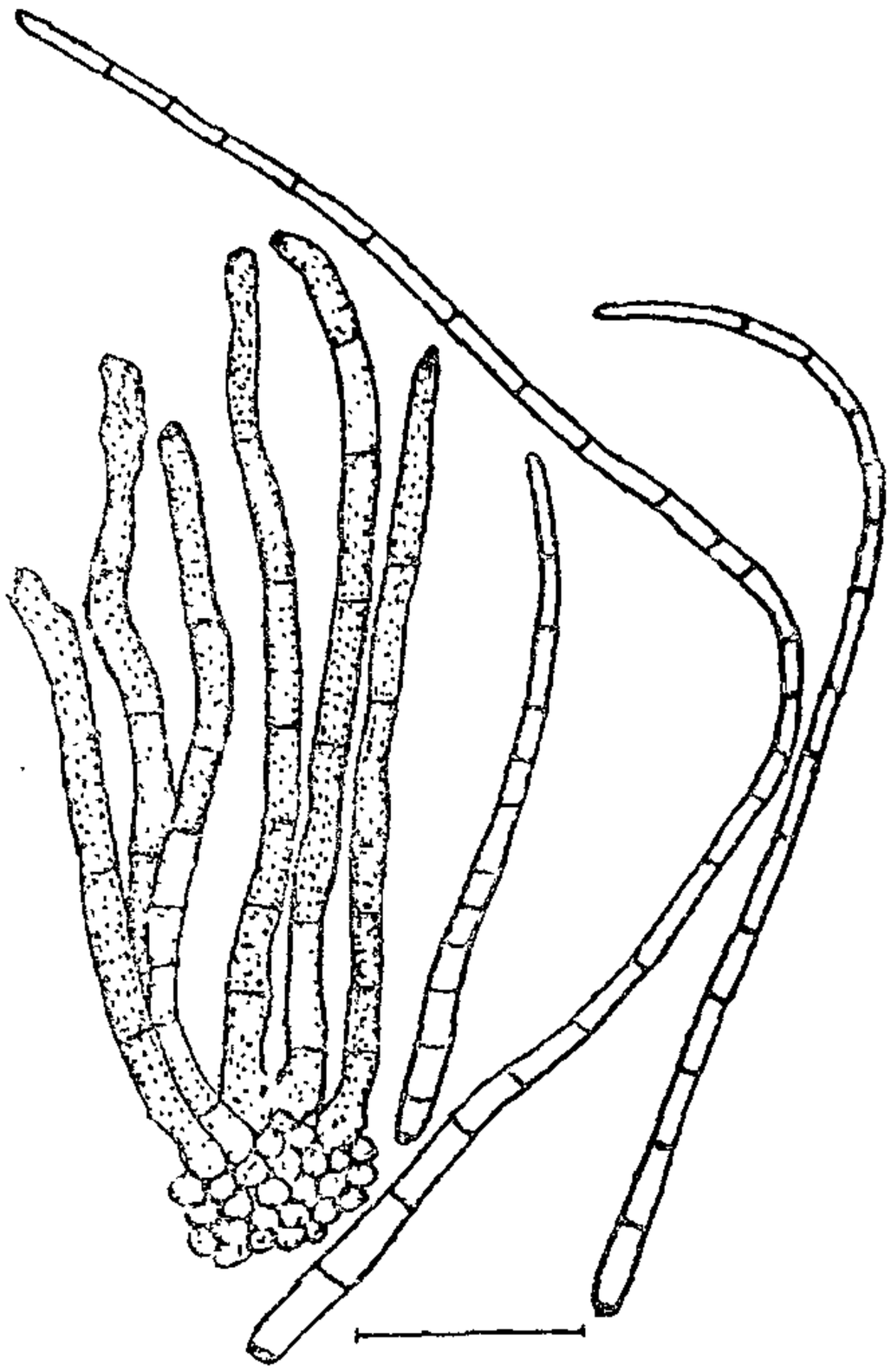

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FIG. 2

On fallen petioles of *Carica papaya* Linn. (Fam Caricaceae) Jabalpur (M.P.), India, December, 1977, Leg. R. C. Rajak and S. P. Gautam.

Type specimen has been deposited in herb. IMI, Kew, No. 225288.

Hansford[3] described *Cercospora papayae* Hansf. causing leaf spot disease of *Carica papaya*, from Uganda. Chona *et al.*[1] reported its occurrence from India. When compared, the present collection was found to be markedly different from *C. papayce* Hansf., in having brown conidiophores showing distinct scar and very long c nidia (80–330 μ against 20–75 μ) which are upto 30 septate and borne acrogenously. The present isolate does not cause leaf spots but merely grow on the fallen petioles. Moreover, it failed to infect the leaves of *Carica papaya* during pathogenicity tests conducted. Therefore, it is being described here as a new species, *C. caricapapayae* spec. Nov.

Cercospora caricapapayae spec. Nov.

Colony effusae, griseo vel albus pulveraceous; stromata brunneo atrae, minutum; conidiophora fasciculata, 10–20 conidiophora per fasciculata, multiseptata, brunnea apicem versus pallidiores, nonramous, simplicia, recta vel flexuosa, cicatrice eminente ad apicem conidiophorum, 95–210 × 4–8 μ; conidiis hyalina, latus infra fastigiata sursum, filiformes, recta vel flexuosa, 9–30 septata, ad basim subtruncata, apicem obtusis, acrogena, 80–330 × 3·5–6 μ (Fig. 2).

Ad petiolus exiccator *Carica papaya* Linn. (Fam. Caricaceae), Jabalpur (M.P.), India, December, 1977, Leg. R. C. Rajak and S. P. Gautam.

The authors express their thanks to Mr. A. Johnston, Director and Dr. B. C. Sutton, Mycologist, Commonwealth Mycological Institute, Kew, England, for their help in the identification of fungi. Thanks are also due to Dr. G. P. Agarwal, Department of Post-graduate Studies and Research in Botany, University of Jabalpur and Dr. M. S. Agarkar, Head, Department of Botany, Government Science College, Jabalpur, for their help.

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A NEW RECORD OF SCLEROTINIA ROT OF CABBAGE IN INDIA

CABBAGE is one of the major vegetable crops grown in Palny Hills Tamil Nadu. A severe outbreak of Sclerotinia watery soft rot of cabbage was observed during February 1978 in Kodaikanal. The above disease has been reported from U.S.A. and other South-Eastern States in America and in the moist areas of the Pacific North-West[1]. It has not so far been reported on the above host in India.

The disease attacks both young and old plants. In old plants, lesions appeared on stems, petioles and leaves. As the fungus advances to the base of the outer head leaves, the leaves turn yellow resulting in sudden wilting.

Ultimately the affected portions rot. From the superficial mycelium found on the affected portions,

irregular hard black compact sclerotial bodies form gradually. They are found embedded in the stems and cabbage heads [Plate 1 (1)]. The sclerotial bodies are initially small, solid, white in colour, later turning black with maturity [Plate 1 (2)] resulting in the entire collapse of the cabbage crop.

PLATE 1. (1) Infected Cabbage head and leaf with schrotia embedded. (2) Sclerotia of *Scelrotinia sclerotiorum* (Lib.) DeBy.

Isolation of the pathogen was made from the diseased tissues and tht isolate produced hyaline and highly branched mycelia with sclerotial bodies at 28° + 1° C. Microscopic examination revealed that no true conidia were produced but only microconidia. The sclerotial bodies were highly irregular measuring 2·5 to 8 mm. The isolate was tested for pathogenicity on autoclaved soil in pots raised with cabbage plants.

Young plants exhibited waterly soft lesions near cotyledonary node and germination was highly affected. Inoculation of pathogen on cabbage heads yielded a cottony white fluffy mycelial mat with soft rot symptoms. The pathogen satisfied the Koch's postulates. From the symptom expression of the host, mycelial and sclerotial characters, the present fungus is identified as *Sclerotinia sclerotiorum* (Lib.) DeBy., which is the first record on cabbage in India.

The specimen and a pure culture of the pathogen have been deposited with the Department of Plant Pathology, Tamil Nadu Agricultural University, Coimbatore.

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SYSTEMATIC POSITION OF *BALANITES* DELILE

THE systematic position of *Balanites* has been a matter of controversy. Bentham and Hooker[1] and Cronquist[2] included it in Simaroubaceae while Engler and Prantl[3] placed it under Zygophyllaceae. Hutchinson[4] created a separate family, Balanitaceae, under his Malpighiales along with ten other families.

Though *Balanites* has received attention from such disciplines as anatomy, floral anatomy, embryology and Palynology, its chemistry is little known. The present study has been undertaken to see how far the data from Chemotaxonomy of *Balanites roxburghii* Planch., along with data from other disciplines, would help in establishing the systematic position of *Balanites*. For the sake of comparison the Chemotaxonomy of *Guaiacum officinale* Linn., *Tribulus terrestris* Linn., and *Ailanthus excelsa* Roxb., has also been included.

The materials of *Balanites roxburghii*, *Tribulus terrestris* and *Ailanthus excelsa* were collected locally and the material of *Guaiacum officinale* was collected from the Botanical Garden, Osmania University, Hyderabad. The tests using fresh materials consisting of stems, leaves and fruits and 80% methanolic extracts of entire plants during flowering and fruiting are presented in Table I.

From Table I it will be evident that *Balanites* resembles *Guaiacum officinale*, *Tribulus terrestris* and *Ailanthus excelsa* in the uniformly positive reactions for carbohydrates (Molisch test), phenols, flavonoids, Maule's test and saponins and negative reactions for cigarette test, hot water test, juglone test, syringin test, aurone test 'A', HCN test, Ehrlich test 'A', tannins, indoles and hydroxyquinones'. However, Zygophyllaceae resemble Simaroubaceae in the negative reaction for hot water test, juglone test, HCN test, syringin test and Ehrlich test 'A' and positive reaction for flavonoids (see Gibbs[7]).

Balanites differs from Simaroubaceae in certain important chemical characters. In the presence of saponins, it resembles *Guaiacum officinale*, *Tribulus terrestris* and other investigated taxa of Zygophyllaceae while in Simaroubaceae they are reported to be doubtfully present (see Gibbs[7]). In *Ailanthus excelsa* however, saponins are present.

The positive reaction for Leibermann-Burchard test and negative reaction for Triterpenoids (Noller's test) in *Balanites roxburghii*, *Guaiacum officinale* and *Tribulus terrestris* indicates the probable presence of steroids. Positive results for Salkowski reaction (steroids) in these taxa confirms the presence of steroids. Since the test for saponins is also positive, the substances present may be inferred to be of the nature of steroidal saponins. In Simaroubaceae on