had normal leaflets and hence it could not be distinguished from the normal parent for about two weeks after germination. Subsequently, suppression of plant height and leaflet growth was quite distinct in the mutant (Fig. *B*) resulting in only 10–15% of the normal plant height. However, at harvest the number of nodes and the number of branches in the mutants were similar to those of the parent. The extremely stunted stem and branches with minute leaves (Fig. *C*) gives a "bunchy top" appearance to the mutant which did not produce flowers and pods. The dwarf mutants reported, so far, in groundnut[1-6] do not show extreme form of stunted growth and minute leaflets as in the "bunchy top" mutant.

FIGS. *A*–*C*. *A*. Sterile "bunchy top" mutant. *B*. Plants, Spanish Improved (left) and mutant. *C*. Leaves, Spanish Improved (left) and mutants.

Segregation for mutant type was noticed in one of the M_3 progenies during *kharif* 1974. Studies in M_4 and M_5 generations (Table II) showed monohybrid segregation and recessive nature of the mutant character. Genotypic segregation also confirmed the same. Accordingly the expression is controlled by a pair of recessive genes which may be designated as d^{stu} d^{stu} denoting stunted character.

Biology & Agriculture Division, S. H. PATIL.
Modular Laboratories, CHANDRA MOULI.
Bhabha Atomic Research Centre.
Trombay, Bombay 400 085,

1. Gegory, W. C., *Radiat. Bot.*, 1968. **8**, 81.
2. Shchori, Y. and Ashri, A., *Ibid.*, 1970, **10**, 551.
3. Patil, S. H. and Chandra Mouli, *Indian J. Expt. Biol.*, 1977, **15**, 521.
4. Ashri, A., *Crop Sci.*, 1968, **8**, 413.
5. Coffelt, T. A. and Hammons, R. O., *Ibid.*, 1972. **12**, 82.
6. Gopani D. A. and Vaishnavi, N. L., *Indian J. Agri. Sci.*, 1970. **40**, 431.

ACHAETOMIUM INDICUM RAI *ET* CHOWDHERY SPEC. NOV.: A NEW SPECIES OF THE GENUS *ACHAETOMIUM* FROM INDIAN 'USAR' SOILS

THE genus *Achaetomium* was established by Rai *et al.*[1]. It includes nine species, all described from Indian soils (Rai *et al.*[1–5]). The present paper deals with a new species, *A. indicum* spec. nov. This differs from the other known species in the size and shape of perithecia, asci, and ascospores. It shows close affinities with *A. strumarium*, but is distinct in having larger perithecia, asci, and ascospores. *A. indicum* has the largest ascospores (19·0–29·0 μm), so far known in this genus. Moreover, each ascospore has two polar germpores, whereas *A. strumarium* has only one

Achaetomium indicum spec. nov. (Figs. 1–4)

Coloniae in agro hordeaceo sat rapide crescentes, mycelio copioso leviter rosaceum. Ascocarpi superficiales, aggregati, raro dispersi, ostiolati, fixi substrato perhyphas rhizoideas, 300·0–335·0 μm × 222·0–235·0 μm.

Asci octospori, fasciculati clavati evanescentes, stipitati, aporati, generatim, 76·0–100·2 μm × 9·6–10·2 μm. Ascosporae dispositae uniserilaliter in asco, griseo-brunneae ellipticae, utrinque apiculatae at pore germinationis praeditae, 19·0–25·0 μm × 10·2–12·0 μm.

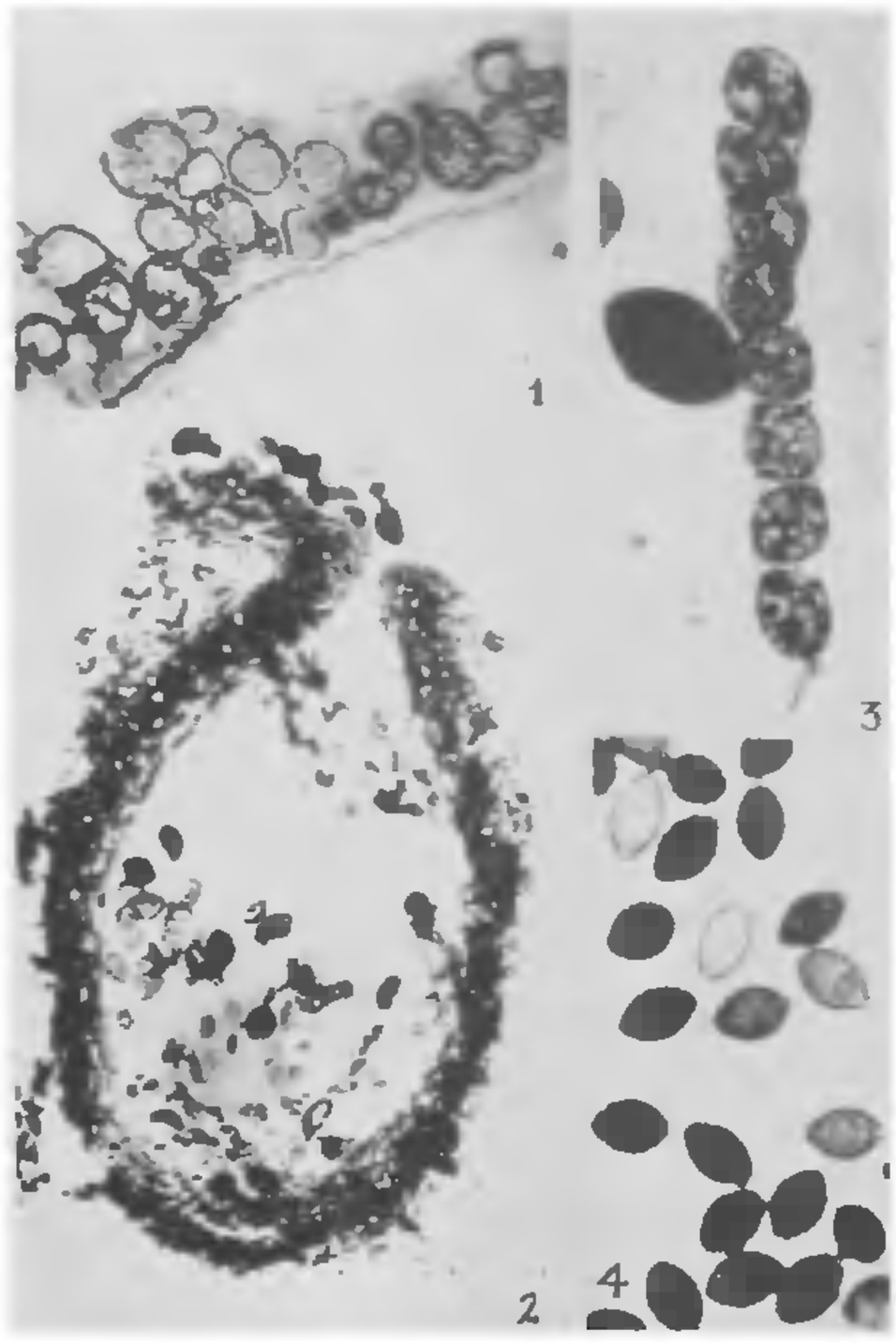

FIG. 1–4. *Achaetomium indicum* spec. nov. on oatmeal agar. Fig. 1. Section showing the perithecia arranged in a stroma like structure. Fig. 2. Section of a mature ascocarp, × 183. Fig. 3. Ascus, × 625. Fig. 4. Ascospores, × 250.

Lectus mense Nov. 1971 ex Solo (pH 8·5) ad Lucknow. Dry cultura holotypus positus in herbario mycologico sectione botanica universitatis Lucknowensis, Lucknow, India.

Colonies on oatmeal agar at 28 ± 1°C moderately fast-growing, attaining a diameter of 5 cm in 4 days with ascocarps developing in small groups, aerial mycelium scanty and pinkish with whitish margin, submerged mycelium hyaline to blakish. Reverse agar blackish-brown. Ascocarps light yellowish-grey, turning deep-brown on ageing, superficial, ostiolate, ostiolar neck present and fixed to substratum by rhizoidal hyphae, 300·0–335·0 μm × 220·0–235·0 μm. Asci 8-spored, fascicled, clavate, evanescent, stipitate, aporate, 76·0–100·2 μm × 9·6–10·2 μm. Ascospores arranged uniseriately in the ascus, greyish-brown, elliptical, and each end provided with a germ pore 19·0–0·25·0 μm × 10·2–12·0 μm, sometimes even upto 29·0 μm × 15·3 μm.

Isolated in November 1971 from '*Usar*' soil (pH 8·5) in Lucknow, India. Type in the form of dried culture deposited in the Department of Botany, Lucknow University, Lucknow, India.

Department of Botany, Lucknow University, Lucknow 226 007, *September*, 17, 1977.

J. N. RAI.
H. J. CHOWDHERY.*

*Present address: Dr. H. J. Chowdhery, Systematic Botanist, Botanical Survey of India, Northern Circle, 3, Laxmi Road, Dehra Dun 248 001.

1. Rai, J. N., Tewari, J. P. and Mukerji, K. G., *Can. J. Bot.*, 1964, **42**, 693.
2. —, Wadhwani, K. and Tewari, J. P., *Indian Phytopath.*, 1970, **23**, 54.
3. — and Chowdhery, H. J., *Curr. Sci.*, 1971, 40, 412.
4. — and —, *J. Indian Bot. Soc.*, 1973 (*a*), 52, 309.
5. — and —, *Kavaka*, 1973 (*b*), 1, 29.

STERCULIOXYLON KALAGARHENSE SP. NOV. FROM KALAGARH (BIJNOR DISTRICT), U.P., INDIA

THE fossil wood reported here was collected from Kalagarh (29°33' N, 78°45' E), a locality which has come to light only recently in the Siwalik range (Trivedi and Misra[6]). The fossiliferous exposures are of Mio-Pliocene age.

The diagnostic features of the fossil wood are as follows :

Wood : diffuse porous. *Growth rings* absent. Vessels medium to large sized, t.d. 132–286 μm; r.d. 118–308 μm; thick walled (9–13 μm thick) : solitary, also in pairs, occasionally in groups of 3–4; vessel member 220–308 μm long with truncate ends; perforation simple, intervessel pit pairs alternate, bordered with linear aperture. *Xylem parenchyma* both paratracheal and apotracheal, paratracheal parenchyma vasicentric forming narrow to thick sheath round some of the vessels; apotracheal parenchyma in the form of regular bands (of 5–7 cells thick), alternating with the fibrous band of the same thickness (Fig. 1) apotracheal parenchyma present also round gum ducts. *Xylem rays* 1–16 seriate (26–246 μm wide), 198–2288 μm high, 4–6 rays per sq. mm, ray tissue heterogeneous with sheath cells, uniseriate rays very rare (Figs. 2 & 3). *Fibres* not aligned in radial rows, non-libriform, non-septate. *Traumatic gum canals* present at some places and arranged in tangential bands.