



Fig. 1. Photomicrographs of *L. discophora*. Photography presents considerable problems, since features are not all in the same plane of focus, and ochre deposits in the capsule obscure details. (a–c) Two-day cultures, (d) 7-d culture. (a) A recently established organism. The filament, surrounded by a capsule, has grown to the left from the initial point of attachment, now surrounded by an incipient disc. (b) An older, attached organism, growing from a larger and darker disc at the right of the field. The filament can be distinguished within the capsule for a short distance to the left of the disc. (c) A detached organism of similar age. The filament, being approximately in the same plane of focus throughout its length, can be seen within the capsule. (d) A disc from which the filament, probably well over 100 µm long, has become detached. The central clear area of approximately 1 µm diameter, a feature of mature discs, corresponds in width to the central filament and marks its point of attachment to the surface. The concentric pattern of differing degrees of darkening is usual in older discs. The base of the capsule in old, detached filaments also commonly shows blackening. Bar, 20 µm (applies to entire figure).

in the agar cultures used in many studies. Our observations show that holdfasts remain firmly attached to the substratum whereas the rest of the organism, after a period of growth, is readily detached. Hence in static or shaken liquid culture, or in Mulder's flow apparatus,

holdfasts are likely to remain attached to vessel walls, and will not be observed in samples withdrawn from cultures. Samples from nature are also likely to contain many detached organisms, with holdfasts remaining attached to solid objects. Their observation in

pure culture may require freshly isolated material and the provision of surfaces that can be removed for examination.

Two general points of interest emerge from the above: that very old reports may still be of value, and that supplementing pure cultures by observations in which natural conditions are simulated can be rewarding.

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