

responds to only α -NAA. For the commercial application, however, further experimentations are necessary to screen a wide range of concentrations to improve the manner of application.

The author is grateful to Dr H. B. Singh for help in photography.

14 September 1987; Revised 4 January 1988

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A NEW WILT DISEASE OF HORSE-GRAM IN INDIA

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A severe wilt disease of horse-gram [*Macrotyloma uniflorum* (Lam.) Verdc] was observed in the Central Research Station, Orissa University of Agriculture and Technology, Bhubaneswar, during January 1986 on a one-month-old crop. Disease incidence ranged from 30 to 40%.

Symptoms of the disease first appeared as yellowing on the lower leaves which then proceeded upwards involving all the leaves. Under severe conditions, the stems also became yellow and infected plants could be well marked in patches from a distance. The uprooted infected plants showed rotting at the collar region below the soil level. Roots and rootlets showed extensive rotting with dark brown discoloration. Infected plants became stunted and lateral root formation was checked.

The pathogen was isolated from infected collar and root regions on potato dextrose agar (PDA) medium. Microscopic observations revealed the following: mycelium white to pale buff, flobose, septate and 1.6–4.7 μ wide; ascospores orange-brown to red, globose, 274.5–480.2 μ long and 321.6–447.6 μ in diameter; rhizoidal hyphae present, osteolate, consisting of vertically-oriented rows of hyaline thin-walled cells; asci cylindrical, thin-walled, 76.4–87.1 \times 9.5–13.2 μ in size, not evanescent and 8-spored; ascospores univariately arranged, buff to salmon-pink in mass, pale yellow

individually, globose to ellipsoidal, 9.3–13.2 \times 6.2–12.8 μ (av. 11.3 \times 9.5 μ) in size; ascospore wall 0.5–2.1 μ thick, rough and wavy margin. Based on these morphological characters the fungus was identified as *Neocosmospora vasinfecta* E. F. Smith var. *vasinfecta*¹ and confirmed by the CMI, Kew, England (IMI 302469).

For pathogenicity test, potted plants of the variety DHG-51, raised in sterilized soil, were inoculated with 15-day-old fungus culture grown on maize-meal and sand medium. An uninoculated set was maintained to serve as control. The wilting symptom was observed within 10 days after inoculation. On reisolation, the infected roots yielded pathogen identical to the original one characterized above.

Vasudeva² and Saharan³ reported the isolation of *N. vasinfecta* from roots and seeds of horse-gram. However, this report constitutes a new report of *N. vasinfecta* var. *vasinfecta* causing wilt of horse-gram.

The author thanks Dr P. F. Cannon, CMI, Kew, England, for identifying the causal organism.

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COROLLOSPORA INTERMEDIA, A LIGNICOLOUS MARINE FUNGUS FROM INDIA

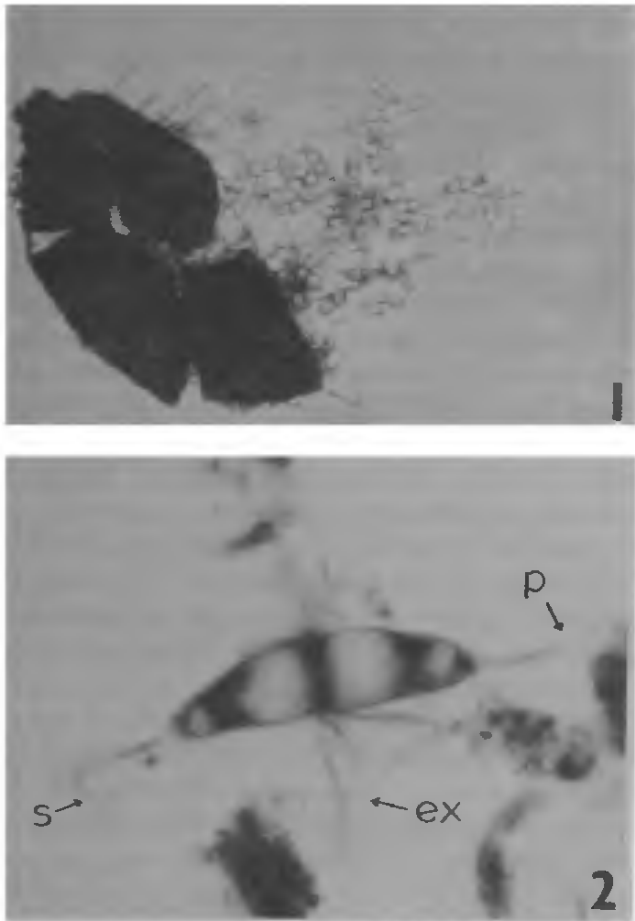
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DURING the study on lignicolous marine fungi in the Vellar estuary, Tamil Nadu, we recorded one species of ascomycetous fungus, *Corollospora intermedia* which is a new record from India. Identification was made with the help of Kohlmeyer and Kohlmeyer¹. A brief description of the fungus is given in this paper.

Corollospora intermedia, Schmidt, Nat. Naturschutz. Mecklenburg **7**: 6 (1969), (figures 1–3).



Figures 1–2. 1. Ascocarp with liberated Ascospores ($\times 200$). 2. Ascospore with appendages ($\times 1260$). [p, — Primary polar appendage; s, — Secondary polar appendages; ex, — Equatorial appendages.]

Ascocarps sub-globose, superficial, seated with subicula on grains of sand and on cases of bryozoa, ostiolate, papillate, carbonaceous, black, solitary. Paraphyses absent. Asci eight spored, unitunicate (not seen), deliquescing before the maturity of ascospores. Ascospores $21\text{--}30 \times 6\text{--}8\ \mu\text{m}$ (excluding appendages), fusiform, slightly curved, three-septate, constricted at the septa, hyaline, appendaged at both ends with a single terminal polar appendage, $9.8\text{--}12.6 \times 1.4\ \mu\text{m}$, thorn-like, slender, attenuate, rigid at the tip with refractive body and bearing secondary polar exosporic fiber-like appendages that develop by peeling off the exospore; peritrichous around the central septum, 10–18 flexible sheet-like exosporic equatorial appendages, $10\text{--}15\ \mu\text{m}$ long, which develop by fragmentation of the exospore; appendages attached to a narrow equatorial belt-like thickening of the wall.

Material examined: Dead twigs of *Prosopis juliflora* collected on 12-4-86 in the Vellar estuary, Tamil Nadu, India.

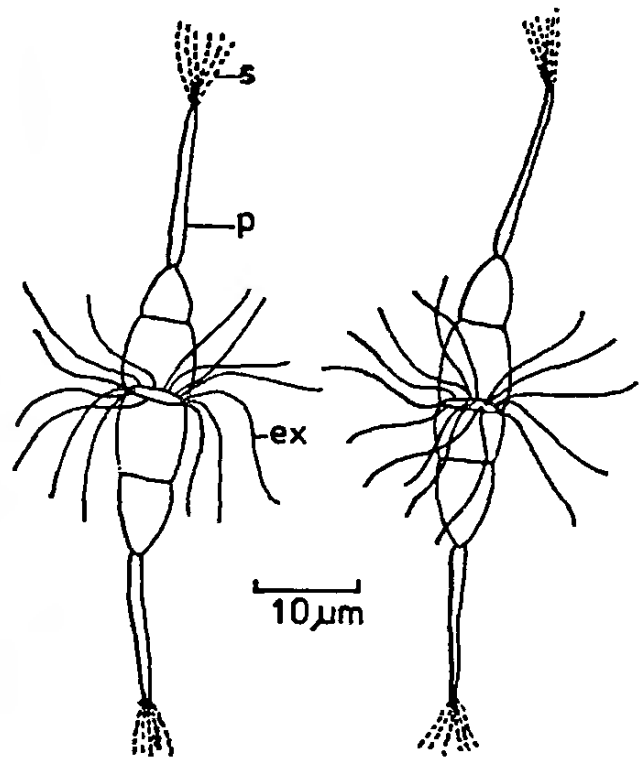


Figure 3. Line drawing of Ascospores.

The authors are indebted to Prof. K. Krishnamoorthy, for encouragement.

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SEX RATIOS IN NATURAL POPULATIONS OF FIVE TROPICAL DIOECIOUS EUPHORBIACEAE

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THE incidence of dioecy is quite high in tropical rain forest trees^{1,2}. But information about the sex ratios in dioecious species of tropical forests is scanty. It is particularly so as regards the fast disappearing but species-rich wet evergreen forests of India³.

Significant deviations from unity in the sex ratios of dioecious species have been reported^{4,5}. It is not known whether the dioecious taxa in the tropical forests of southern India are also showing any such