



Department of Plant Pathology, BSMRAU
PLP 340 Diseases of Field Crops
Autumn, 2020

1

Wet preservation:

General preservative for museum specimen are-

a) Formaldehyde solution----- 5% formaldehyde solution in water.

b) Formaldehyde Alcohol solution (F. A. solution)

Formaldehyde (40%) ----- 25 ml,

Ethyl alcohol (95%) -----150 ml and

Water -----825 ml.

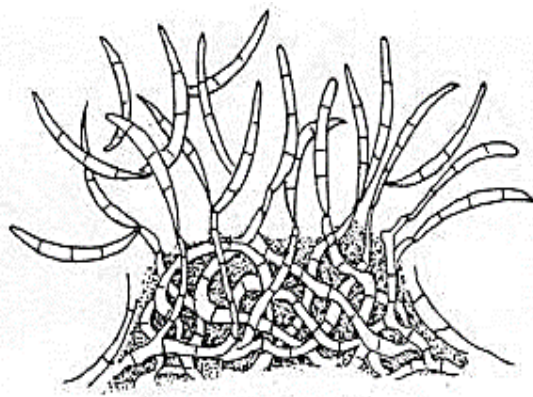
c) Formaldehyde Aceto Alcohol solution (F. A. A. solution)

Formaldehyde (40%) -----50 ml,

Glacial acetic acid -----50 ml and

Alcohol (50-70 %) -----900ml.

2



Sporodochium
(*Fusarium*)

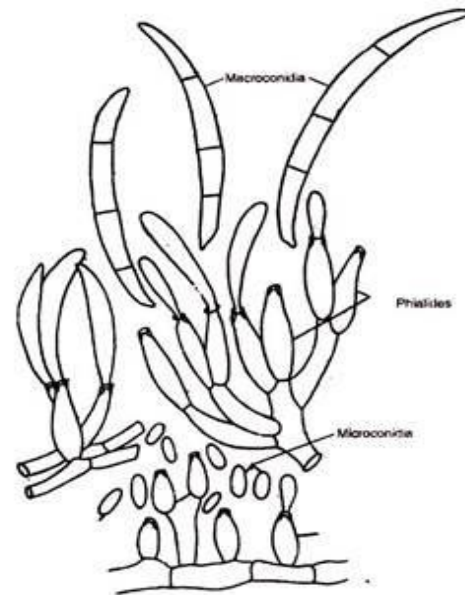


Fig. 3. *Fusarium* : Phialide, microconidia and macroconidia.



Taxonomic position:

Kingdom: Fungi

Division: Deuteromycota

Class: Hyphomycetes

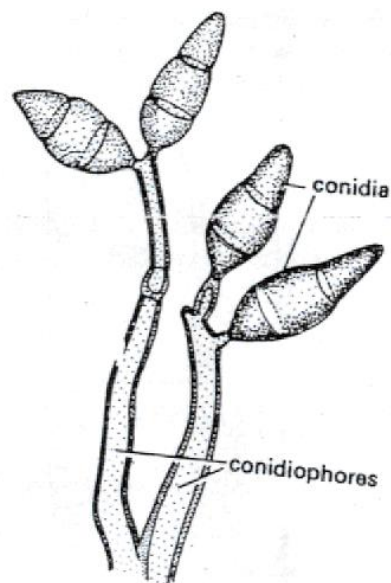
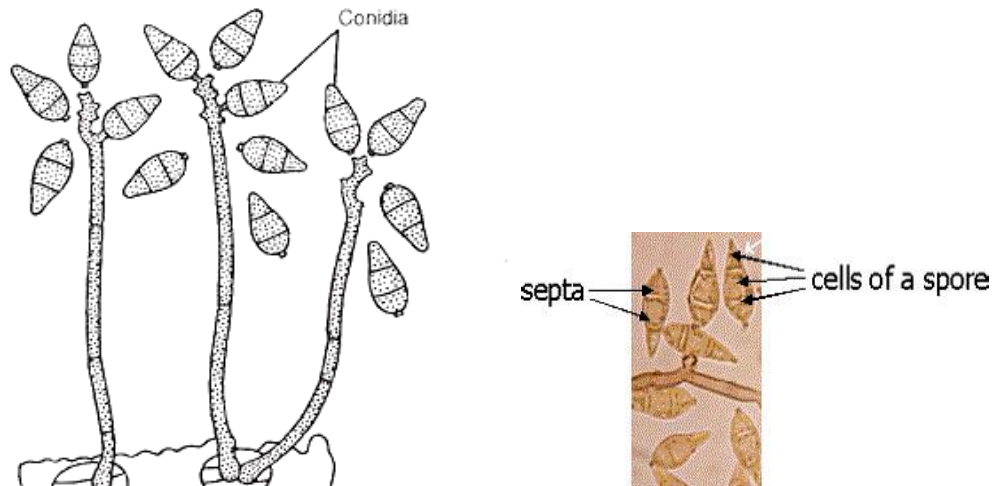
Order: Moniliales

Family: Tuberculariaceae

Genus: *Fusarium*

Species: *F. moniliforme*

3



Taxonomic position:

Kingdom: Fungi

Division: Deuteromycota

Class: Hyphomycetes

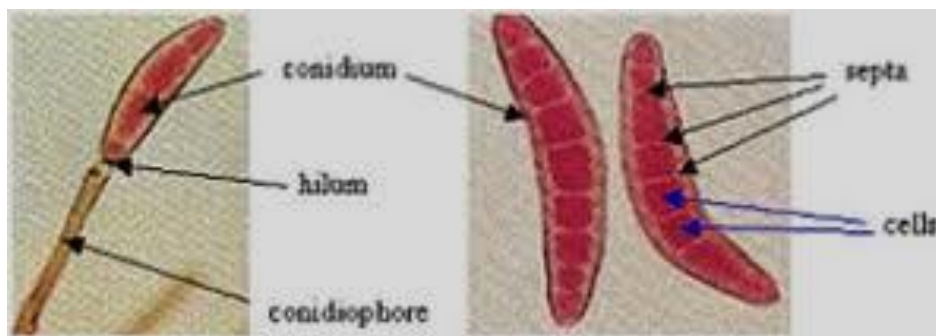
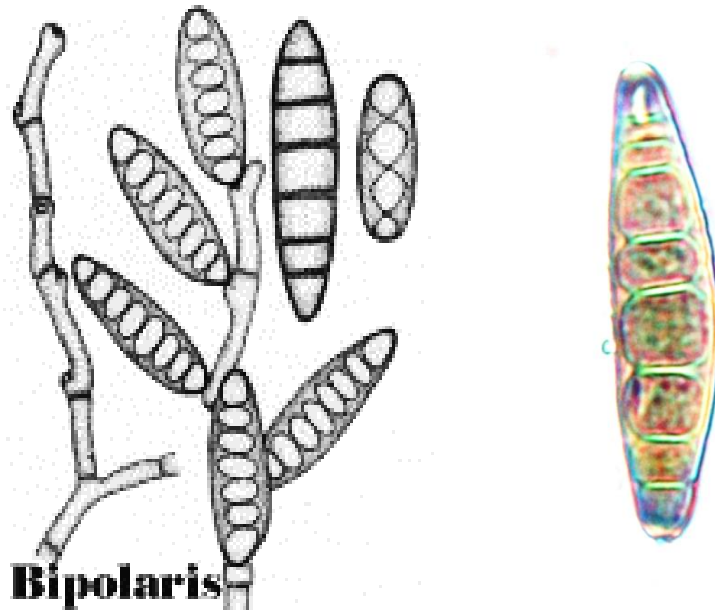
Order: Moniliales

Family: Dematiaceae

Genus: *Pyricularia*

Species: *P. Oryzae*

4



Taxonomic position:

Kingdom: Fungi

Division: Deuteromycota

Class: Hyphomycetes

Order: Moniliales

Family: Dematiaceae

Genus: *Bipolaris*

Species: *B. sorokiniana*.

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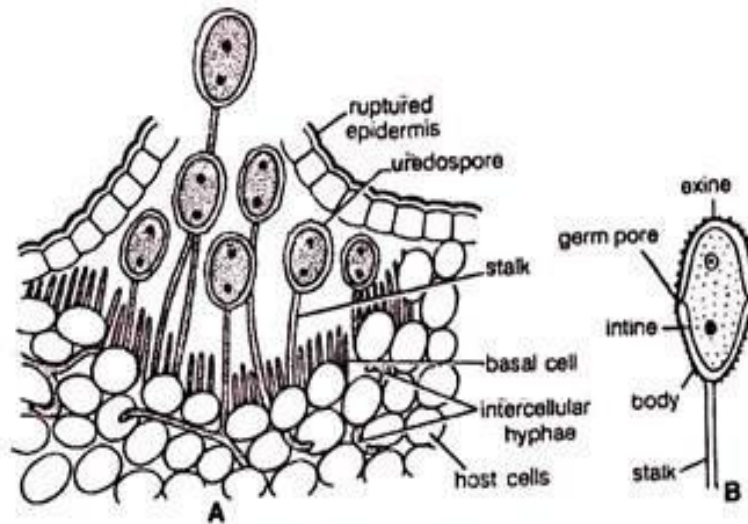


Fig. 4 (A-B). *Puccinia graminis* : T.S. wheat leaf passing through a uredosorus, (B) A uredospore

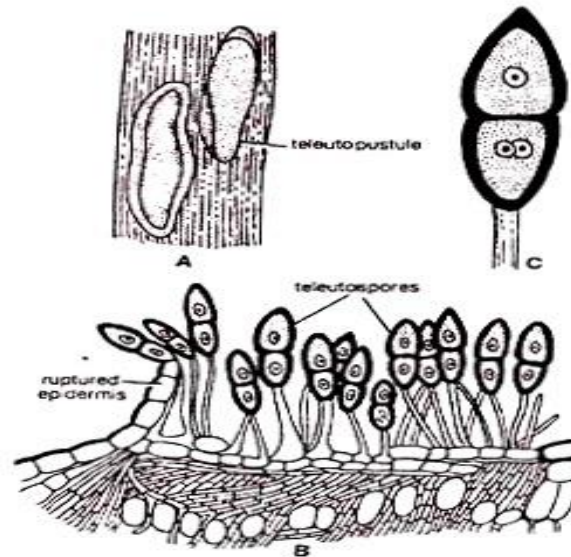


Fig. 5 (A-C). *Puccinia graminis* : (A) Teleutopustule on wheat. (B) Vertical section of leaf passing through teleutosorus; (C) A single teleutospore

Taxonomic position:

Kingdom: Fungi

Division: Basidiomycota

Class: Teliomycetes

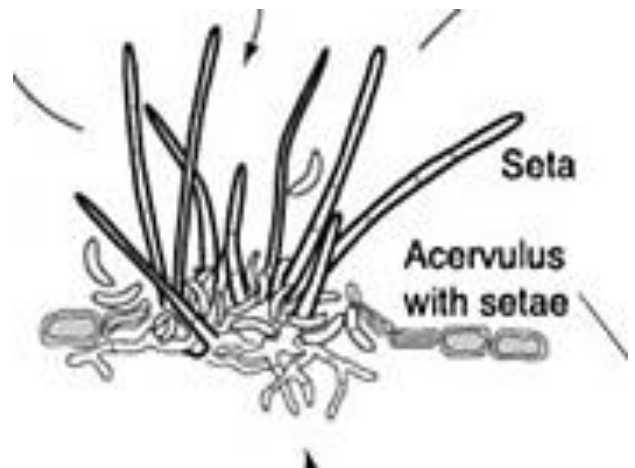
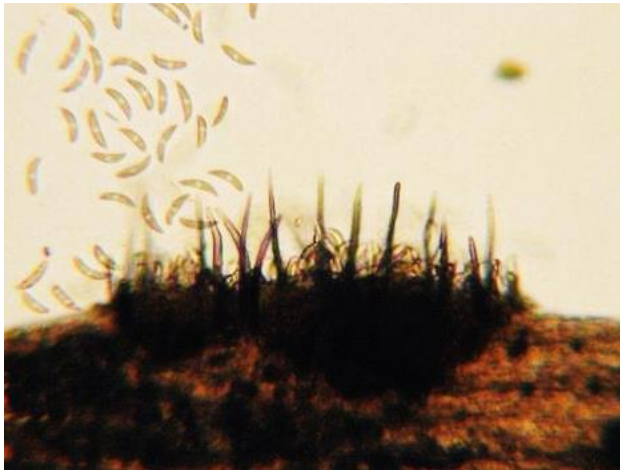
Order: Uredinales

Family: Pucciniaceae

Genus: *Puccinia*

Species: *P. graminis* f. sp. *tritici*

6



Taxonomic position:

Kingdom: Fungi

Division: Deuteromycota

Class: Coelomycetes

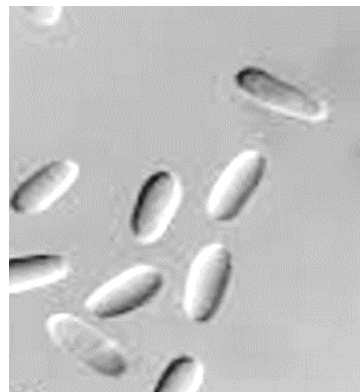
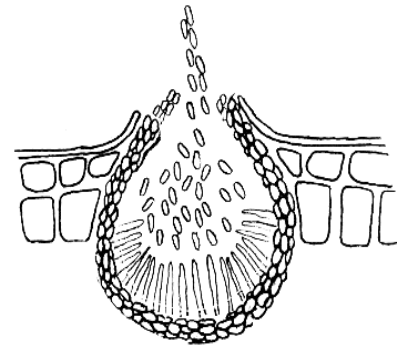
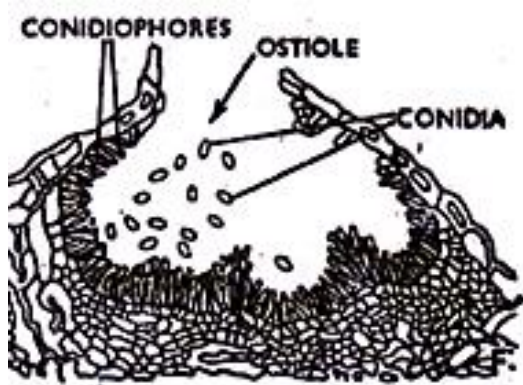
Order: Melanconiales

Family: Melanconiaceae

Genus: *Colletotrichum*

Species: *C. corchori*

7



Taxonomic position

Kingdom: Fungi

Division: Deuteromycota

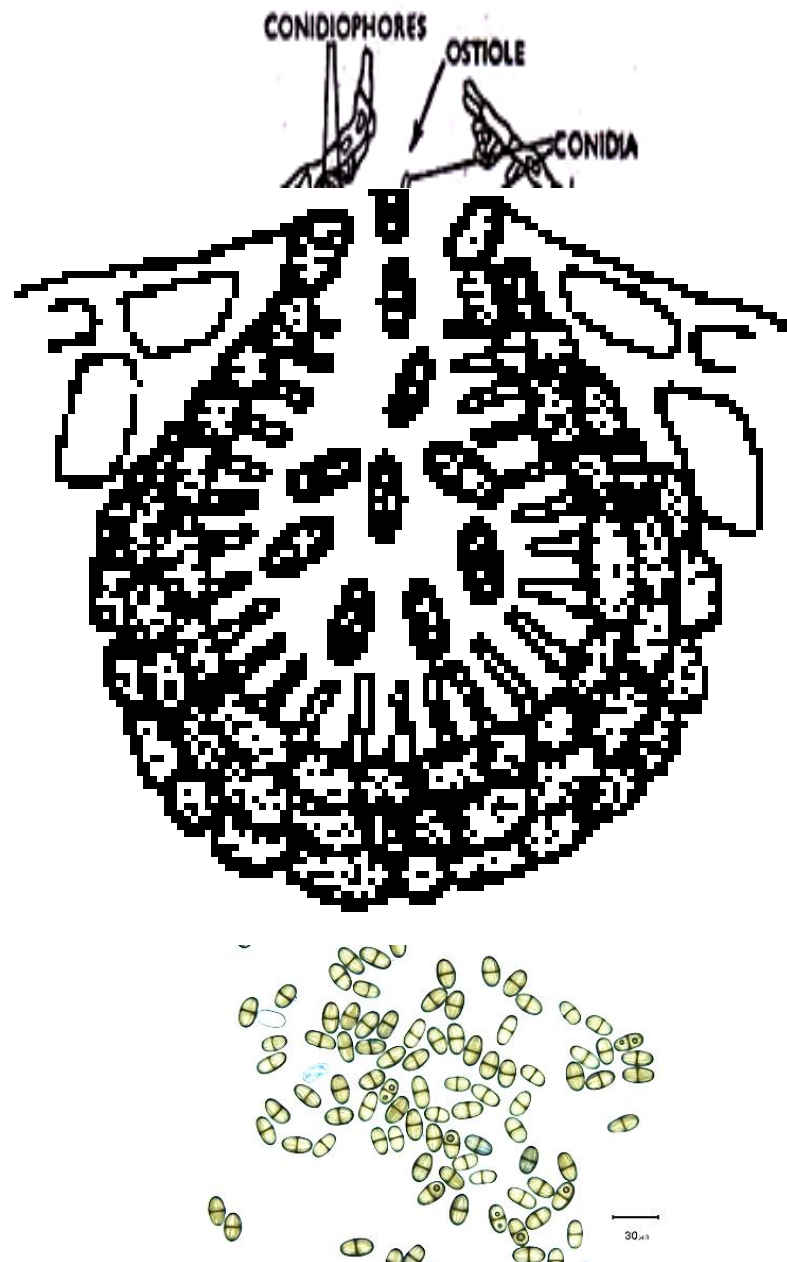
Class: Coelomycetes

Order: Sphaeropsidales

Family: Sphaeropsidaceae

Genus: *Macrophomina*

Species: *M. phaseolina*



Taxonomic position:

Kingdom: Fungi

Division: Deuteromycota

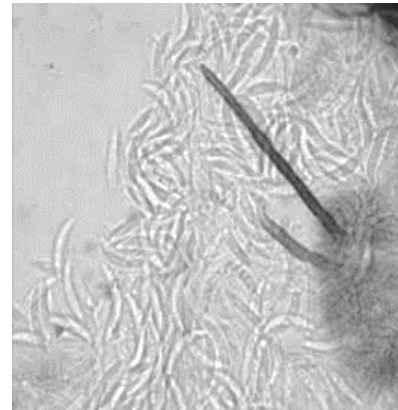
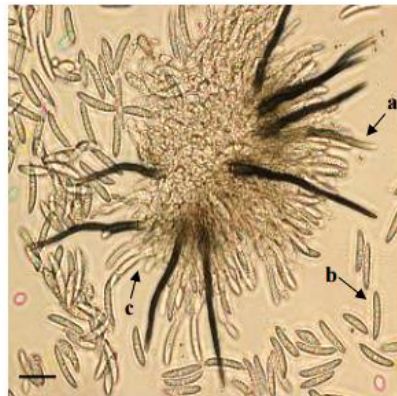
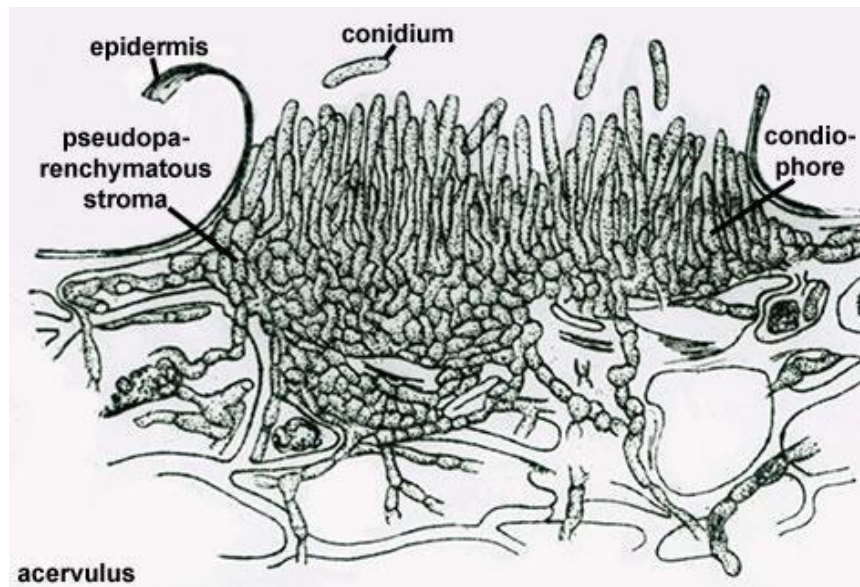
Class: Coelomycetes

Order: Sphaeropsidales

Family: Sphaeropsidaceae

Genus: *Botryodiplodia*

Species: *B. theobromae*



Taxonomic position:

Kingdom: Fungi

Division: Deuteromycota

Class: Coelomycetes

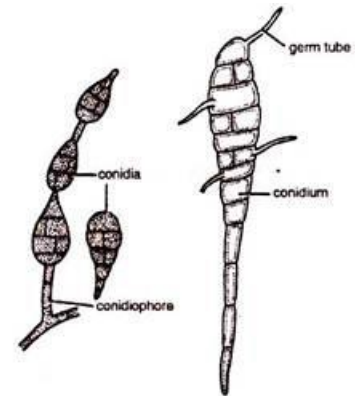
Order: Melanconiales

Family: Melanconiaceae

Genus: *Colletotrichum*

Species: *C. falcatum*

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Taxonomic position:

Kingdom: Fungi

Division: Deuteromycota

Class: Hyphomycetes

Order: Moniliales

Family: Dematiaceae

Genus: *Alternaria*

Species: *Alternaria brassicae*

A. brassicicola

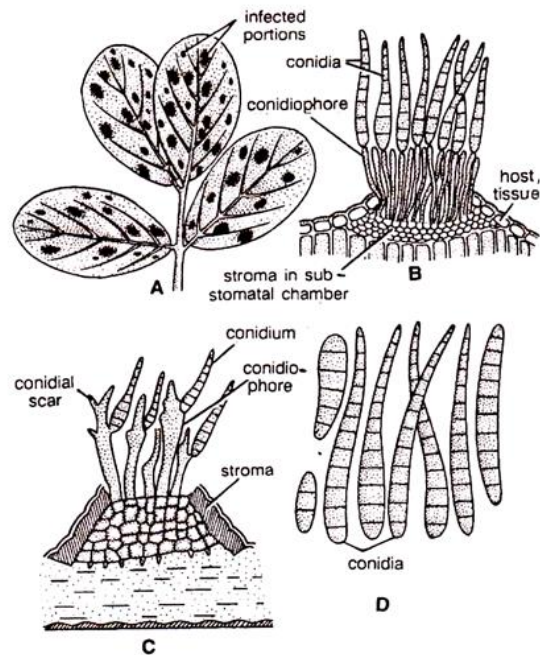
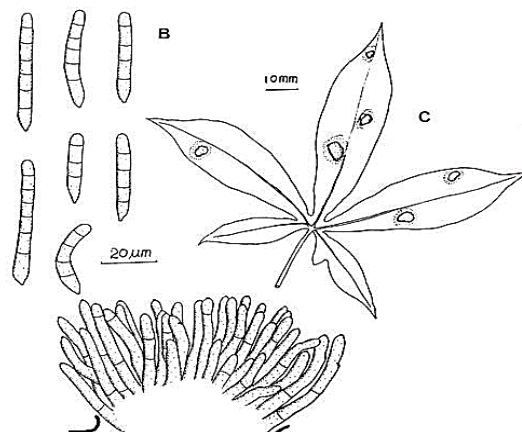


Fig. 1. (A–D). *Cercospora*. (A) Leaf spot disease of ground nut, (B) Conidiophore bearing conidia, (C) Longitudinal section of acervulus with geniculate conidiophores, (D) Conidia



Taxonomic position:

Kingdom: Fungi

Division: Deuteromycota

Class: Hyphomycetes

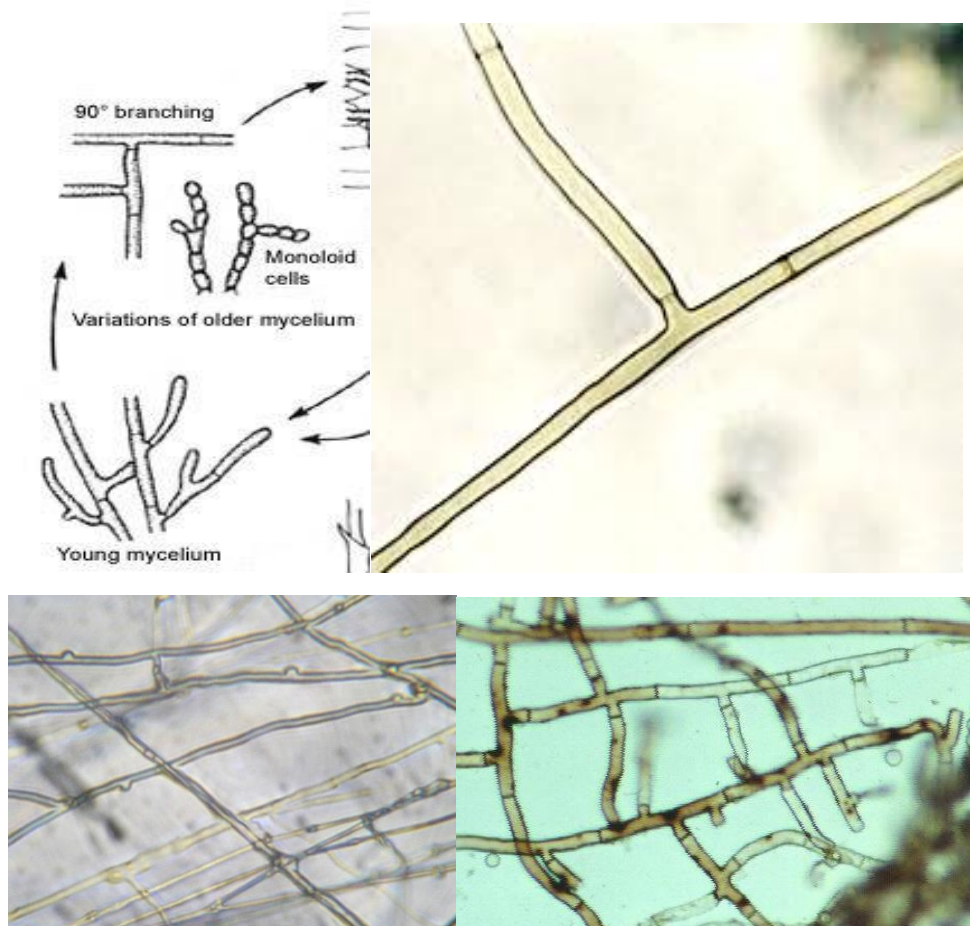
Order: Moniliales

Family: Dematiaceae

Genus: *Cercospora*, *Cercosporidium*

Species: *C. arachidicola*

C. personatum



Taxonomic position:

Kingdom: Fungi

Division: Deuteromycota

Class: Hyphomycetes

Order: Agonomycetales

Family: Agonomycetaceae

Genus: *Rhizoctonia* / *Sclerotium*

Species: *R. solani* / *S. rolfsii*