyphal system in contrast to the generative and binding hyphae of *L. sulphureus*. Based on the molecular phylogenetic analyses of rDNA 5.8S, nuLSU, nuSSU, and TEF1 sequences of *P. baudonii* with additional sequences from Gene Bank comprises species from the antrodia clade (Vilgalys & Hester 1990; Hibbett 1996), we propose a revision of *Piptoporellus baudonii*, based on a new combination which formerly was designated as *Laetiporus baudonii* in Polyporales. Both morphological and phylogenetic evidences justify the incorporation of *Piptoporellus baudonii* comb. nov. in *Piptoperellus* genus together with other three members of the genus. A study on the genome and possible mitigation measures of this parasite are ongoing.



Biography

Tibuhwa Donatha Damian completed her PhD at the age of 35 years from Dar es Salaam University, Tanzania. She is a Director of post-graduate studies at the University of Dar es Salaam. She has published more than 32 papers in reputed journals and has been serving as an editorial board member of several journals.

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