

methods and the organisms were claimed as pathogens only after satisfying Koch's postulates.

Sof rot (figure 1): Single water-soaked area may appear on any part of the fruit, which increases centrifugally with age. The infected tissues turn soft with a pinkish tinge in the spreading region. The infected tissue gets sunk and separates from healthy tissues. Tissue-bit isolations from the junction of healthy and diseased tissues resulted in *Syncephalastrum racemosum* Schroet. in culture.

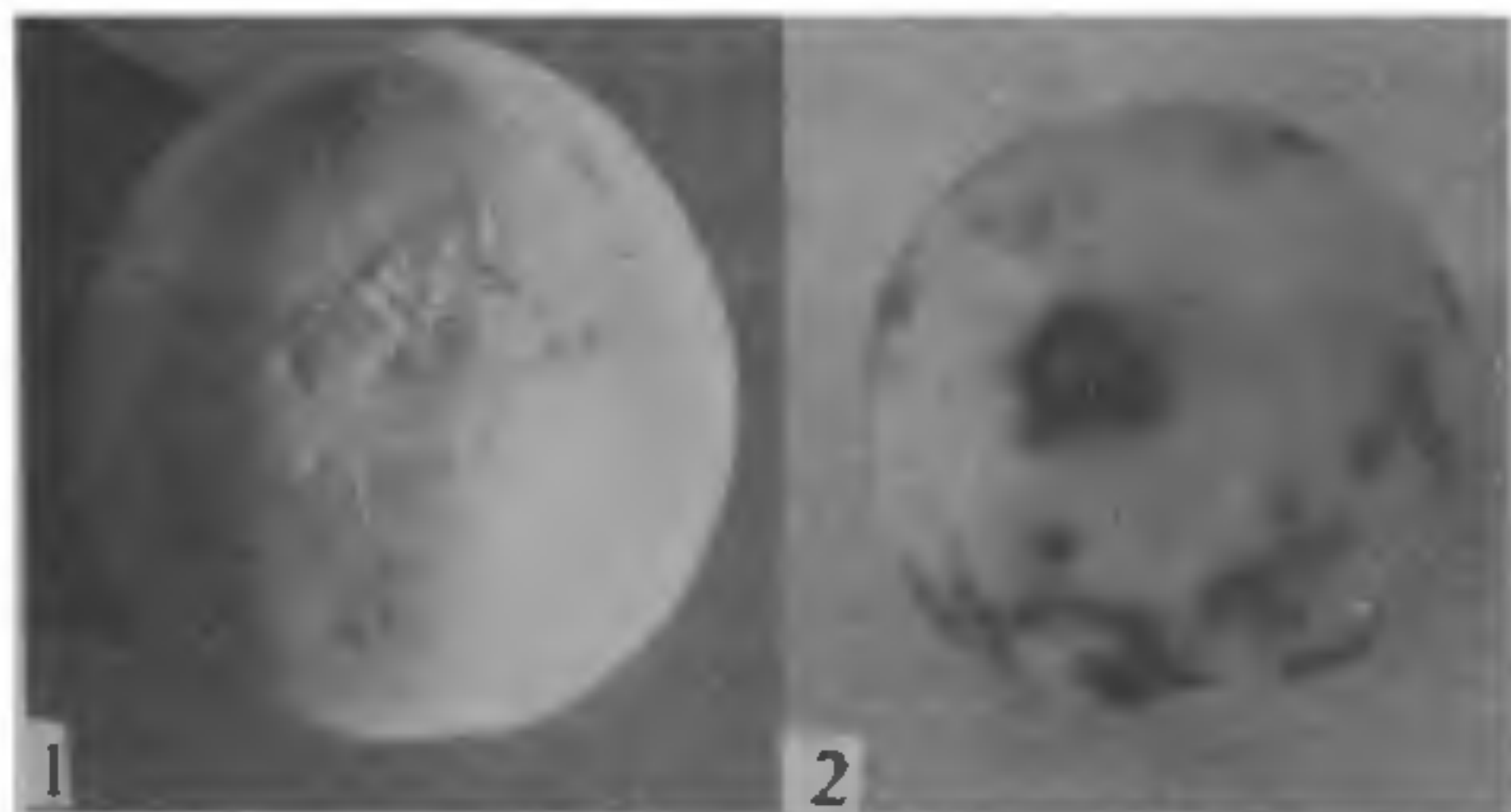


Figure 1. Symptoms of disease caused by *Syncephalastrum racemosum*.

Morphology: Colonies rapidly spreading, hyphae mostly aerial, white at first turning dark-grey to black with age, 1.5–3.6 μm wide. Sporangiphores erect, richly branched, pale-brown with globose to oval head, 22.70 μm in diameter with numerous merosporangia. Merosporangia cylindrical containing 5–10 spores. Sporangiospores variable in shape, mostly globose to sub globose, 3.5 (2.5–5) μm in size.

Brown rot (figure 2): The infection usually starts from the stalk end or may occur on any part of the fruit. The spots were mostly restricted in size and blackish brown in colour, which assumes dark-brown with age. The fruit turns soft and a putrid odour emits out. Repeated isolations yielded (*Aureobasidium Pululans* (De Bary) Arn.) in culture.

Colonies effuse, first white turning black, powdery. Mycelium immersed and superficial. hyphae greenish-black, septate, branched, 3.8–8.5 μm thick, torulose. Condiophores micronematous, mononematous, branched, flexous, pale to mid-brown, variable in length, 4.2–7.3 μm thick. Condiogenous cells monophialidic, integrated, intercalary, determinate, cylindrical. Conidia aggregated in slimy masses, semi-endogenous, pleurogenous, simple, ellipsoidal or oval, colourless, 0-septate, 3.1–12.4 \times 3–1.6 μm .

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1. Bilgrami, K. S., Jamaluddin and Rizwi, M. A., *Fungi of India, Today and Tomorrow Publications*, 1980, New Delhi.
2. Knorr, L. C., Suit, R. F. and Ducharme, E. P., *Hand book of citrus diseases in Florida*, 1957, Bulletin 587.

A NEW REPORT ON ANTHOLYSIS IN *CONVOLVULUS MICROPHYLLUS* SIEB. EX SPRENG.

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CONVOLVULUS microphyllus (Family Convolvulaceae) is a common weed of Indian arid zone. Two distinct forms—prostrate compact and erect less compact of this species have been recorded¹, growing



Figure 1. Normal (healthy) branch (A), flower (C) and ovary (E); infected branch (B), flower (D) and ovary (F) of *C. microphyllus*.

almost throughout the year. A distinct abnormality in the habit and the floral parts was noted in this species in 1981 which appeared similar to antholysis reported earlier in *Sesamum indicum* L.² and *Pedaliium murex* L.³ The infection leads to virescence, phyllody and proliferation.

Following characteristic observations were recorded on the infected plants.

(i) The infected plants can be recognised from a distance because of stunted growth, condensed appearance and lack of coloured flowers. The internodes become shorter (figure 1B).

(ii) New branches exhibit infection and the leaves become smaller and yellowish. Chlorophylls *a, b* and carotenoids decreased in the infected plants (table 1).

(iii) Infected plants possess much less mucilage in comparison with normal plants, when crushed in water.

(iv) Number of flowers was less in infected plants than in healthy ones (figures 1B and D). The colour of corolla also changed from pink/white to green. The infected flowers possessed more chlorophylls *a, b* and carotenoids as compared to normal ones.

(v) Sizes of pedicel, calyx and corolla were larger than the normal, and the petals got separated very much, giving a polypetalous makeup (figure 1D).

(vi) Stamens shrivelled in infected flowers and when present they were very short in length. Anthers were sterile having no pollen grains.

(vii) Size of the ovary increased and became flattened. Length of style was reduced. Ovary became leaf-like when it was severely infected (figure 1F).

(viii) Infected fruits were very small in size and mostly had no seeds.

When the aqueous extract of the infected plants was sprayed on healthy plants, they did not receive the infection which indicates that antholysis does not spread by contact.

TABLE 1

Chlorophylls a, b, total chlorophylls and carotenoids mg/g fresh weight in infected and healthy flowers and leaves of C. microphyllus

Plant part	Plant	Chlorophylls			Total Carotenoids
		a	b	Total	
Flower	Healthy	5.39	1.04	6.43	1.28
	Abnormal	7.60	2.17	9.77	1.86
Leaf	Healthy	3.66	2.13	5.80	2.01
	Abnormal	2.01	1.78	3.80	1.21

The infection on *C. microphyllus* may be due to mycoplasma. Sen *et al.*² and Bansal and Sen³ also assumed mycoplasma-like organism, responsible for antholysis. Antholysis on *C. microphyllus* is of great interest because the infection appeared only after the crop of *S. indicum* was harvested from the fields. Thus *C. microphyllus* may act as an alternate host for the perpetuation of disease year after year. Sen⁴ has mentioned the occurrence of antholysis in a number of plants (*Borreria articularis*, *Dicoma tomentosa*, *Heliotropium marifolium*, *Pulicaria crista*, *Vernonia cineria* and *C. microphyllus*), although he did not investigate them.

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1. Sen, D. N., *Eco-physiological foundation of ecosystems productivity in arid zone, International symposium USSR, 1972.*
2. Sen, D. N., Bhandari, D. C. and Bansal, R. P., *Curr. Sci.*, 1976, 45, 248.
3. Bansal, R. P. and Sen, D. N., *Sci. Cult.*, 1978, 44, 367.
4. Sen, D. N., *Ecological approaches to Indian weeds*, Geobios International, Jodhpur, 1981.

NOTES ON INDIAN HYPHOMYCETES—VII *MONACROSPORIEALLA INDICUM* SP. NOV. ON MUSHROOM COMPOSE

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THE present paper deals with a new fungus which captured nematodes in adhesive traps typical of the predaceous series and subsequently been given an epithet of *Monacrosporiella indicum* sp. nov.

The genus *Dactylella* Grove was discussed by Subramanian¹ in which many species of this genus were transferred to *Monacrosporium* Oudem due to the presence of large subterminal cell of the conidium. Later² he again changed some species of *Dactylella* into other genus like *Monacrosporiella* Subr., *Drechleromyces* Subr., *Gangliophragma* Subr., *Lactydina* (Drech) Subr. and *Candelabrella* Rifai & Cooke on the basis of his recognised concept³ of gangliar and blastoconidia.