Erwinia chrysanthemi pv *paradisiaca*. The bacterium produced convex, slight to moderately irregular, undulate pale creame colonies on NA at 27°C. The bacterium was gram-negative, 0.7×1.65 mm size, motile, showing a positive pectate degradation, indole and acetoin production. The bacterium produced acid and gas from glucose and only acid from lactose and maltose. It also produced acid from D(−) arabinose and D(+) raffinose and utilized tartarate but failed to liquify gelatin. It failed to utilize D(−) mannitol and D(−) sorbitol. The bacterium was a facultative anaerobic one. On inoculation with bacterial suspension of 3×10^7 cells/ml by injection, the disease symptoms on healthy bananas were produced successfully within 14 days. The identification of bacterium was thus confirmed[1-2].

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ROLE OF RHIZOPLANE FUNGI ON THE PRODUCTION OF PHYTOALEXIN LIKE SUBSTANCES AGAINST *RHIZOCTONIA BATATICOLA* IN GROUNDNUT

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ASSOCIATION of several fungi on the rhizoplane (viz root surface of various plants) has been reported[1-3] and it has been found that the reciprocal relationship between the rhizoplane mycoflora and plant root system holds good. The present work has been carried out to understand the role of rhizoplane mycoflora on the production of phytoalexin-like substances in groundnut roots for the inhibition of *Rhizoctonia bataticola*, the dry root rot and seed rot pathogen.

The rhizoplane fungi was isolated by the serial root washing technique[2]. For this, roots of groundnut plants var SB-11 grown for 15 days in the experimental field were used. In pathogenicity tests of rhizoplane fungi; healthy seeds of groundnut var SB-11 were treated with fungal spore/mycelial suspensions separately and were sown in the pots containing sterile soil.

Production of phytoalexin-like substances was studied by using roots of groundnut var SB-11 grown for 15 days in the experimental plots. The roots were carefully removed from the soil, washed with sterile-distilled water, treated with 0.1% $HgCl_2$ solution for 2 min and then rewashed thoroughly with sterile-distilled water. The roots were cut into 4 cm long pieces and were incubated with drops (2 drops per piece) of spore suspensions of the rhizoplane fungi individually. The root pieces with the drops of sterile-distilled water served as control. After 24 hr of incubation at room temperature, the root pieces were washed two to three times with sterile-distilled water and were homogenized for the preparation of root extracts using 10 g of roots with 100 ml sterile-distilled water. The extracts were filtered finally through Seitze filter, and the filtrate concentrated 10 times. Anti-fungal activity of the concentrated extracts was studied against *R. bataticola*, by growing it on agar plates containing the root extract (5 ml/plate). The growth of *R. bataticola* without root extract was the control. On the 7th day of incubation the radial growth of the colonies was recorded.

It is clear from the results given in table 1 that out of seven rhizoplane fungi isolated, the root rot was caused significantly only by *R. bataticola* and *Penicillium funiculosum* while all the seven caused seed rot nearly to the same degree.

It is interesting to note (table 2) that the growth of *R. bataticola* was significantly inhibited by the extracts of groundnut roots incubated with spore suspensions of *Fusarium semitectum*, *Penicillium funiculosum*, *A. niger* and *R. bataticola*. However such inhibition was not seen when the spore suspensions of *F. oxysporum* and *Rhizopus stolonifer* were used.

Inhibitory nature of groundnut root extracts due to the association of different rhizoplane fungi might be a biochemical response of the host against its root

Table 1 *Pathogenicity of rhizoplane fungi against groundnut*

Species	% seed rot	% root rot
R. stolonifer	7	3
A. niger	14	2
P. funiculosum	20	10
Phoma sp	8	0
F. oxysporum	10	0
F. semitectum	12	0
R. bataticola	30	20

Table 2 *Effect of root extracts obtained after 24 hr incubation with rhizoplane fungi on the root surface on growth of R. bataticola*

Fungi incubated on roots	*Growth of R. bataticola* mm	Difference over the control
Control (sterile water)	86	0
R. stolonifer	80	−6
A. niger	46	−40
P. funiculosum	24	−62
Phoma sp	89	+3
F. oxysporum	78	−8
F. semitectum	26	−60
R. bataticola	20	−66

pathogens. Hence, such chemicals in the host can be considered as phytoalexins as reported earlier[3,4].

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PILIDIUM ACERINUM KUNZE, A NEW GENERIC RECORD FOR INDIA

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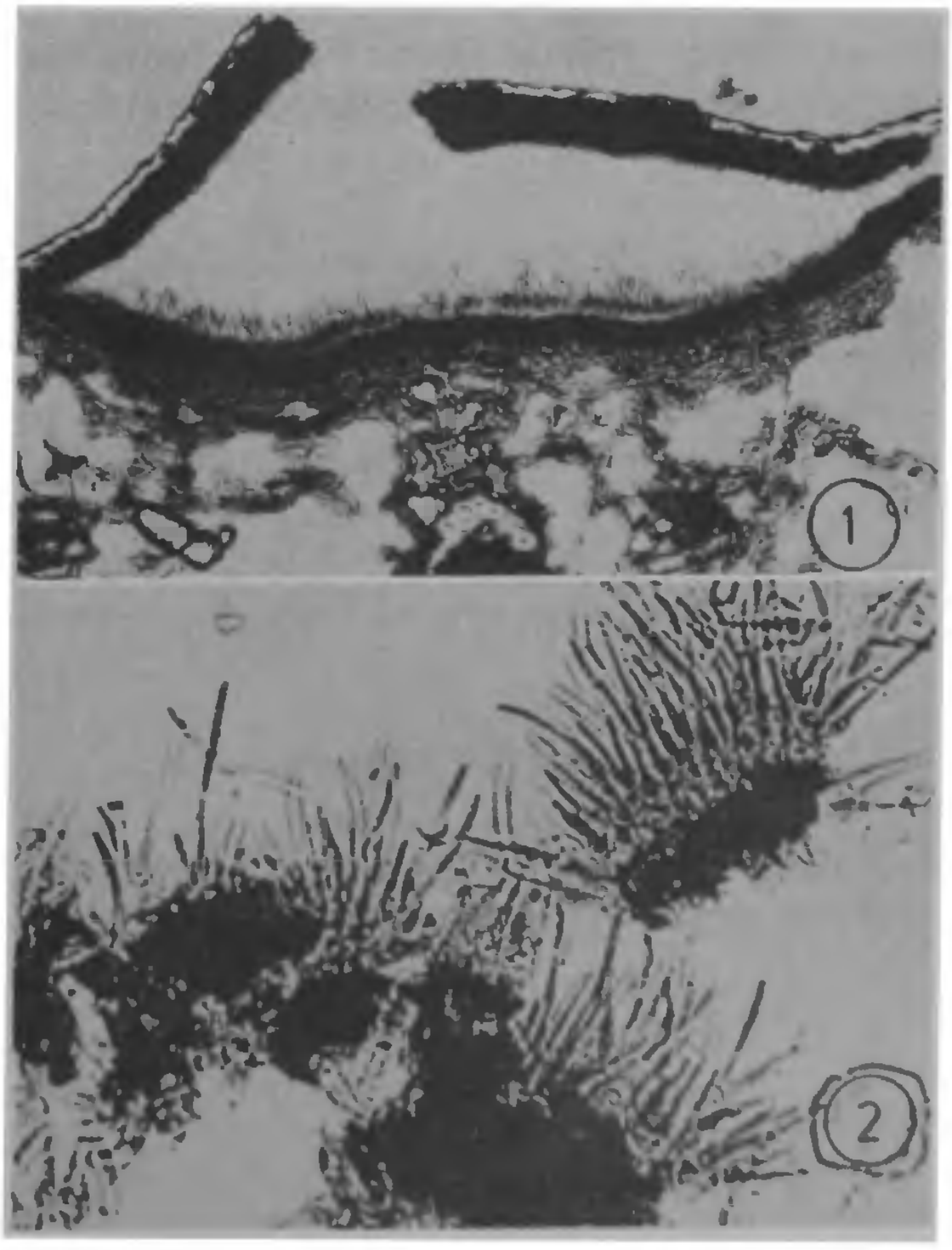
THIS paper describes an interesting Coelomycetous fungus, *Pilidium acerinum* Kunze which is a new record to India.

Sutton accepted two species in the genus *Pilidium* Kunze i.e. *P. acerinum* Kunze and *P. concavum* (Desm) Höhn which are separated by conidial size. *P. acerinum* has been reported on leaves of *Betula* sp, *Eucalyptus globulus*, *Eucalyptus* sp, *Quercus* sp, and *Acer opulifolium* from Italy, Great Britain, California, USA, Brazil, Spain and New Zealand. In the present report the fungus is described for the first time from a tropical country occurring as a saprophyte on decaying leaves of *Calophyllum inophyllum* L and *Eucalyptus* sp. The fungus has been fully described recently by Sutton[1]. The fungus is characterized by the presence of typical, lenticular and stromatic pycnidia. The Indian collection differs from other collections in having much larger pycnidia measuring up to 1.5 mm in diameter whereas in collections from other countries the pycnidia are only 200μ in diam. The conidiogenous cells line the basal region of the cavity, lageniform, phialidic, integrated, hyaline, tapered towards the apices, 18–25 × 2–3 μ (figures 2 and 4). The conidia are falcate, aseptate, hyaline, slightly coloured in mass, apex acute, base acute to obtuse, thinwalled, eguttulate, 15–18 × 2–2.5 μ (figure 3). There is no ostiole and dehiscence



Figures 1, 2. 1. Vertical section of the pycnidium (× 250). **2.** Tease mount showing the conidiogenous cells and young conidia (× 1000).