



Preliminary evaluation of the possible impact of climate change on myxomycetes

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Abstract: The myxomycetes (plasmodial slime molds or myxogastrids) are likely to be affected by climate change, since temperature and moisture are the main factors limiting their occurrence in nature. However, the resilience of myxomycetes to climate change is extremely difficult to determine due to their cryptic life history. It is possible that myxomycetes may represent one of the least affected groups of organisms, although all available evidence suggests that the anticipated changes in climate regimes are going to have a significant impact upon their distribution and ecology. This will be especially true for those species of myxomycetes restricted to particular types of microhabitats (e.g., alpine snowbanks) or which are confined to geographical areas that are limited in extent (e.g., small oceanic islands). The composition of assemblages of myxomycetes species associated with deserts, the polar regions and other ecosystems of the world also could be affected.

Key words: climate change, distribution patterns, evaluation of threats, myxomycetes.

Introduction

Projected increases in global temperatures will produce major shifts in climate regimes throughout the world by the year 2100. Climate change has always been a naturally occurring factor for all living organisms, but the recent accelerated pace of short-term climate change (which is assumed to be primarily anthropogenic in origin) is quite a different matter. The fact that the latter exists and has the potential to affect life on the earth is supported by a considerable body of data (Root et al. 2003). However, a specific focus on this topic is new for groups such as the fungus-like myxomycetes (also called plasmodial slime molds or myxogastrids). They associated with dead plant material in

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