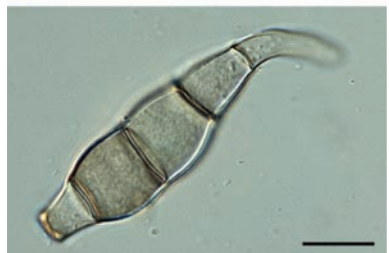
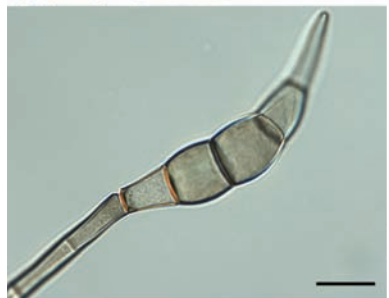


***Sporidesmium knawiae* Crous, sp. nov.****Mycobank:** MB508003.**Etymology:** Named for the Royal Netherlands Academy of Arts and Sciences (KNAW), on the occasion of its 200<sup>th</sup> anniversary. The host genus, *Encephalartos*, is commonly called the ‘bread tree’. It was formerly used for food, and thus has some similarity to the Academy, which feeds us with knowledge.**Latin diagnosis:** *Sporidesmio inflati* simile, sed conidiis 4-septatis, 60–80 × 10–13 µm.**Description:** Colonies sporulating on tap water agar supplemented with sterile *Pinus* needles. Colonies black, erumpent, sporodochial. Mycelium consisting of branched, septate, thin-walled, hyaline to pale brown, smooth, 1.5–2 µm wide hyphae. Conidiophores separate, or aggregated in groups of 2–6, sinuous or straight, erect or somewhat repent, arising from creeping hyphae, or aggregated in black sporodochia; separated from hyphae by basal septum, base mostly not swollen, and lacking rhizoids; stipe cylindrical, brown, smooth, thick-walled, at times geniculate and branched in upper part, or regenerating percurrently, 100–250 × 4–6 µm. Conidiogenous cells terminal, cylindrical, brown, 10–20 × 4–6 µm; proliferating once percurrently at apex, after which the conidiophore extends in length, before forming the next conidium; flaring collarete visible. Conidia solitary, acrogenous, obclavate, tapering towards subobtuse apex and truncate base, 4-euseptate, smooth-walled, (60–)65–70(–80) × (10–)11–12(–13) µm, basal cell pale brown, second to fourth cells medium brown, and apical cell pale brown; hilum with minute marginal frill; at times conidia with delayed secession visible, creating the impression of lateral conidiogenous loci on conidiogenous cells; conidial base truncate, 5–6 µm wide.**Cultural characteristics:** Colonies on 2 % malt extract agar (MEA; Difco) at 25 °C in a 12 h dark : 12 h light cycle under mixed fluorescent and near-ultraviolet light after 1 month: 25 mm diam, erumpent, spreading, with moderate aerial mycelium and feathery margins; surface pale olivaceous-grey, outer region fertile, olivaceous-grey; reverse olivaceous-grey. On 2 % potato-dextrose agar (PDA) and oatmeal agar (OA)<sup>1</sup> similar in texture and colour, but growth slower, reaching 10 mm diam after 1 month.**Typus:** South Africa, KwaZulu-Natal, South Coast, Uvongo, Skyline Nature Reserve, arboretum (30°49′27.32″S, 30°23′30.26″E), living leaves of *Encephalartos lebomboensis*, 29 May 2008, collected by A.R. Wood, isolated by P.W. Crous, CBS H-20158, **holotypus**, culture ex-type CPC 15467 = CBS 123529, CPC 15468–15469. GenBank: ITS FJ349609, LSU FJ349610.**Notes:** *Encephalartos* (*Zamiaceae*) was the genus described by the German botanist J.G. Lehmann in 1834 for cycads indigenous to Africa. The name is derived from Greek (*en* = within, *kephali* = head, and *artos* = bread), meaning ‘bread in the head’, referring to the Khoi-Khoi’s (“Hottentots”) habit of removing the pith of the stem, burying it in the ground for 2 months, before kneading it into bread. Species of *Encephalartos* are thus commonly referred to as bread trees or bread palms ([www.kew.org/plants/](http://www.kew.org/plants/)). Although this ancient plant genus is endangered, and known to suffer from trunk and root parasites, and fungal infections, only a few fungi have been described from this host ([nt.ars-grin.gov/fungalatabases/](http://nt.ars-grin.gov/fungalatabases/)).The genus *Sporidesmium* Link and morphologically similar genera are polyphyletic, with *Sporidesmium* having phylogenetic relationships to both *Dothideomycetes* and *Sordariomycetes*<sup>2</sup>. *Sporidesmium knawiae* is phylogenetically and morphologically closest to *S. inflatum* (Berk. & Ravenel) M.B. Ellis, which also has widely dispersed percurrent proliferations, and conidia with brown median, and paler ends cells<sup>3</sup>. *Sporidesmium inflatum* is a cosmopolitan species<sup>3,4</sup>, although it is clearly a species complex, from which *S. knawiae* can be distinguished based on its conidial width (10–13 µm), being narrower than *S. inflatum* (10–18 µm). This species complex is not that dissimilar from the type species of *Sporidesmium*, *S. atrum* Link, and hence we prefer to retain this complex in *Sporidesmium*, rather than *Repetophragma* Subram.<sup>3</sup>, awaiting clarification once the type species of the segregate genera of the complex have been included in future molecular analyses.**Colour illustrations:** *Encephalartos lebomboensis* palm growing in South Africa (H. Glen, SANBI, South Africa); fungal colony growing on PDA; conidiophores with terminal conidiogenous cells, giving rise to versicoloured conidia with paler basal and end cells (P.W. Crous). Scale bars = 10 µm.**References:** <sup>1</sup>Gams W, Verkley GJM, Crous PW (2007). *CBS course of mycology*. 5<sup>th</sup> ed. Centraalbureau voor Schimmelcultures, Utrecht, Netherlands. <sup>2</sup>Shenoy BD, Jeewon R, Wu WP, Bhat DJ, Hyde KD (2006). Ribosomal and RPB2 DNA sequence analyses suggest that *Sporidesmium* and morphologically similar genera are polyphyletic. *Mycological Research* **110**: 916–928. <sup>3</sup>Wu WP, Zhuang W (2005). *Sporidesmium*, *Endophragmiella* and related genera from China. *Fungal Diversity Research Series* **15**: 1–351. <sup>4</sup>Ellis MB (1971). *Dematiaceous hyphomycetes*. Commonwealth Mycological Institute, Kew, England.Pedro W. Crous & Johannes Z. Groenewald, CBS Fungal Biodiversity Centre, P.O. Box 85167, 3508 AD Utrecht, Netherlands. Email: [p.crous@cbs.knaw.nl](mailto:p.crous@cbs.knaw.nl) & [e.groenewald@cbs.knaw.nl](mailto:e.groenewald@cbs.knaw.nl)  
Alan R. Wood, ARC – Plant Protection Research Institute, P. Bag X5017, Stellenbosch 7599, South Africa.  
Email: [wooda@arc.agric.za](mailto:wooda@arc.agric.za)

# *Sporidesmium knawiae*



Tweehonderd jaar  
Koninklijke  
Nederlandse  
Akademie van  
Wetenschappen

*Magie van wetenschap*