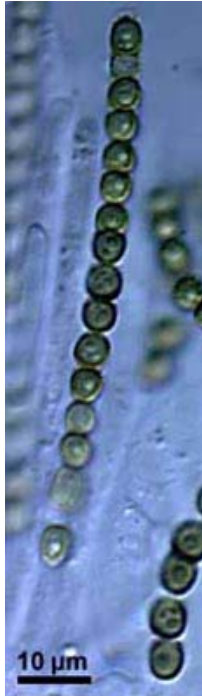


# Mold of the Month September 2008

## *Ascomycetes*



Ascus of eight 2-celled Ascospores



Sac Fungi

### Colony Description and Microscopic Morphology

Ascomycetes belong to the Ascomycota division. They are classified by their sexual reproduction methods. The majority of ascomycetous fungi grow as a mycelium, consisting of many hyphae which are microscopic multi-branched filaments. Hyphae are septate.

Ascomycetes are commonly known as the **sac fungi**. Ascomycetes form their sexual spores (ascospores) inside special sac-like cells, called asci, which are usually produced in larger numbers on or in fruiting structures called ascomata. Most asci act as tiny spore guns, shooting their ascospores into the air at maturity. Ascomata, ascocarps, and fruiting bodies are synonyms. There are 5 types of fruiting bodies: gymnothecium, cleistothecium, perithecium, apothecium, and naked asci.

The growth rate, colony size, texture, and colony color of ascomycetes are widely varied. The size, color, shape, and surface of ascospores are also wide spread.

## Ecology

Ascomycetes principally digest living or dead biomass, such as fallen leaves, twigs, or logs. Some ascomycetes are parasitic fungi, they would attack plants, animals, or other fungi as parasites. However, some ascomycetes are symbiotic, such as lichens and algae. The most popular ascomycetes seen in the laboratory are *Sordariales*, *Chaetomiaceae*, *Leptosphaeria*, *Eurotiales*, and *Neurospora*.

## Health Effect

Some of the ascomycetes are plant-pathogenic. Commonly seen examples are apple scab, ergot, black knot, and powdery mildews. However, a famous anamorphic (asexual) age of ascomycetes is *Pencillium Chrysogenum*. *Pencillium Chrysogenum* produces “penicillium” which triggered a revolution in the treatment of bacterial infectious diseases.