

Table 1 Test in yeast, bacteria and fungi for the growth inhibitory effects of authentic and isolated sterigmatocystin.

Name of the micro-organism.	Dosage in mcg/20 ml medium	Degree and inhibition of growth	
		Isolated sterigmatocystin	Authentic sterigmatocystin
<i>S. carlsbergensis</i>	50	--	--
	100	--	--
	150	+	+
	200	+	+
	250	++	++
<i>S. cerevisiae</i>	50	--	--
	100	--	--
	150	--	--
	200	+	+
	250	++	++
<i>P. crustosum</i>	50	--	--
	100	--	--
	150	--	--
	200	+	+
	250	++	++
<i>P. patulum</i>	50	--	--
	100	--	--
	150	--	+
	200	+	+
	250	++	++
<i>P. cycloptum</i>	50	--	--
	100	--	--
	150	--	--
	200	+	+
	250	+	++
<i>S. aureus</i>	50	--	--
	100	--	--
	150	+	+
	200	++	++
	250	++	+++
<i>B. subtilis</i>	50	--	--
	100	--	--
	150	+	+
	200	++	++
	250	+++	+++

-- absence of inhibition zone.

+ appearance of inhibition zone.

++ radius of inhibition zone about 0.5 mm.

+++ radius of inhibition zone about 1 mm.

of almost all the micro-organisms tested.

It is interesting to note that high concentrations of sterigmatocystin are needed to inhibit the growth of micro-organisms. The ability of aflatoxin B₁ to inhibit the growth of several micro-organisms is known⁸ and a method based on inhibitory effect has been recom-

mended for the assay of aflatoxin B₁. Lillehoj and Ciegler⁹ reported that *Bacillus megaterium* which is highly sensitive to aflatoxin B₁ can be used as an assay organism. Patulin is also a potent antibiotic¹⁰.

A high molecular weight glycoprotein has been isolated from *A. nidulans*, culture. This glycoprotein acted synergistically with sterigmatocystin and inhibited the growth of several gram-positive bacteria. Sterigmatocystin contains unsaturated bifuran moiety which is shown to be essential to the antimicrobial action of the synergy¹¹.

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MONODICTYS INDICA SP NOV AS A SAPROPHYTE BUT TRANSITORY FUNGUS ON HUMAN SKIN

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DURING the course of mycological investigation of patients suffering from superficial mycoses, a new

species of *Monodictys* belonging to dematiaceous hyphomycetes was isolated from the skin lesion of a man, caused by *Scytalidium* state of *Hendersonula toruloidea* Natrass reported by us¹.

The present species of *Monodictys* was compared with the known species described by Ellis^{2,3}. The *Monodictys* species that resembled our isolate were *M. antiqua* (Corda) Hughes, *M. Lepraria* (Berk) M. B. Ellis and *M. fluctuata* (Tandon and Bilgrami) M. B. Ellis. However, the differences noted were: *M. antiqua* conidia becoming clavate, obclavate, verruculose with no blue green pigmentation: *M. fluctuata* conidia were paler, first smooth becoming verruculose, smaller with no blue green pigmentation: *M. Lepraria* conidia often cylindrical or oblong, becoming dark brown, smooth walled with no blue green pigmentation. It is, therefore, erected as *M. indica* Singh et Barde, sp nov, saprophyte on human skin; Balaghat India, Dec. 1979, leg. A. K. Barde.

Colonies on Sabouraud's dextrose agar after 7 days at 30°C were effuse, floccose, olivaceous grey to dark, slow growing (19 mm in 10 days) centre slightly raised with shining aerial mycelium, reverse was iron grey. Mycelium well-developed, branched, euseptate, 3–5 µm in width, sometimes showing racquet hyphae; conidiophores micronematous, showing greenish blue pigmentation in the cytoplasm, conidia large, irregular, multicelled, olivaceous grey to black showing greenish blue pigmentation in the cytoplasm, measuring upto 75 × 65 µm in diam. (figures 1–3). The type culture has been deposited in the Herb. CMI Kew, England, No. 244074.

Monodictys indica Singh et Barde sp nov

Coloniae (in agar secundum Sabouraud's in 30°C) effusae, floccosae, oleogineo-ravae vel nigrae, crescentes



Figure 1. Colony of *Monodictys indica* on Sabouraud's dextrose agar after 7 days at 30°C.

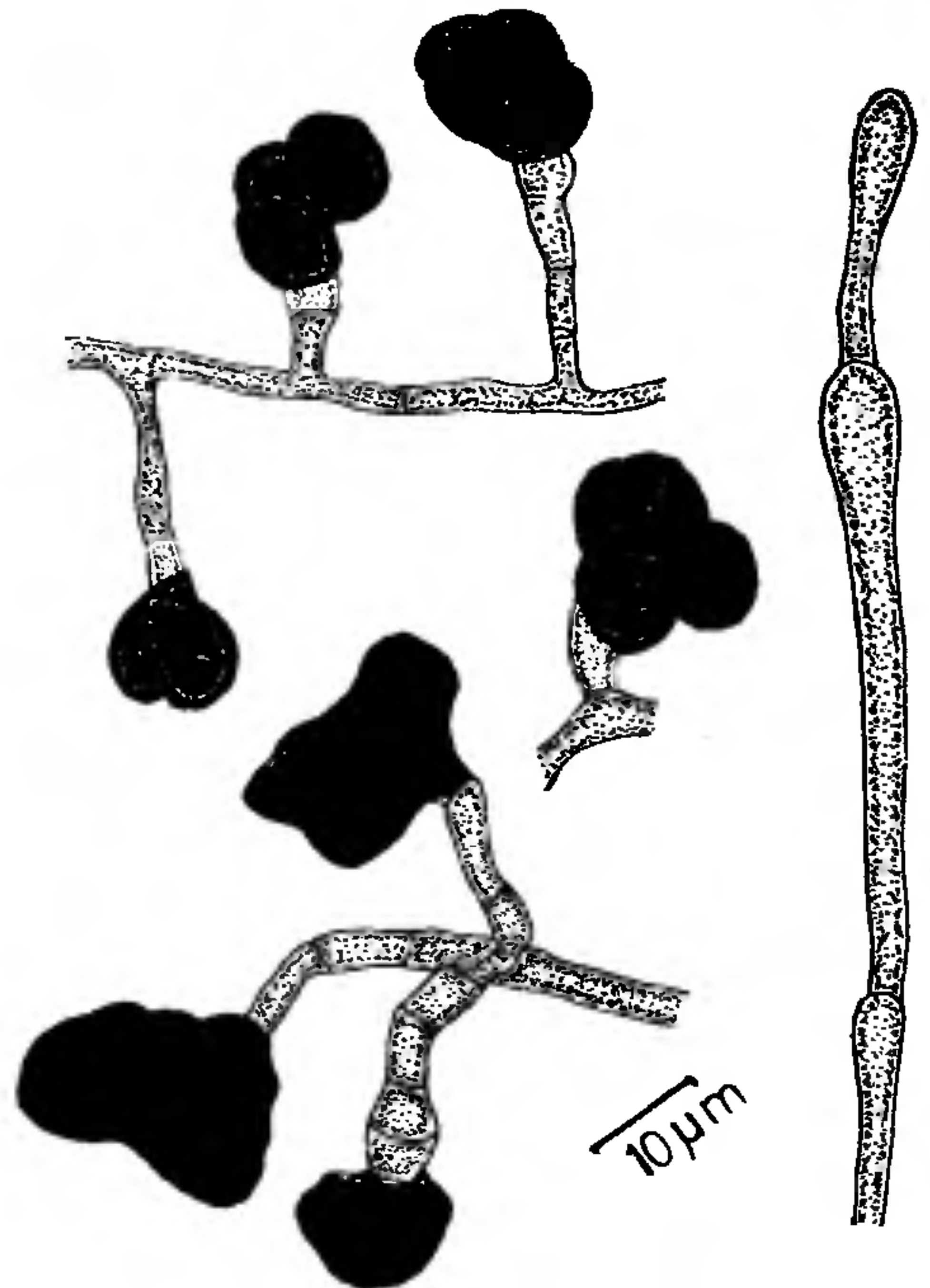


Figure 2. *M. indica* showing conidia, conidiophores and racquet hypha.

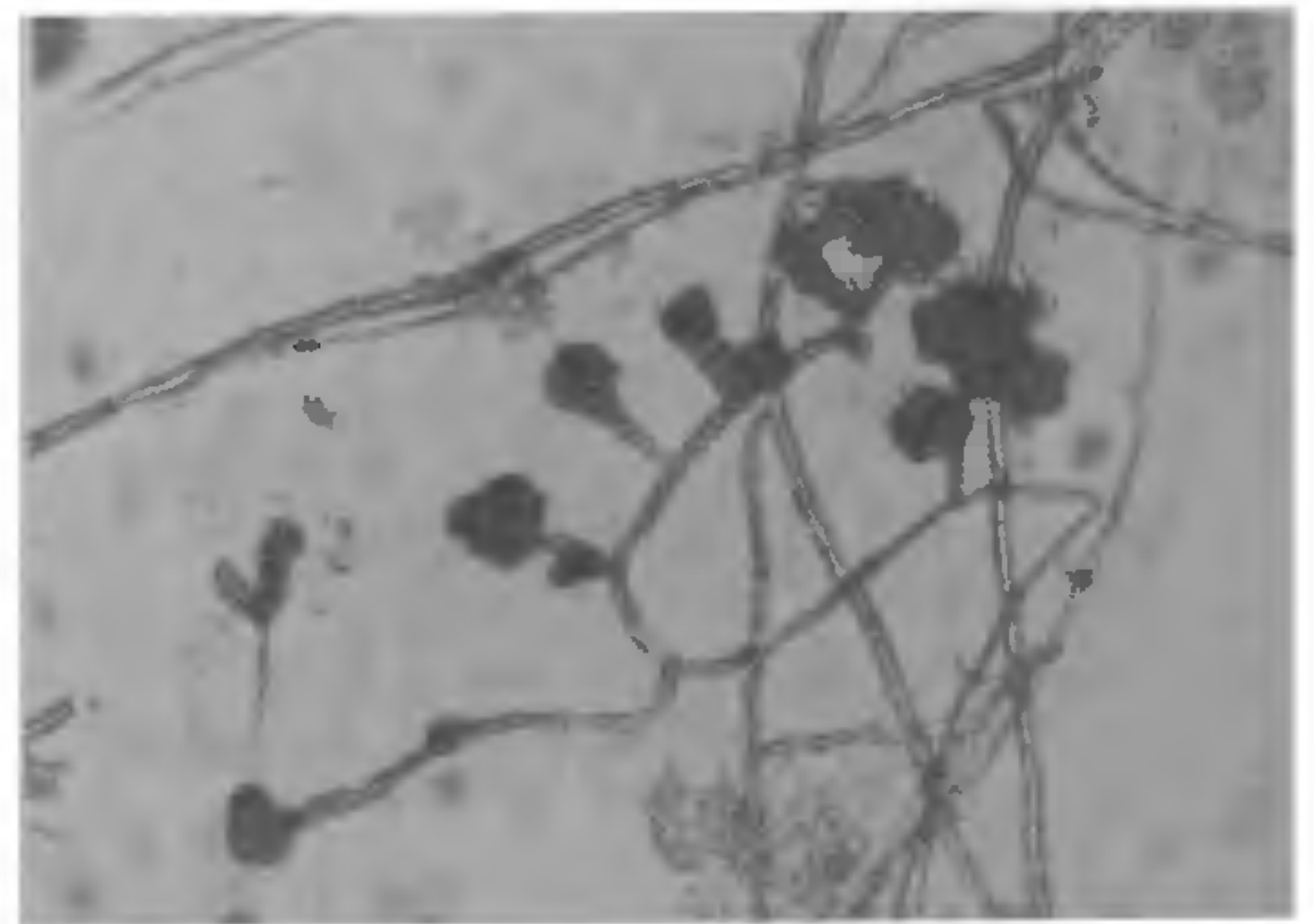


Figure 3. Photomicrograph of *M. indica* (× 300).

lente (19 mm in 7 diebus), centrum leviter olivatum cum mycelio aereo nitenti, marolevs, pars aversa rava instar ferri, mycellium bene efformatum, hyphae ramosa, septatae, viride glaucae 3–5 µm latae, coni-

diophori micronematosi demonstro azure pigmentum in cytoplasma; conidia grandis, irregularia, multi-spetata oleagineo-ravae vel nigra, demonstro azure pigmentum in cytoplasma, ad $75 \times 65 \mu\text{m}$ in diametrum. Typus positus in Herbario CMI Kew No. 244074.

Key to the taxa of *Monodictys*³

Conidia few celled, $10 \times 20 \times 7 - 14 \mu$. . . *asperospora*. Conidia many celled more than 20μ wide . . . 1

1. Lower half of conidium

paler than upper half *melanopa*

Lower half not paler 2

2. Conidia often quite deeply

lobed, verruculose *antiqua*

Conidia not deeply lobed,
mostly smooth 3

3. Conidia roughly oblong

rounded at the ends *lepraria*

Conidia irregular in shape
but roughly sub sphaeri-
cal *fluctuata*

Conidia irregular in shape
and conidia and conidio-
phores showing blue green
pigmentation. *indica* sp nov

Thermotolerance studies showed that *Monodictys* sp grew well at 26°C ; the colonies attained 38 mm diameter by the end of 10 days of growth period on SDA medium. On the contrary, colony at 37°C measured 10 mm in 10 days. Rayner⁴ colour chart was used in the description of the fungus.

Invasion of the already damaged skin by filamentous non-dermatophyte is not uncommon. In such cases the fungus survives in the necrotic tissue purely as a saprophyte⁵. The saprophytic nature of *M. indica* in the present case is emphasized by its spontaneous disappearance within two months, without any specific antifungal therapy. Such saprophytes but transitory fungi have also been reported⁶. The significance of such transients has not been understood. Nevertheless, the ability of *M. indica* to tolerate and grow fairly well at 37°C (10 mm in 10 days) and its survival on the skin suggest that this fungus may have the potential to parasitize man and animal tissues. However, we have at present no direct or indirect evidence of its pathogenic nature.

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ASSOCIATION OF *FUMAGO VAGANS* ON COCONUT LEAVES

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AN epiphytic association of *Fumago vagans* was noticed on the leaflets of 10–15 year old coconut palms (*Cocos nucifera* L) in the coconut groves of the Regional Agricultural Research Station, Pilicode, Kerala.

The fungi were found to occur as a sooty growth covering the dorsal surface of the individual leaflets. Occurrence of infection before separation of the leaflets resulted in webbing together of the leaves by the fungal mycelia. The infection persisted on the leaflets till the leaf matured without causing any deformation of the leaves. The fungi did not enter the host tissues to cause direct damage to the leaf.

A preliminary survey revealed that the extent of infection varied from 0 to 40% of the leaves.

The specimen was sent to CMI, Kew, England for isolation and identification. It was found to consist of a mixed culture of hyphomycetes and also *Cladosporium* sp. The term *F. vagans* is generally used for such mixed cultures (IMI No. 292571).

Leaf tissues of the infected portions of the leaflet were analysed for the chlorophyll content¹ and the