First Report of Smut on *Imperata cylindrica* Caused by *Sporisorium schweinfurthianum* in South Africa

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Imperata cylindrica (L.) Raeusch. (Poaceae) is indigenous to the old world but is a problem weed in tropical areas throughout the world (1). A smut fungus was observed frequently on this grass at a single site near Pretoria (25°44'19"S, 28°15'39"E), South Africa during April of 2006. On the basis of the following characteristics, it was identified as *Sporisorium schweinfurthianum* (Thüm.) K. Vánky (2). Panicles were systemically infected and all ovaries in infected inflorescences were replaced by spores. Spores were globose or subglobose, brown, 10 to 14 × 9 to 12 µm (average 11.2 × 9.8 µm; n = 25), wall 1 µm thick, and finely verruculose. Hyaline, thin-walled sterile cells were present. This identification was confirmed by K. Vánky (*personal communication* to A. R. Wood). To our knowledge, this is the first report of this smut species from southern Africa. A voucher specimen has been deposited in the South African National Collection of Fungi, ARC-Plant Protection Research Institute (PREM 59895). To test pathogenicity, soil in 15 pots with individual 1-month-old seedlings was drenched with an aqueous suspension of 1×10^8 spores ml^{-1} amended with 0.1% Tween 80. Before treatment, the pots were placed on pot trays and remained immersed in the spore suspension in the trays at 28°C (relative humidity <80%) for 24 h. To maintain the spore concentration in the soil, the pots were not watered until 7 days after inoculation. Distilled water amended with 0.1% Tween 80 was applied as control treatments to a further 15 pots with plants. Five of the treated plants produced panicles within 4 months of inoculation. Of these, all the ovaries of four emerging inflorescences were completely replaced with a brown, powdery mass of teliospores. No smutted panicles developed on the control plants. This smut fungus may have potential as a classical biological control agent for use against *I. cylindrica* by reducing dispersal by seed.

References: (1) L. G. Holm et al. The World's Worst Weeds: Distribution and Biology. University Press of Hawaii. Honolulu, 1977. (2) K. Vánky. Australas. Plant Pathol. 29:155, 2000.