

Fungus lecture 7

PMB102 November 29, 2007

Raven et al. 2005, pp. 309-312

Oomycota

Phylogenetics of Oomycota, "fungi" at the base of the stramenopiles.

Non-fungal characters, cellulose, DAP lysine synthesis, 2N thallus, storage polysaccharide

Fungal behavior

Small Phylum, < 1% of described fungi, ~ 580 sp.

Habitats: aquatic, in wet soil, or terrestrial inside of plants.

Life cycle introduction

Means of nutrition

Saprobies, lots

Parasites, lots

Animal

Fish, frogs, one mammal pathogen, best known from horses, *Pythium insidiosum*.

Plant

Seedling "damping off"

Potato

Grape

Tobacco

Oak

Symbionts, none, unless you count the "brown plants"

Oomycete Life cycle

Mitospores

Saprolegnia example

Meiospores

Achlya example

Regulation of mating

Achlya example

Pheromones

Relative gender expression

Most famous oomycetes

Pythium, Damping off and pythiosis

Phytophthora infestans

Mitospores and meiospores

Regulation of mating

Irish potato famine

Modern *Phytophthora* famine

Downy mildews

Plasmopara Grape mildew and Bordeaux mixture

Peronospora Blue mold of tobacco

The only oospores/ antheridia seen in lab this year, *Albugo candida*, the "white rust" of mustards.

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