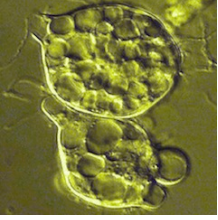


Chytrid Fungus

Batrachochytrium dendrobatidis

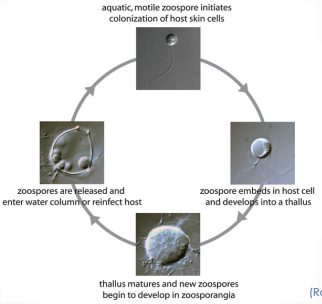


Clay Coward

Chytrid Life Cycle



Life Cycle of the Pathogenic Chytrid Fungus: *Batrachochytrium dendrobatidis*



aquatic, motile zoospore initiates colonization of host skin cells

zoospores are released and enter water column to reinfect host

zoospore embryos in host cell and develop into a thallus

thallus matures and new zoospores begin to develop in zoosporangia

(Rosenblum 2010)

Symptoms of Chytrid

- Thickening skin
- Excessive shedding
- Abnormal posture
- Unnatural behavior
- Seizures

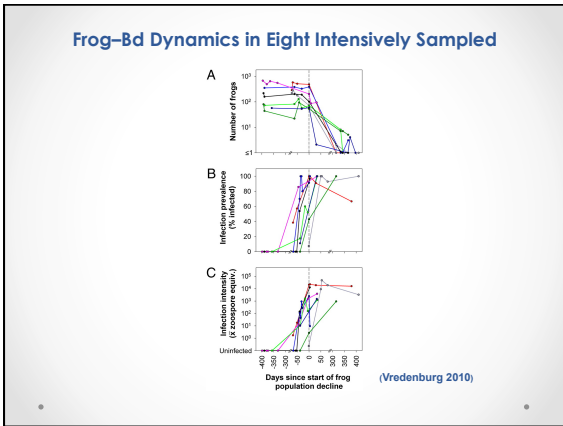
How Does It Kill?

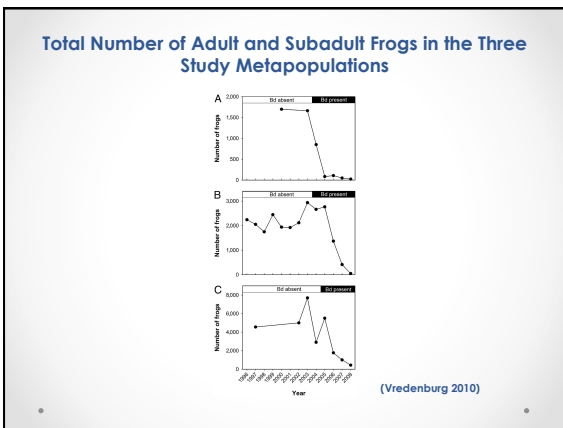
- Infects the epidermis
 - Amphibian skin is unique
- Thickening of skin occurs
 - Blocks the transfer of gases, water, and electrolytes
- Causes electrolyte depletion and osmotic imbalance
 - Evidence suggests this is enough to cause mortality (Rosenblum 2010)

Mountain Yellow-Legged Frog

Chytrid Fungus and Mountain Yellow-Legged Frog Tadpoles

(Vrendenberg 2010)



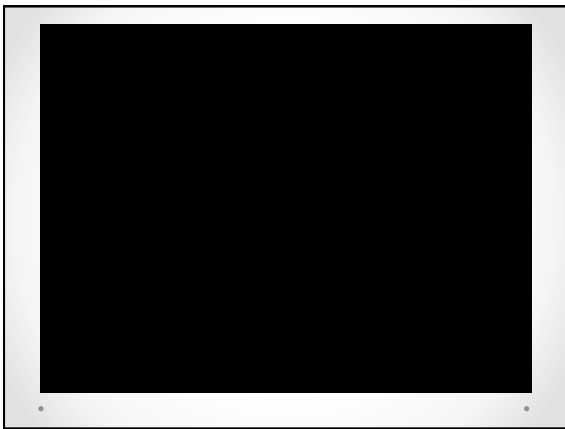


Why is Chytrid the most important cause of amphibian decline?

- Extinction Can occur in as little as one year
- Chytrid has caused massive die offs in even remote, pristine areas
- Chytrid is a global epidemic- Every continent except Antarctica
- Over 200 species are extinct or have had catastrophic declines
- First emerging disease shown to cause decline or extinction of species not otherwise threatened
- Over 350 amphibian species known to be affected

(Amphibiweb 2014)





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Questions????