

MASSARINA EBURNEA SACC. AND LEPTOSPHERAERIA MACULANS (DESM.) CES. & DE NOT.—TWO NEW FUNGUS RECORDS FROM INDIA¹

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ABSTRACT

This communication deals with *Massarina eburnea* Sacc. and *Leptosphaeria maculans* (Desm.) Ces. & de Not., members of Loculoascomycetes, which are fully described and illustrated. Both the species are new records for India.

INTRODUCTION

Massarina Sacc. and *Leptosphaeria* (Desm.) Ces. & de Not. both belong to the order pleosporales of Loculoascomycetes. The former is characterized by gregarious pseudothecia, immersed in bark with a feebly developed clypeus and ascospores with a gelatinous outer coat, whereas, the latter has superficial or somewhat erumpent, papillate pseudothecia without any gelatinous sheath around the ascospores. Two species *Massarina eburnea* Sacc. and *Leptosphaeria maculans* (Desm.) Ces. & de Not. are described and illustrated in this paper, based on the collections made from two different localities of Western Himalayas. Both the species are new records for Indian fungi. Specimens have been deposited in the herbarium of the Botany Department, Punjabi University, Patiala under acc. nos. (75) PUN 481, (153) PUN 479.

DESCRIPTION OF TAXA

Massarina eburnea Sacc. Syll.
Fung. 2 : 158 (1883) Figs. 1-6. Pseudothe-

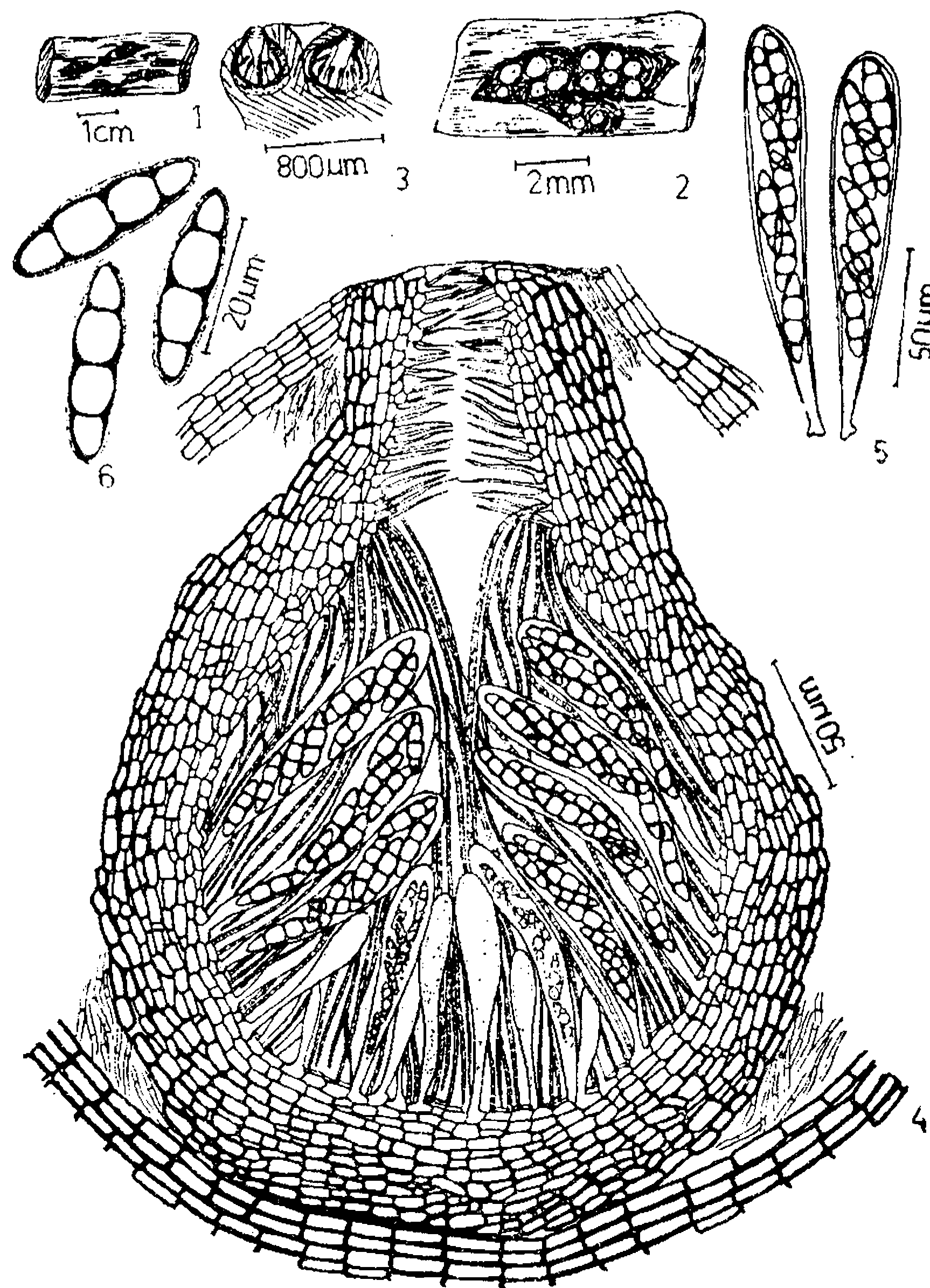
cia gregarious, covered over by host epidermis, slightly erumpent, subdepressed to spherical, 550-750 μ m long 300-400 μ m broad with a long cylindrical neck, flattened above, covered over by a small patch of black stromatic tissue, forming a small clypeus ; asci 125.0-140.0 \times 16.0-20.0 μ m, cylindric-clavate, bitunicate, short stipitate, 8 spored with a rounded apex, base bulbous ; ascospores 30.0-36.0 \times 9.5-13.0 μ m, sub-biseriate, oblong-cylindrical, 3 septate, cells around central septa, enlarged, hyaline, with a gelatinous coat ; pseudoparaphyses filiform, hyaline, aseptate, 1.5 μ m broad.

Anatomy : Stroma wanting ; pseudothecial wall 64.0-72.0 μ m wide, textura subangularis, cells of outermost 1-3 layers very thick walled, cells of middle layer lighter and of smaller size than that of outer one and the cells of innermost 3-4 layers hyaline, cells 6.0-13.0 \times 5.0-10.0 μ m.

Specimen examined : Himachal Pradesh : Simla, on dead wood, M. Bhatia (75) PUN 481, March 26, 1982.

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Figs. 1-6. *Massarina eburnea* Fig. 1. Stromata general habit. Fig. 2. Stromata enlarged. Fig. 3. V. S. stroma showing various zones. Fig. 4. V. S. stroma showing complete pseudothecium, detailed structure of pseudothecial wall and clypeus. Fig. 5. Asci. Fig. 6. Ascospores.

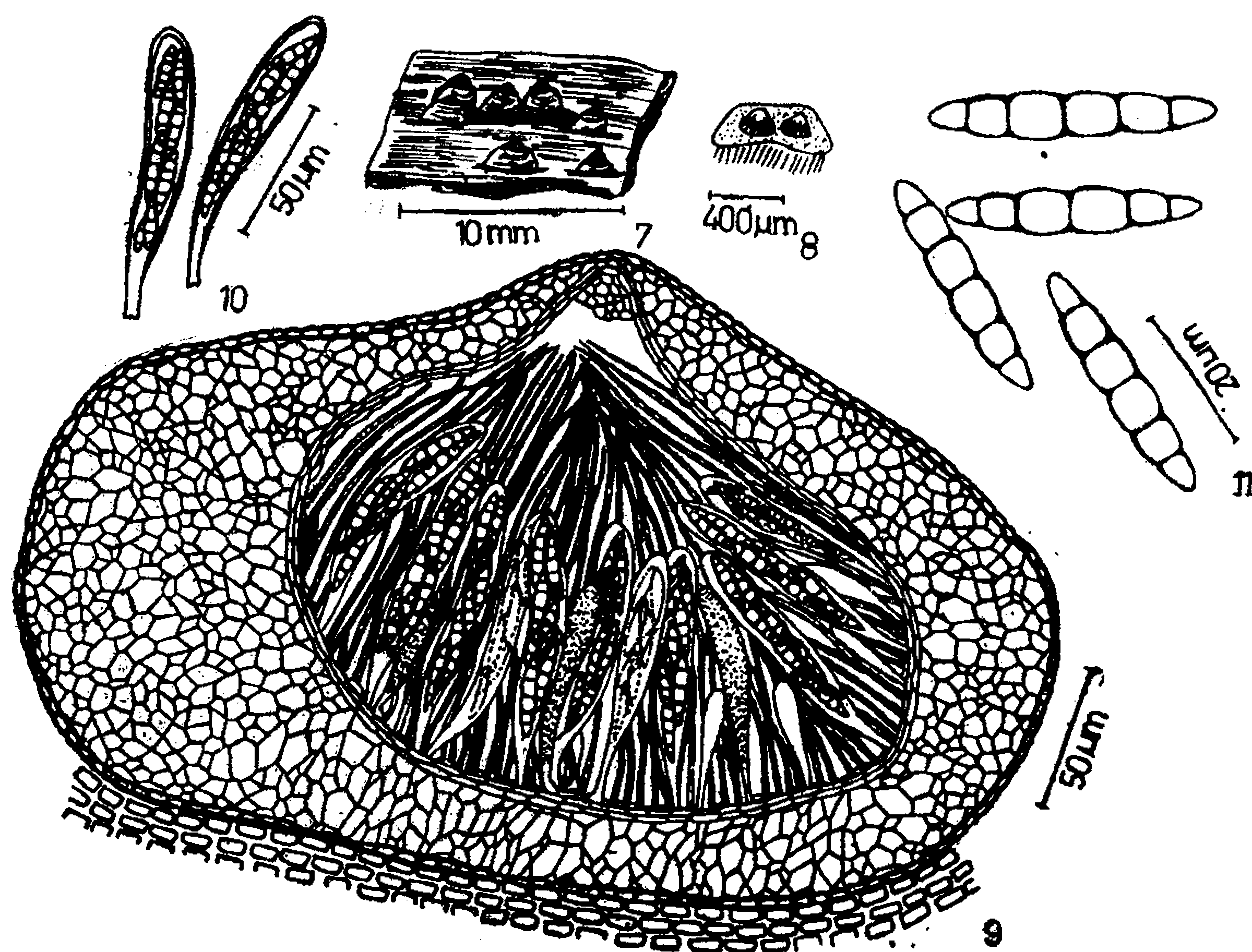
This collection resembles *M. eburnea* as described by Dennis (1978), in the presence of pseudoparaphyses, pseudothecia immersed in bark, size and shape of pseudothecia, presence of clypeus, size of ascospores, and the presence of gelatinous coat around ascospores. However, there is slight difference in shape of ascospores of this collection.

Leptosphaeria maculans (Desm.) Ces. & de Not. in Comm. Soc. Critt. Ital. 1 : 253 (1863). Figs. 7-11.

Pseudothecia 150-200 × 160-250 µm, scattered or gregarious, superficial, subglobose, usually flattened at the base,

black, surface with concentric wrinkles due to drying, glabrous, with a small, erumpent, papilliform conical ostium; asci 80.0-110.0 × 8.0-13.0 µm, clavate, short stipitate, 8 spored, paraphysate with a bulbous base; ascospores 28.0-40.0 × 3.5-5.5 µm, biserial, spindle shaped 3-4 septate, yellowish; pseudoparaphyses filiform, hyaline, aseptate, 1.5 µm broad at base.

Anatomy : Pseudothecial wall thickest on sides, 140.0 µm broad, in basal portion 45 µm broad, composed of two zones, outer zone 40.0-130.0 µm broad, textura angularis, cells 8.0-16.0 × 5.0-10.0 µm, elongated in basal region, inner zone



Figs. 7-11. *Leptosphaeria maculans* Fig. 7. Stromata enlarged. Fig. 8. V. S. stroma showing various zones. Fig. 9. V. S. stromata showing detailed structure of pseudothecial wall and ostiolar region. Fig. 10. Asci. Fig. 11. Ascospores with gelatinous envelope.

composed of 2-3 layers of elongated hyaline cells ; cells of outermost layers thick walled with small lumen.

Specimen examined : Uttar Pradesh Nainital, on way to Naina Peak on dead angiospermous twigs, M. Bhatia (153) PUN 479, September 18, 1982.

This collection has been identified as *L. maculans* because it resembles *L. maculans* (Desm.) Ces. & de Not. as described by Munk (1957), in having

subhemispheric, papillate, black pseudothecia, similar size and shape of asci and also similar size, shape and colour of ascospores.

REFERENCES

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