Written by Administrator Thursday, 10 January 2013 23:42 -

Downsizing downy mildew genes reported in ScienceDaily 10 December 2010. An international team of scientists has sequenced the genome of a microscopic mould that causes a plant disease named downy mildew. The mould is called *Hyaloperonospora arabidopsidi* and can only live as a parasite on plants. The scientists then compared its genome with that of similar organisms such as Phytophthora species that can cause parasitic plant diseases, but can also live independently, feeding only on dead plant matter on forest floors. They found the downy mildew was missing almost 700 genes compared with the Phytophthora species. These genes included those for making enzymes and other molecules involved in the metabolism of nitrogen and sulphur that are needed for a fungus to be independent of a host plant. According to ScienceDaily, "The massive gene loss that is evident in the *H. arabidopsidis*

genome will provide many clues on the evolutionary adaptation necessary for a pathogen to become fully dependent on a plant host".

ScienceDaily

Editorial Comment: Whatever caused this organism to lose hundreds of genes was not evolutionary adaptation. Being unable to live independently does not improve any organism. Such a change has really been a massive degradation of this organism, along with the demise of the plants it infects and the environment in general.

The study of the sometimes non parasitic Phytophthora species does seem to give us a clue as to the original function of these mildew organisms. Breaking down dead plant matter is an important process in recycling nutrients and maintaining the soil, so these organisms are useful contributors to the ecology, and would have been created as part of the original fully functioning good world.

Organisms that have suffered massive gene loss such as the Downy Mildew and which consequently have become partially or fully dependant but parasitic organisms, which now damage or destroy other plants, may be examples of survival in a struggle for existence, but this is not evolution. It is a tragic reminder that the real history of the world has been a change from a good world with functioning ecosystems maintained by co-operating organisms to a corrupted world of competitive survival, often at the expense of other living things. We predict that new parasitic fungal and plant organisms brought about by gene loss will occur with increasing frequency as we get further away from God's original good creation. (Ref. ecology, parasitism, botany, mycology, prediction)

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