

REPORT ON *FUSARIUM* WILT IN *PINUS KESIYA* ROYLE

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Pinus kesiya Royle is the main source of timber and fuel at higher altitudes of Meghalaya. It has been observed during the last three years that when soil temperature and humidity is high (June-July) the newly emerging seedlings get infected with a white mycelial fungus which causes heavy seedling mortality within 15-25 days of their germination. This could be visually observed in the pine forest floor in the form of prostrate seedlings heavily infested with white mycelium. On isolation the organism involved was identified to be *Fusarium oxysporum* (Schl.) emend Snyder and Hans.

Pathogenicity tests were carried out by sowing surface sterilized healthy seed, of *P. kesiya* in pots containing soil earlier inoculated with the fungus. In another experiment the surface sterilized pine seeds were transferred to sterilized moist chambers pre-inoculated with the fungus. It was observed that in pot culture the seedlings emerged successfully and after their establishment, the fungus attacked the cortical region of the stem base and exhibited the symptoms of chlorosis. Soon after a visible wilting of the seedlings was observed. In the moist chamber experiment, just after the germination, the plumule and radicle were attacked by the fungus and thereafter the seedlings grew abnormally and could survive upto 7-10 days (Fig. 1).

The species of *Fusarium* have been reported to be distributed in soils and are known to cause wilt disease of vascular plants¹⁻⁵ however, *F. oxysporum* is a new record for *P. kesiya* Royle.

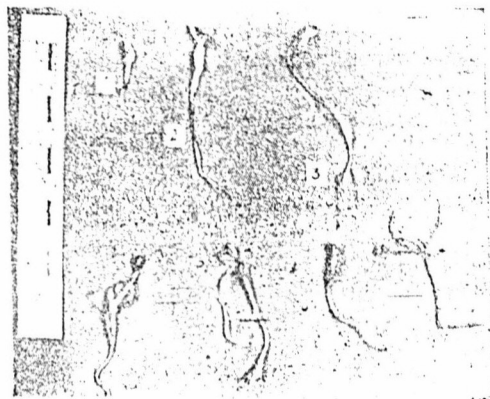


FIG. 1

Authors are thankful to the Director, Commonwealth Mycological Institute, Kew, England, for confirming the identity of the pathogen.

July 12, 1980.

1. Bloomberg, W. J., *Phytopathology*, 1976, 66, 1090.
2. —, *Ibid.*, 1979, 69, 74.
3. Tint, H., *Ibid.*, 1945, 35, 498.
4. Sadasivan, T. S. and Subramanian, C. V., *J. Indian Bot. Soc.*, 1954, 33, 162.
5. Sharma, R. D. and Singh, R. S., *Ind. Phytopathology*, 1978, 31, 352.