

**STECCHERICIUM SERIATUM (LLOYD)
MAAS GEESTERNAUS—A NEW RECORD
FROM INDIA**

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DURING a mycological survey at Santiniketan, Birbhum, West Bengal, India in July 1979 several sporophores of a fungus were collected from the base of a trunk of *Ficus bengalensis* L. These sporophores were identified as *Stecchericium seriatum* (Lloyd) Maas Geesteranus, a species hitherto not recorded from India^{1,2}. A brief description of this fungus is given below:

Morphology: Basidiocarp (figure 1) annual, white, gregarious, erect, pileate, fan-shaped, sessile, soft when fresh, hard and brittle on drying, 6–8 × 3–5 × 0.5–1.5 cm; pileus surface white, glabrous, smooth or somewhat wrinkled, very faintly zonate; context white to creamish, zonate, 0.4–1.4 cm thick; hymenial surface white, spiny, spines conical, small, up to 0.1 cm long, 2–3 per mm; margin thin, entire, incurved on drying.

Anatomy: Hyphal system dimitic; generative hyphae

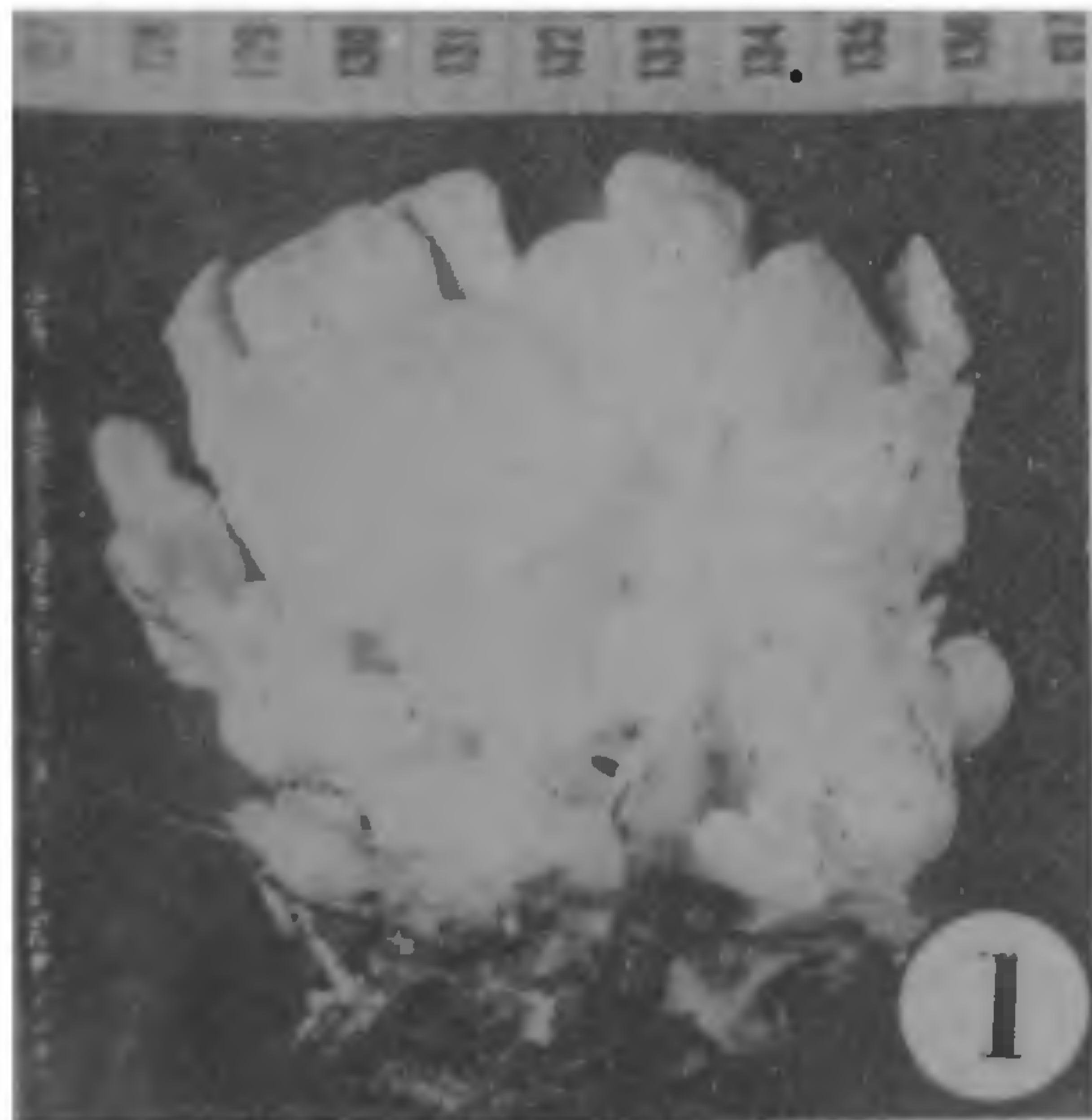


Figure 1. Basidiocarps of *Stecchericium seriatum* (Lloyd) Maas Geesteranus.

(figure 2A) hyaline with clamp connections and rare simple septa, thin to slightly thick-walled, moderately branched, 10–14 μ in diameter; conducting hyphae (figure 2B) hyaline, with clamp connections and rare simple septa, thin-walled, usually unbranched, highly protoplasmic, 11–14 μ in diameter; skeletal hyphae (figure 2C) hyaline, aseptate, thick-walled to solid, refractive, long, unbranched, vermiculiform, 10–13 μ in diameter; pseudoparenchymatous cells (figure 2D) thin to slightly thick-walled, hyaline, isodiametric; basidia (figure 2E) hyaline, thin-walled, clavate, 24–30 × 8–10 μ , tetrasterigmatic, sterigmata up to 2 μ long; basidiospores (figure 2G) hyaline, thin-walled, smooth, ellipsoid to cylindrical, apiculate, 6.5–9.0 × 5.0–6.5 μ ;

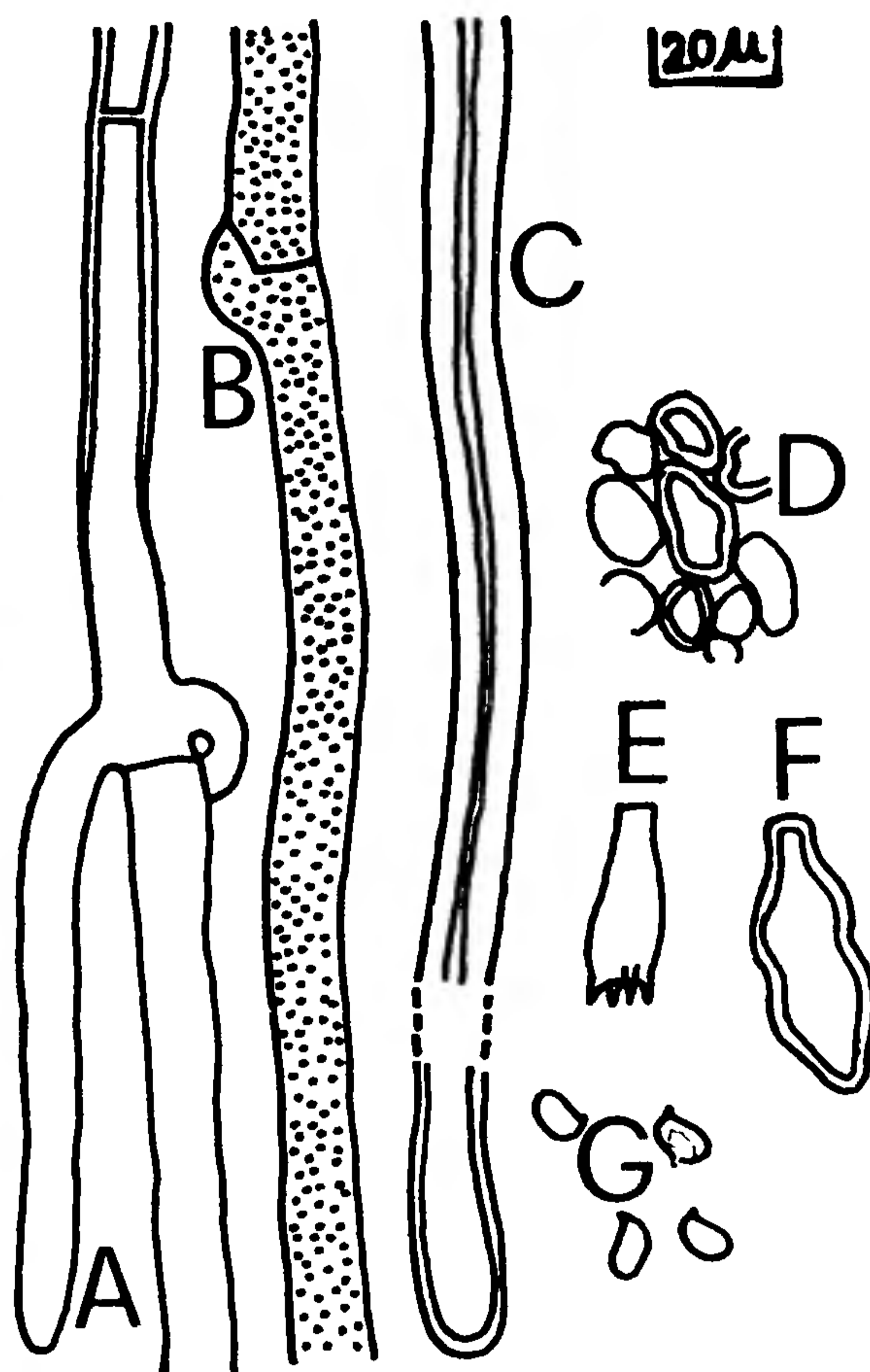


Figure 2. A–G. Microstructures of *Stecchericium seriatum* (Lloyd) Maas Geesteranus. A. Generative hypha. B. Conducting hypha. C. Skeletal hypha. D. Pseudoparenchymatous cells. E. Basidium. F. Cystidium. G. Basidiospores.

cystidia (figure 2F) extending beyond the hymenial layer, hyaline, slightly thick-walled, swollen with rounded apex, $35-42 \times 12-18 \mu$.

The voucher specimen has been deposited in the Mycological Herbarium of Burdwan Raj College (BRCMH 7911), Burdwan, West Bengal, India and the duplicate material in the herbarium of the Division of Mycology and Plant Pathology, Indian Agricultural Research Institute, New Delhi, India.

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1. Bilgrami, K. S., Jamaluddin and Rizwi, M. A., *Fungi of India (Part I)*, Today & Tomorrow's Printers and Publishers, New Delhi, 1979.
2. Bilgrami, K. S., Jamaluddin and Rizwi, M. A., *Fungi of India (Part II)*, Today & Tomorrow's Printers and Publishers, New Delhi, 1981.

SAPONINS AND LEUCOANTHOCYANINS IN CASSIA L.

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SAPONINS and leucoanthocyanins have been shown to be of great taxonomic interest in a wide variety of taxa¹⁻⁴. The present article deals with the distribution of saponins and leucoanthocyanins in 21 species of *Cassia* L, and its systematic significance. Saponins were earlier detected in *C. auriculata*, *C. fistula*, *C. italica*, *C. occidentalis*, *C. sophera* and *C. nodosa*⁵ and leucoanthocyanins only in *C. roxburghii*⁶. These species, except *C. italica*, have been reinvestigated here in view of the conflicting reports on the occurrence of saponins^{5, 8}.

The materials used in the present study (table 1) were collected in Bangalore. Voucher specimens are in the Herbarium of the authors' department.

Saponin Test A and Leucoanthocyanin Test A of Gibbs⁷ were used to detect the respective compounds.

The distribution of saponins and leucoanthocyanins

in different parts of the species studied is given in table 1.

The presence of saponins in the species reported to be positive earlier⁵ is confirmed in the present study. There was no correlation between flower colour or habit and the presence of saponins. Since saponins were found in either the leaves or seeds in some species and in both in others, it is necessary to study different parts of the plant to determine their taxonomic distribution. In the present study, quantitative differences from sample to sample were noticed for most species. *C. auriculata* and *C. sophera* were reported⁸ to be saponin-negative while these species were found to be saponin positive⁵ as in the present study. This indicates that interpopulation variation in the presence of saponins does occur. The kind of variation found in the presence of saponins in *Cassia* is not uncommon for secondary compounds in plants⁹. Because of such variation, it is necessary to study several populations before the genetic potentialities for the synthesis of a

Table 1 Distribution of saponins and leucoanthocyanins in *Cassia* species

Species	Saponins		Leucoanthocyanins	
	Leaves	Seeds	Leaves	Flowers
1. <i>C. kleinii</i> W. & A.	-	+	-	-
2. <i>C. mimosoides</i> L.	-	+	-	-
3. <i>C. hirsuta</i> L.	+	+	-	-
4. <i>C. sophera</i> L.	+*	+	-	-
5. <i>C. tora</i> L.	+	-	-	-
6. <i>C. auriculata</i> L.	+*	+	-	-
7. <i>C. montana</i> Heyne ex Roth	-	-	-	-
8. <i>C. alata</i> L.	-	-	-	-
9. <i>C. occidentalis</i> L.	+*	+	-	-
10. <i>C. bicapsularis</i> L.	+	+	-	-
11. <i>C. fruticosa</i> Mill. (= <i>C. bacillaris</i> L.)	+	+	-	-
12. <i>C. carnaul</i> Spreng.	-	-	-	-
13. <i>C. fistula</i> L.	+*	+	-	-
14. <i>C. timorensis</i> DC.	-	-	-	-
15. <i>C. spectabilis</i> DC.	-	+	-	-
16. <i>C. siamea</i> Lam.	+	+	-	-
17. <i>C. nodosa</i> Buch.- Ham ex Roxb.	+*	+	+	+
18. <i>C. javanica</i> L.	+	+	+	+
19. <i>C. grandis</i> L.f.	+	+	+	+
20. <i>C. renigera</i> Wall. ex benth.	+	+	+	+
21. <i>C. roxburghii</i> DC. (= <i>C. marginata</i> Roxb.)	+	+	+*	+*

+ : present; - : absent; * : reinvestigated