

SOME ADDITIONS TO THE LICHEN FLORA OF INDIA

III. Genus *Relicina* (Hale & Kurk.) Hale
(Parmeliaceae)

THE genus *Relicina*, a segregate of the composite genus *Parmelia*, has recently been monographed on world level by Hale³ (1975), and it includes 24 species almost all of which occur in tropical south-east Asia. Hale has further mentioned that the genus is yet unknown in Europe, India, Central Asia and Africa (p. 12). We collected two species of the genus *Relicina* in Cardamom hills, Kerala and these have also not been reported in the recent monograph of the Indian species of the collective genus *Parmelia* by Awasthi¹ (1976).

In this note, we give descriptions of the two species of the genus *Relicina*. Chemical studies were carried out by thin layer chromatography (Culberson², 1972). Specimens referred to in the text are deposited in the Lichen Unit of the Ajarekar Mycological Herbarium (AMH).

1. *Relicina abstrusa* (Vain.) Hale, *Phytologia* 28 : 484, 1974.

≡ *Parmelia abstrusa* Vain. *Acta Soc. Faun. Fl. Fenn.* 7 (7) : 64, 1890.

Thallus 5–8 cm broad, pale-yellowish green, closely adnate to the substratum, corticolous or saxicolous, dissected into lobes; lobes sublinear to linear, 1.0–1.5 mm broad, upper surface smooth, plane to slightly convex; moderately isidiate; isidia short, simple, cylindrical; cilia bulbate, slightly inflated; lower surface black to the margin, rhizinate, rhizines moderately developed, simple. Apothecia not seen.

Chemistry : Cortex K + yellow; medulla K + yellow turning red, C –, KC –, P + orange. Norstictic acid and usnic acid are present.

Specimens examined : Kerala : Cardamom hills, Munnar–Kumily Road, near Begampara—76.680, 808, 809, leg. P. G. Patwardhan.

Distribution : North America, Central America, South America, Japan, Taiwan, Philippines, Malaya, Indonesia, Sarawak and now India.

Remarks : *Relicina abstrusa* is a common species in both New as well as Old World. The New World species are reported to produce salacinic acid along with norstictic acid.

2. *Relicina sydneyensis* (Gyel.) Hale, *Phytologia* 28 : 485, 1974.

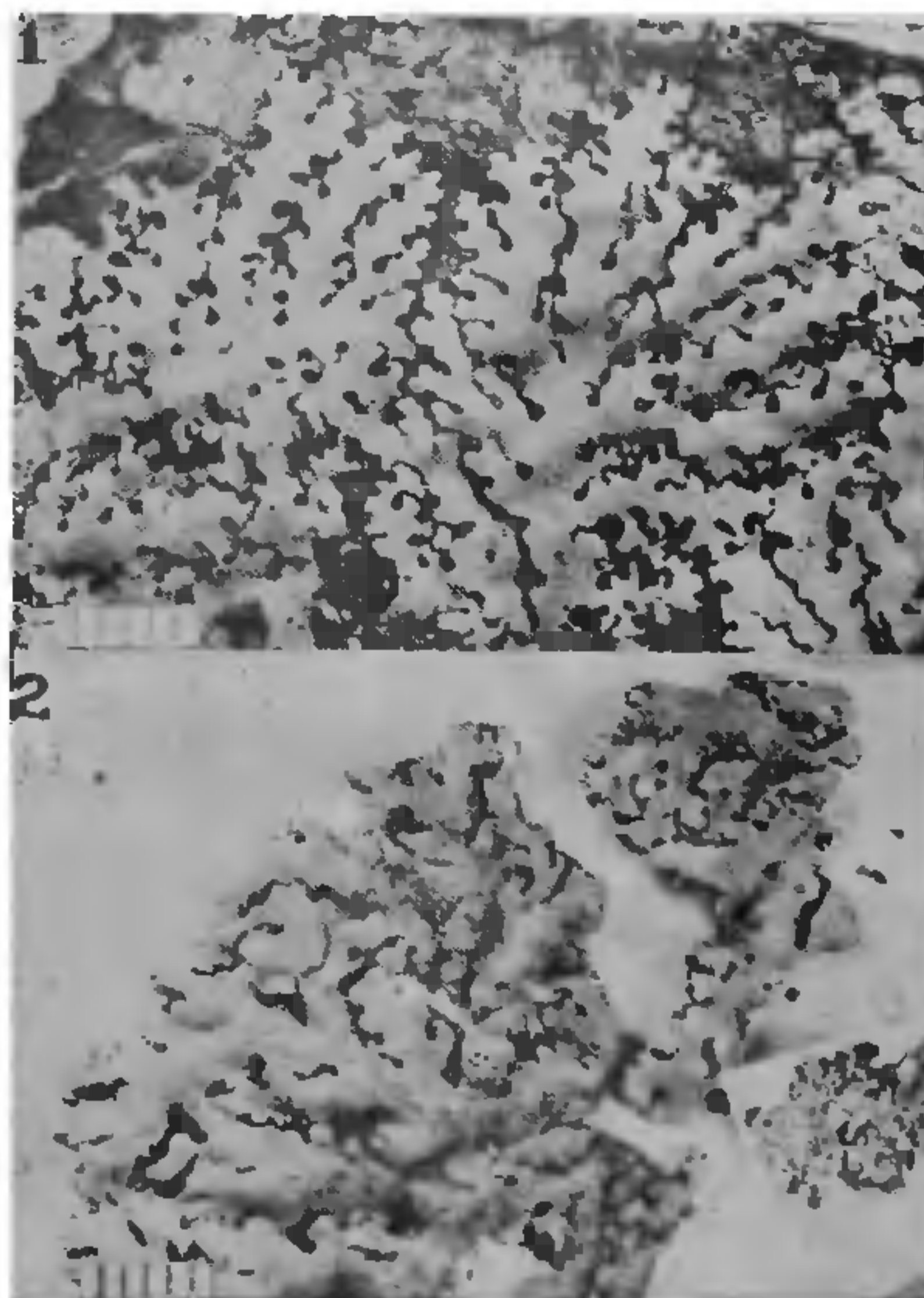
≡ *Parmelia sydneyensis* Gyel. *Ann. Mycol.* 36 : 292, 1938.

Thallus closely adnate to the substratum, corticolous or saxicolous, 3–5 cm broad, dark green

with yellowish tinge (due to usnic acid), divided dichotomously into sublinear to linear-elongate lobes, lobes 1.0–2.0 mm broad, upper surface smooth, isidiate; isidia simple, cylindrical; bulbate cilia distinctly inflated; lower surface pale brown, sparsely rhizinate, rhizines simple, mostly towards the centre. Apothecia not seen.

Chemistry : Cortex K + yellow; medulla K + yellow turning red, C –, KC –, P + orange. Atranorine, usnic acid, norstictic acid and stictic acid are present.

Specimen examined : Kerala : Cardamom hills, Munnar–Kumily Road, near Gudampara—76.659 (Part in US); leg. M. E. Hale.



FIGS. 1–2. Fig. 1. *Relicina abstrusa* (Vain.) Hale. Fig. 2. *R. sydneyensis* (Gyel.) Hale—Scale in mm.

Distribution : Japan, Taiwan, Java, Australia and now India.

Remarks : *Relicina limbata* (Laurer) Hale, a non-isidiate species, is very closely related to *R. sydneyensis* which, however, is a isidiate species.

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1. Awasthi, D. D., *Biol. Mem.*, 1976, 1 (1 and 2), 155.
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CHAETOMIUM JABALPURENSE, A NEW FUNGUS FROM SOIL

DURING the course of studies on fungal succession in the soil of grazed grassland of Jabalpur, M.P., India, a hitherto unknown species of *Chaetomium* was isolated and is herewith described.

Perithecia superficial, olive-brown to almost black, densely clothed with dark olive brown hairs, globose to subglobose with more or less rounded base, $154.7-304.5 \times 150.3-297.2 \mu$, ostiolate attached firmly to the substratum by a few yellowish-brown rhizoids. Terminal hairs forming a dense head at the top of perithecium, brownish-black at the base, gradually becoming lighter in colour towards the apex, always unbranched, uniformly thick, 3.2μ wide with rounded tips, apparently unseptate, coarsely roughened with minute projections, below straight or nearly so, becoming coiled anticlockwise into 6-10 regular close spirals above, coils extending above the spore mass. Lateral hairs dark olive-brown, straight below anticlockwise spirally coiled into 1-6 spirals above, apparently aseptate, minutely roughened, $3.2-3.6 \mu$ wide. Asci clavate, hyaline, thin walled, evanescent, eight spored, $31.0-46.5 \times 9.3-12.5 \mu$ (spore bearing part $21.7-24.8 \mu$ in length). Ascospores irregularly biserial in the asci, dark olivaceous brown, fusiform-elliptical to rhombo-ellipsoidal, $8.7-12.4 \times 5.3-6.2 \mu$, narrowly rounded at one end or both ends, frequently produced in cirrhi.

The present isolate resembles closely to *Chaetomium spiralotrichum* Lodha¹ in having spirally coiled terminal and lateral hairs and the shape of perithecia, but differs in that the terminal and lateral hairs are always unbranched and anticlockwise coiled. The ascospores are typically fusiform to rhombo-ellipsoid as against ellipsoid ascospores found in *C. spiralotrichum*. It also resembles *Chaetomium gelasinosporum* Aue and Müller² in the

nature of terminal hairs, but distinctly differs in having spirally coiled lateral hairs and larger perithecia, asci and ascospores which are also of different shapes.

In view of these differences, the present isolate is described as a new species and named *Chaetomium jabalpurensense* after the place of occurrence.

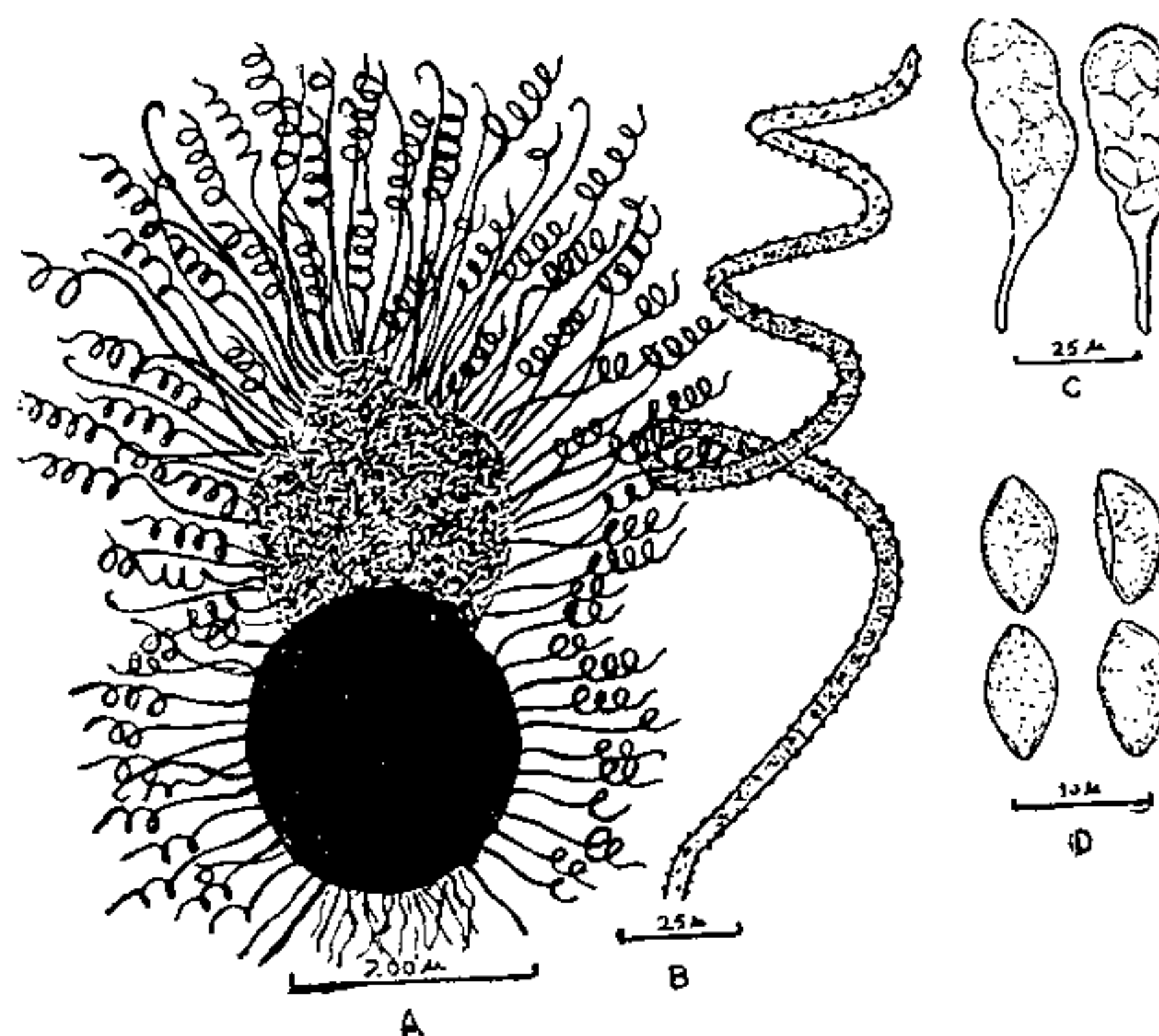


FIG. 1. *Chaetomium jabalpurensense* sp. nov. A, Perithecium; B, Upper portion of terminal hair; C, Asci; D, Ascospores.

Chaetomium jabalpurensense Tiwari, Agrawal and Lodh sp. nov.

Peritheciis superficialibus, olivaceo-brunneis vel prope nigris, globosis vel sub-globosis, $154.7-304.5 \times 150.3-297.2 \mu$, ostiolatis; ad substratum cum rhizoidii pallide luteobrunneis leviter affixis. Capillus terminalibus brunneo-nigris inferne, pallidiores in ultima, non-ramosis, 3.2μ latis; apicibus rotundatis, inhonspique septatis; manifeste minute granuloso incrustatis, basi rectis, spiraliter curvatis in apicis, spiris 6-10 anticlock typus, extensi ultra sporarum massum. Capillus lateralibus fusce olivaceo-brunneis, inferne recti, in ultima spiraliter curvatis, spiris 1-6 anticlock typus, apparenter aseptatis, leviter asperis, basi latis $3.2-3.6 \mu$. Asci clavatis, octosporis hyalinis, stipitatis, evanescentibus, $31.0-46.5 \times 9.3-12.5 \mu$ (parte sporas fereute longa $21.7-24.8 \mu$). Ascosporis inaequate biserialis, fusce olivaceo-brunneis, fusiforme ellipsoides vel rhombo-ellipsoides, $8.7-12.4 \times 5.3-6.2 \mu$, anguste rotundatus ad utroque apicis, saepae cirrhos prolatis.

Typus lectus in solo, Jabalpur, M.P., India. Cultura typica postea in C.M.I., Kew, Surrey, England, No. IMI, 157256.

Colonies on potato-dextrose and potato-malt-cellulose agar media growing rapidly at 28°C ,