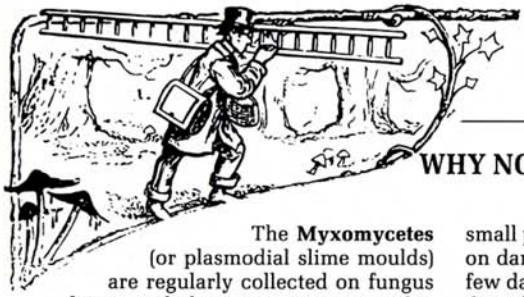

FIRST STEPS
A Beginner's Guide

WHY NOT STUDY MYXOMYCETES?

The **Myxomycetes** (or plasmodial slime moulds) are regularly collected on fungus forays and always arouse interest because of their beauty. They are easy to collect and preserve and not too difficult to identify. With less than 300 British species, of which only about 60 are common, they are a manageable group for the beginner.

The simplest fruitbody is a stalked **sporangium**, although this may be sessile, or other structures may be produced, one-sporangium thick, but often several centimetres long — **plasmodiocarps**. In a few species the whole plasmodium becomes a single massive fruitbody — an **aethalium**. Inside the sporangium the spores develop together with a structure which facilitates their dispersal — the **capillitium**. This may range from sculptured threads to limey plates or tubes, or may be absent. The **spores** may be smooth, warty, spiny or covered in a network of ridges. Stalked sporangia are usually one or two millimetres high and may be single or grouped together on a common sheet of horny tissue — the **hypothallus**.

Myxomycetes are predominantly autumnal woodland organisms, most often on rotten wood or leaf litter. Some species prefer wood of coniferous trees and are becoming more common as new forestry plantations mature. Others are found in the deep litter under holly bushes, bramble clumps, ferns or stands of rosebay willow-herb. There are characteristic slime moulds in grassland, such as the large white *Mucilago* which encrusts the stems of grasses, especially in limestone regions. The fens and marshes of East Anglia are rich in myxomycetes in the deep, damp litter of reeds and other large grasses. Even sand-dunes and shingle beaches have their own myxoflora, on marram litter or under mats of creeping plants. On mountains may be found shining *Lamproderma* species on plant remains when the winter snows melt. *Sphagnum* bogs typically carry the large yellow plasmodia of *Badhamia lilacina*, followed by clusters of lilac-grey sporangia. One of the most productive habitats is the bark of living trees. Minute species of *Echinostelium*, *Licea*, *Macbrideola* and *Paradiacheopsis* are discovered when small pieces of bark are removed and placed on damp filter paper in Petri-dishes. After a few days sporangia begin to appear and may do so for up to three months. Few samples fail to produce myxomycetes. For identification of these forms the keys provided by Mitchell are valuable.

After collection, fruitbodies can be preserved by drying, preferably without heat, and kept in small boxes e.g. matchboxes, preferably fixing the substrate to a small white cardboard tray. The standard text for identification is the monograph by Martin & Alexopoulos (1969). The most beautiful pictures are those of Lister (1925), this is no longer readily available but good libraries may have it. A recent account of the Dutch species is given by Nannenga-Bremekamp (1974) which will shortly appear in English, the black-and-white illustrations are very helpful. A new account of the British species is in active preparation. Meanwhile the writer will be happy to identify material, sent dry, in tubes and boxes.

The Society is organising a **Workshop** on the collection, identification and ecology of Myxomycetes at Chester College, Chester in October 1988. Further details will appear in **The Mycologist**. BMS and other societies' forays are often attended by myxomycete enthusiasts and further help is thus available to the beginner. Many of the larger museums have small collections of slime moulds and these may be consulted on application to the curator.

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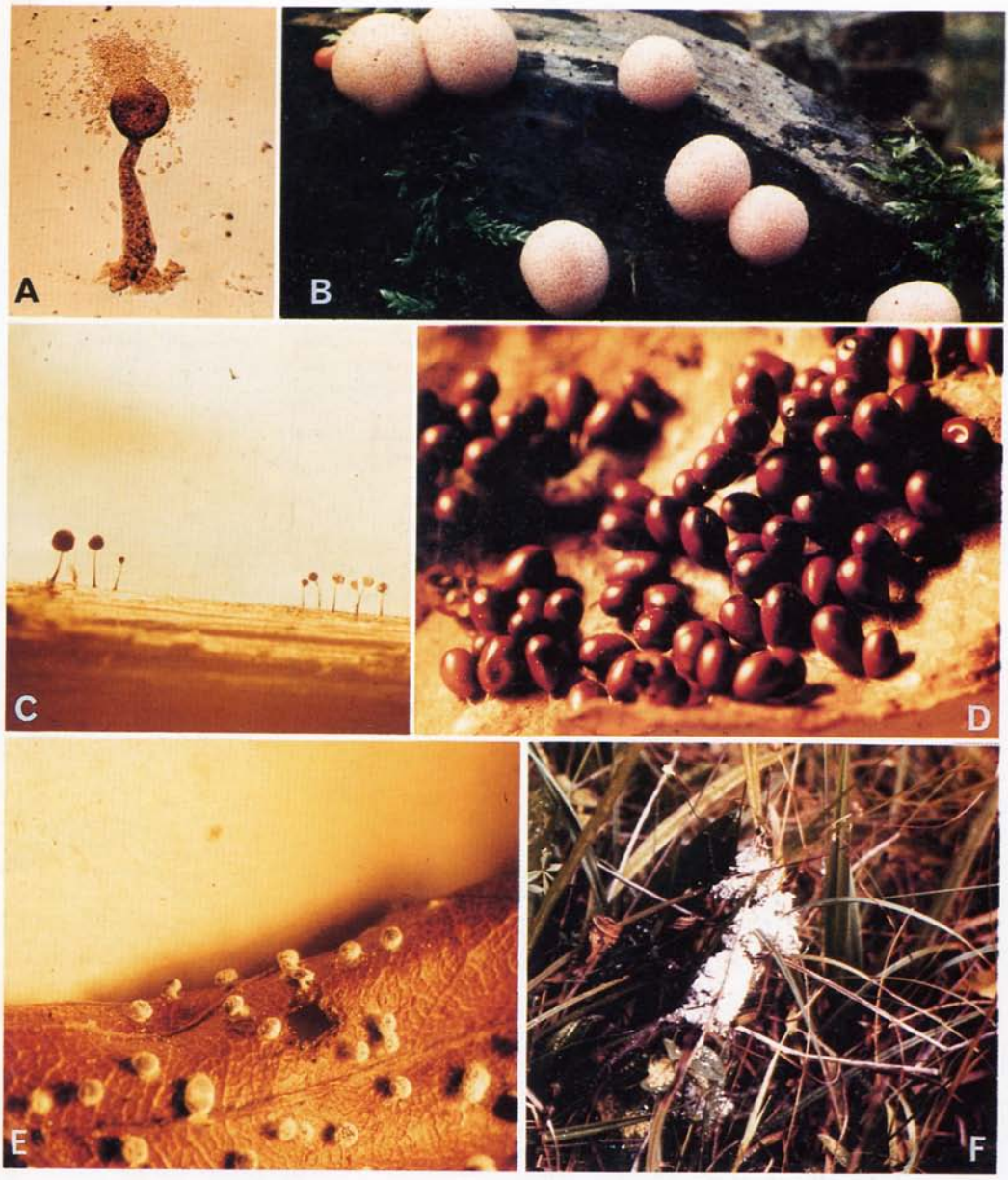

Myxomycetes. (A) *Licea capitata*, recently described from the the western UK, ca 1mm high; (B) *Lycogala epidendrum*, a very common aethalial species on logs, especially in spring, ca 1cm diam; (C) *Comatricha nigra*, a common species on forest debris, 2-6mm high; (D) *Leocarpus fragilis*, common on leaf litter in woods of all kinds, ca 2mm high; (E) *Didymium squamulosum*, common on leaf litter, ca 1mm high; (F) *Mucilago crustacea*, commonly encrusting grasses, especially limestone regions, up to 10cm long. (Photos: *B. Ing*)