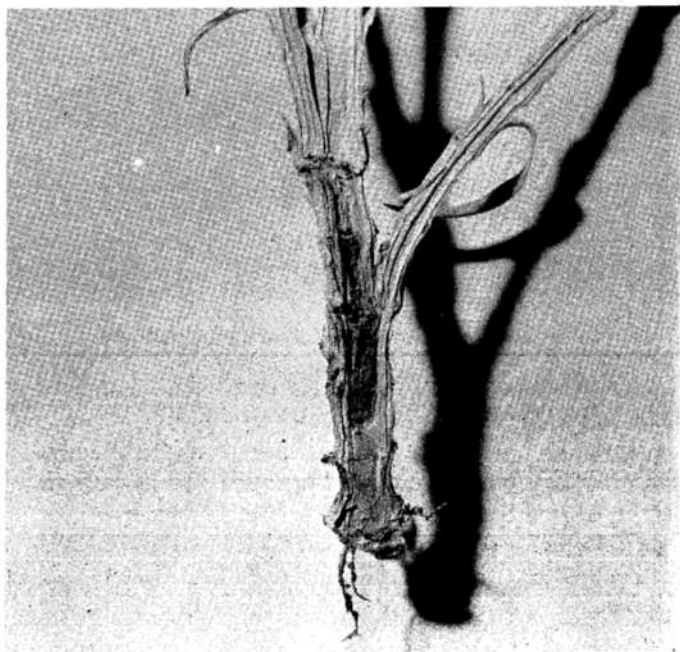


Invasion of Carnation Tissue *Fusarium roseum* f. *cerealis*

by Douglas Phillips

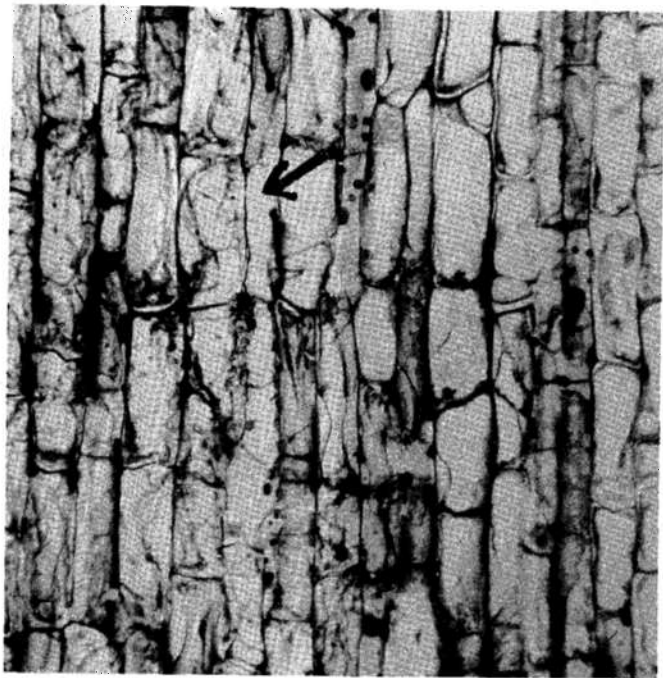
Fusarium roseum f. *cerealis*, the causal agent of stem rot of carnation, is being studied from several different aspects at Colorado State University. The study of new methods of culturing disease-free carnations by shoot tip culture is one of these phases. The pictures represent another phase in the fight to control this pathogen. Anatomical studies



#1

Fusarium stem rot often attacks carnation plants in this manner.

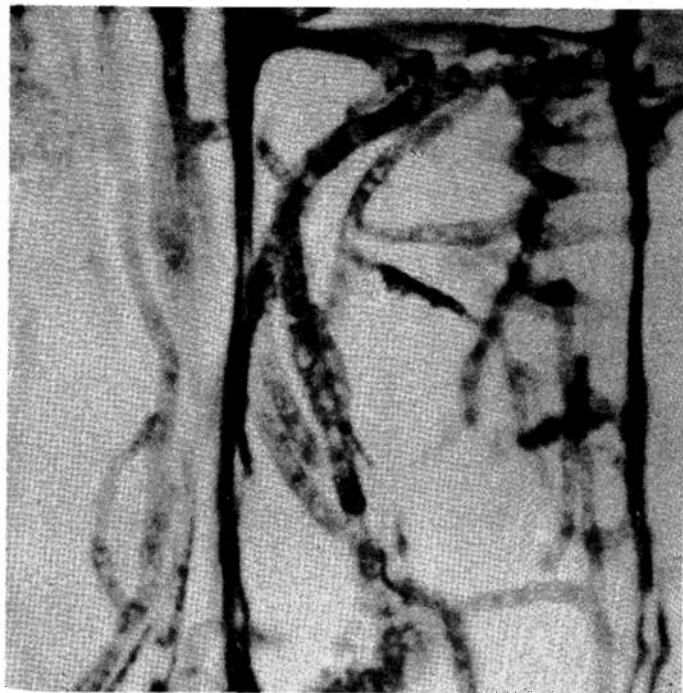
on the nature of parasitism of F. roseum, are attempts to understand the complete life history of this fungus. Two of the pictures are photomicrographs of carnation tissue with the fungus threading its way through the brick-like parenchyma



#2

When sections of stem around the rotted area are sectioned and magnified by 100 and enlarged 20 times, the cells look like stone walls on edge. Thread-like strands of the fungus are visible inside some of the cells.

cells. The fungus threads are seen as somewhat mottled, dark, irregular bodies which are grouped in the plant cells. Further work is under way in an attempt to determine just how this fungus invades the tissues.



#3

Magnifying the cells further by 450 and enlarging about 20 times, the mottled vegetative strands of Fusarium are plainly visible.

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