

***Physarum viride* (Bull.) Pers.**

**SM2 (= PDD 110382) & SM4 (= PDD 110394)**

**SM2:**

**Substrate:** Unidentified dead wood with plasmodium only

**Collection site:** Remutaka Forest Park nr. Wainuiomata, Catchpool Loop Walk

**Collection date:** 5 April 1997

**Collectors:** Ann Bell, mycology student field trip

**Identifier:** Dan Mahoney

**Voucher materials:** dried herbarium material (dried fruiting structures on paper towelling from plasmodial fruiting in the laboratory); Dan's dissecting scope photos of in-situ fruiting bodies (digitized) and his compound scope digital photos of microscopic detail; Dan's description and comments.

**SM4:**

**Substrate:** Unidentified dead wood with mostly older fruiting structures

**Collection site:** Remutaka Forest Park nr. Wainuiomata, Catchpool Loop Walk

**Collection date:** 6 April 1999

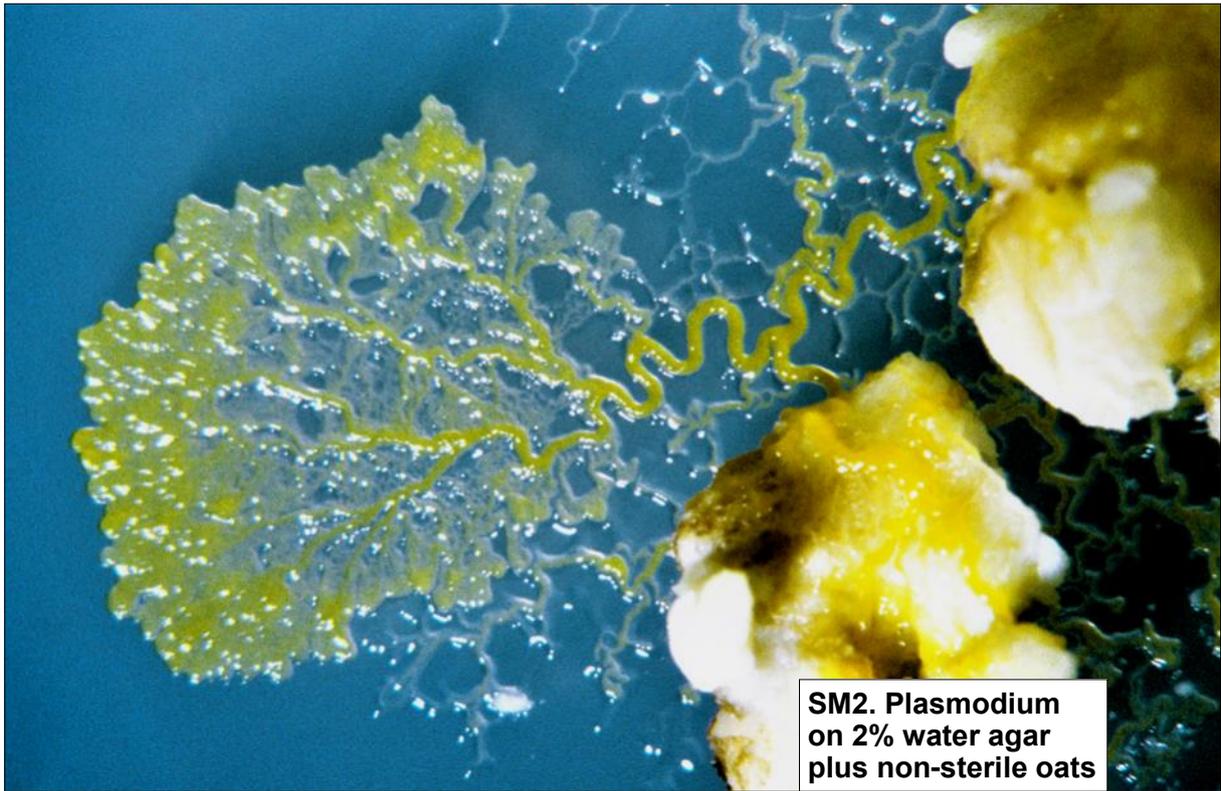
**Collectors:** Dan Mahoney, Ann Bell and Toni Atkinson

**Identifier:** Dan Mahoney

**Voucher materials:** dried herbarium material; Dan's dissecting scope photos of in-situ fruiting bodies (digitized) and his brief comments.

**SM2 & SM4 combined description and comments:** Less time was given to SM4 as it soon became clear that it represented the same species collected in 1997. They were a good match, had been collected at similar sites and on similar dates – two years apart. The noteworthy difference between them was the starting point in their observation. SM2 was collected as a plasmodium only while SM4 had already fruited on the dead wood and consisted mostly of older sporocarps. The plasmodium of SM2 was taken back to the lab and fed non-sterile dry oat flakes on moist paper towelling and on 2% water agar. The growth on paper towelling provided the fruiting bodies in the herbarium sample. Their description is given on the next page:

**Plasmodium** yellow, forming large fans as it grew. **Sporotheca** globose to lenticular (mostly 500–600  $\mu\text{m}$  in greatest diameter), usually compressed somewhat from top to bottom (lenticular) and usually bent downwards (nodding on the stalk apex) to reveal an 'umbilical-like' attachment; **Peridium** fragile, thin, single-layered, dull yellow to golden with yellow lime granules (these turning red in lactic acid mounts), upper portions of the peridium breaking into many angular platelets but the lower portions usually left as a flower-like remnant (often described as *floriform*) with most of the capillitium radiating from this remnant; **Stalks** approx. 1.5 mm long, yellowish to golden but darker near the base, tapering gradually from base to apex and composed of numerous longitudinal fibrillar strands with these sometimes appearing to spiral, especially as they approach the sporotheca. Angular to globular 'food?' or 'waste?' material abundant among the fibrils at the base of the stalk; **Capillitial threads** branching dichotomously or sub-dichotomously with frequent anastomoses and bearing yellow fusiform lime nodes. Lime nodes further from this region appeared shorter, more angular and more irregular; **Spores** violaceous (violaceous brown to black in mass), appearing smooth but with a finely verruculose surface, regularly globose and mostly 8–9  $\mu\text{m}$  in diameter.

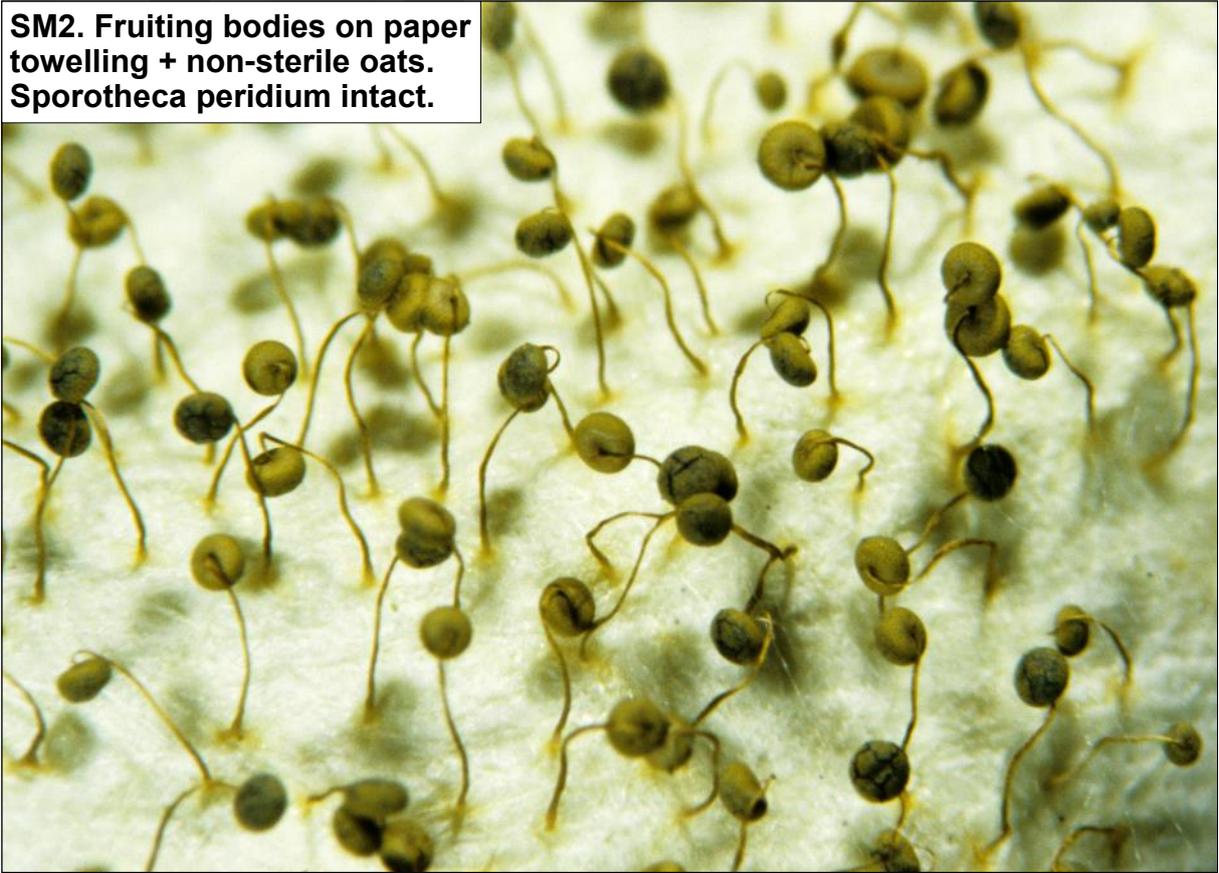


**SM2. Plasmodium on 2% water agar plus non-sterile oats**



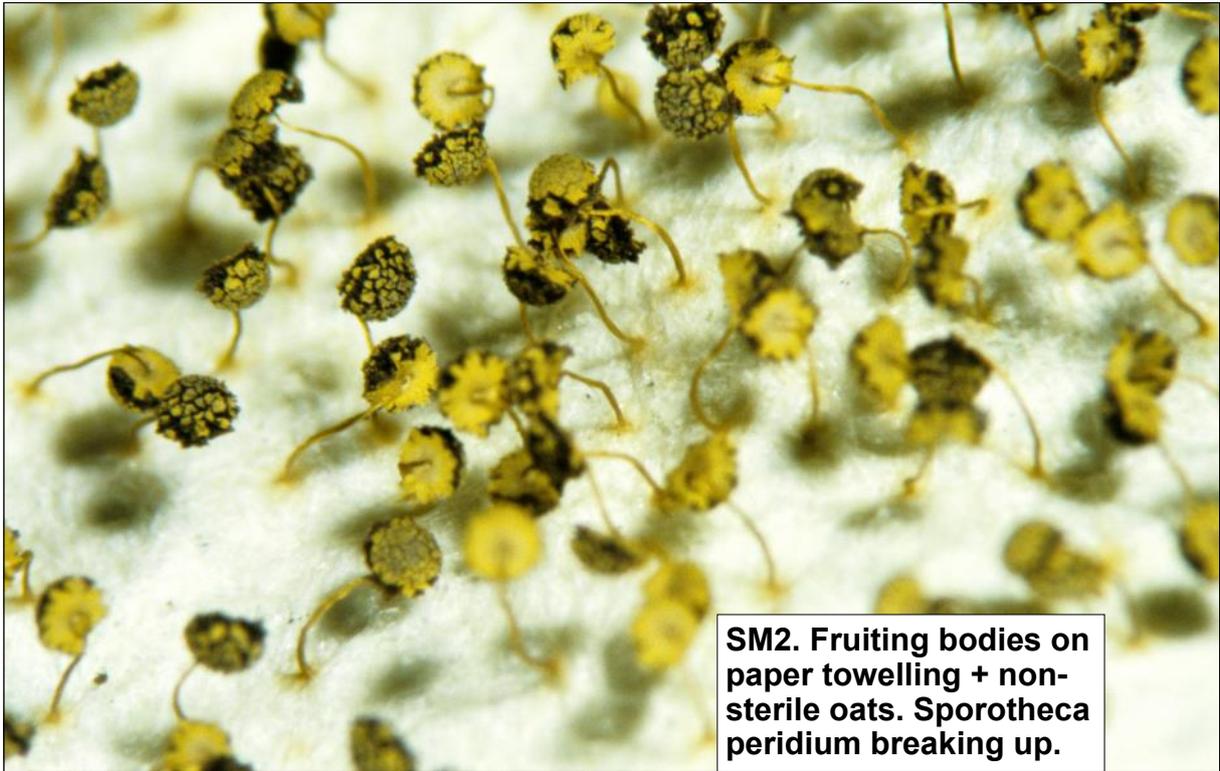
**SM2. Bottom photo: Dried fruiting on paper towelling plus non-sterile oats. Photograph by Brett Robertson.**

**SM2. Fruiting bodies on paper towelling + non-sterile oats. Sporotheca peridium intact.**

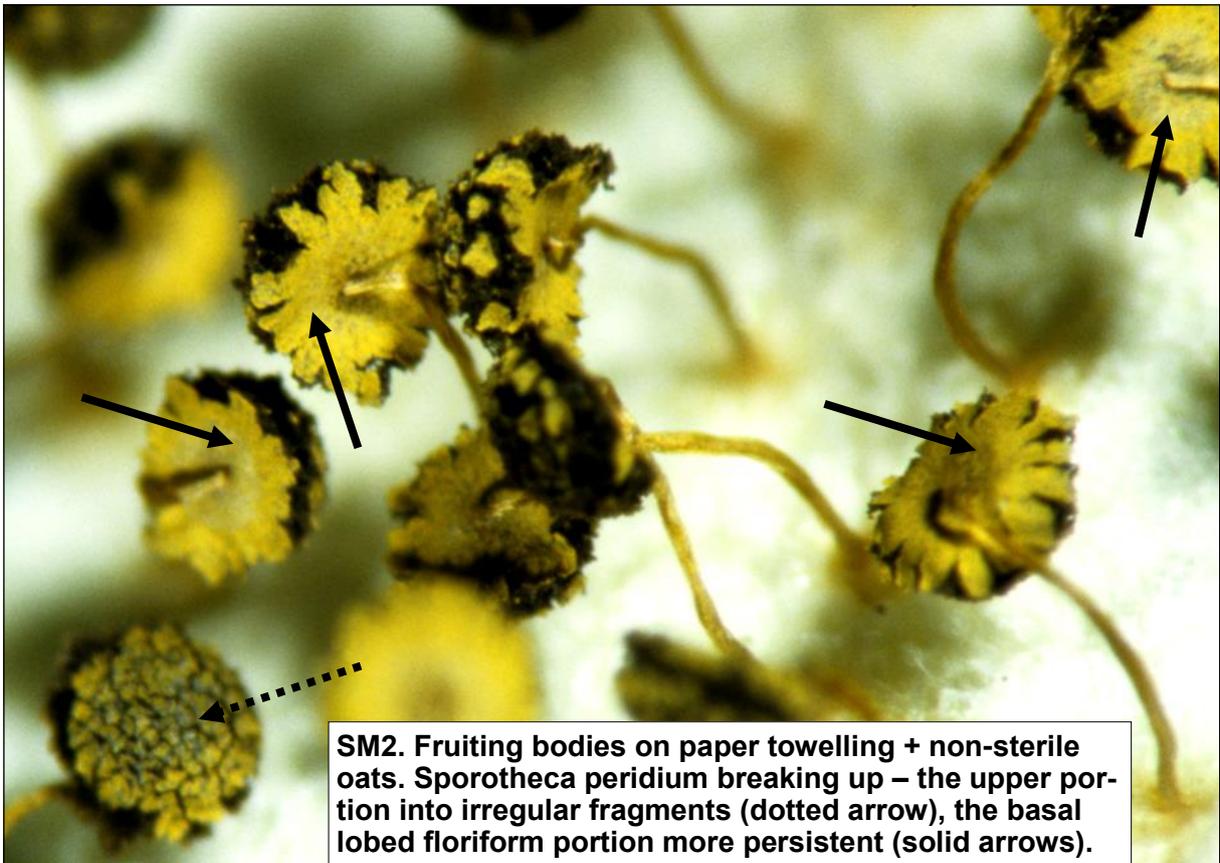


**SM2. Fruiting bodies on paper towelling + non-sterile oats. Sporotheca peridium intact.**

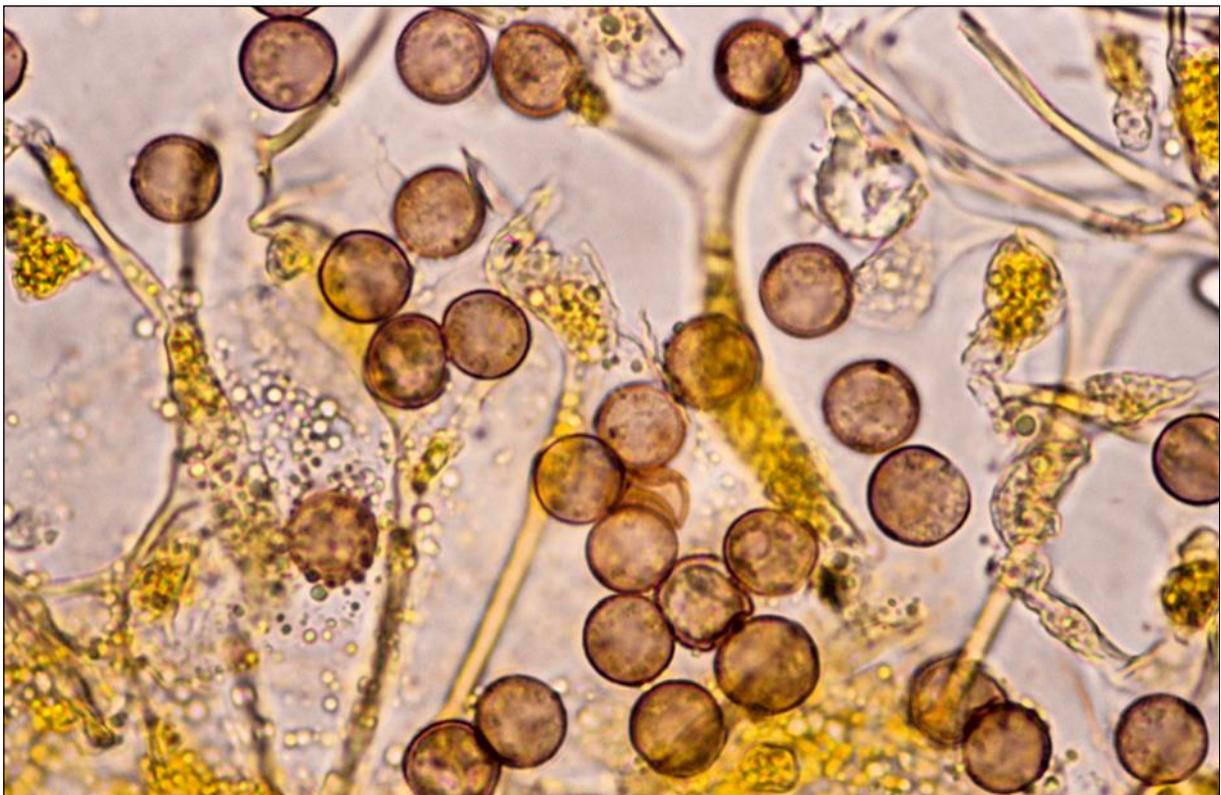
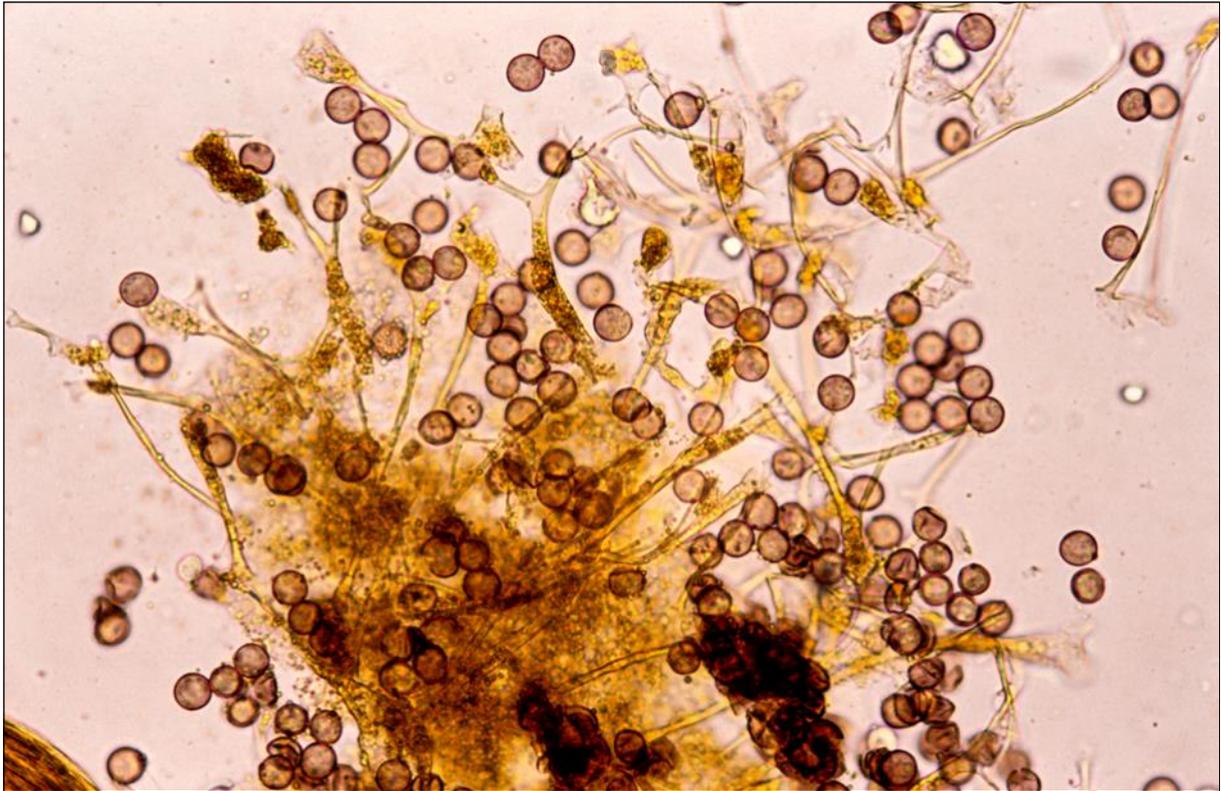




SM2. Fruiting bodies on paper towelling + non-sterile oats. Sporotheca peridium breaking up.



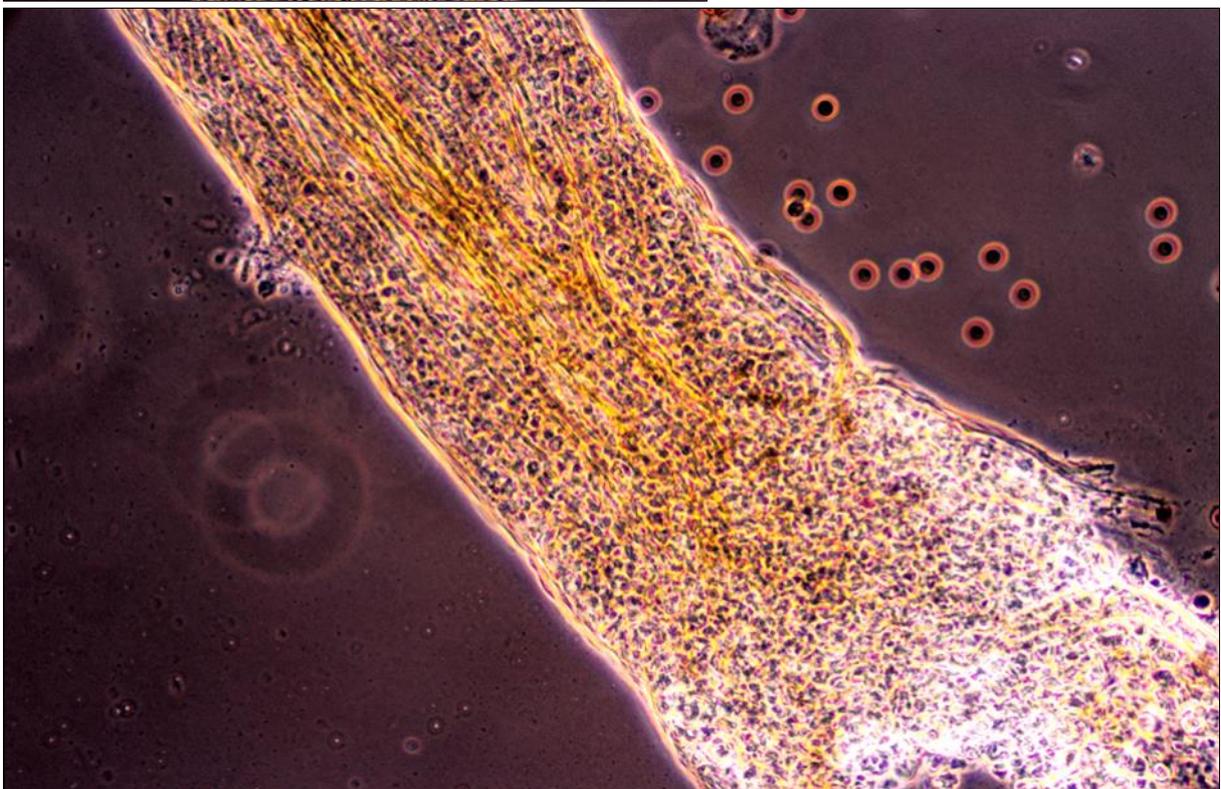
SM2. Fruiting bodies on paper towelling + non-sterile oats. Sporotheca peridium breaking up – the upper portion into irregular fragments (dotted arrow), the basal lobed floricorn portion more persistent (solid arrows).

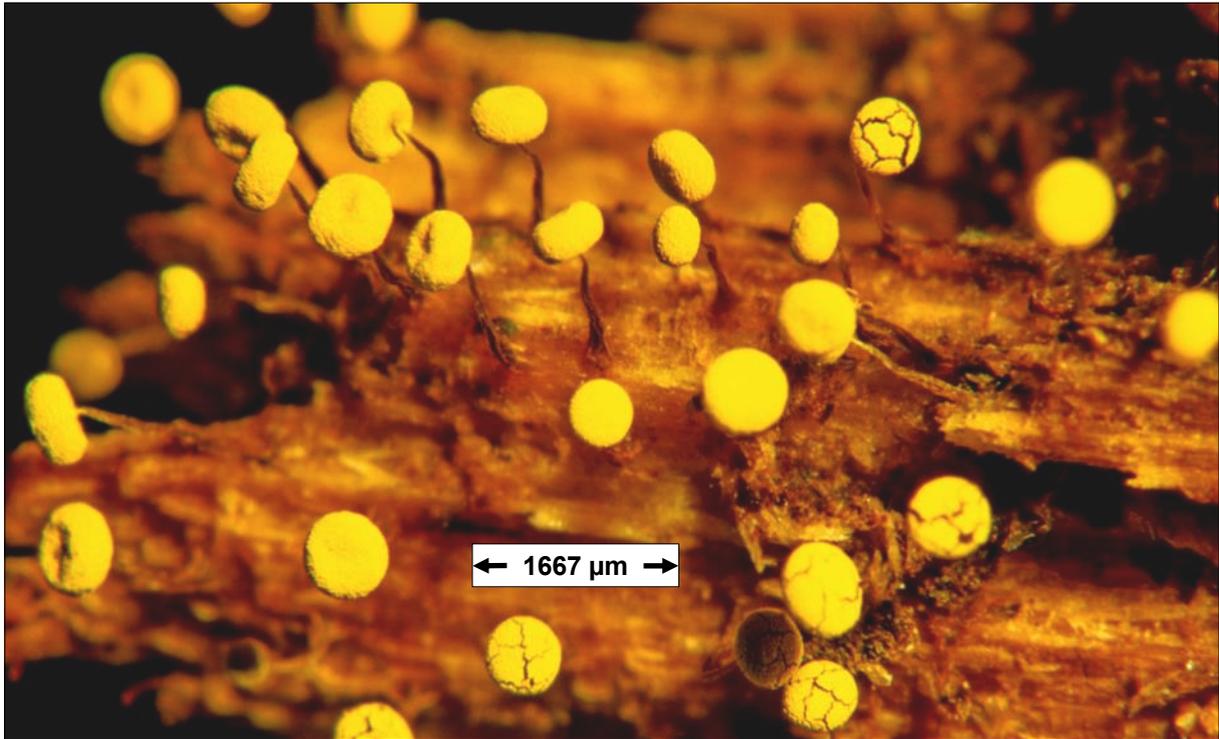


**SM2. Both photos same field of view – low magnification (above) and higher magnification (below). Note the dichotomously branching capillitium with its yellow, fusiform to spindle-like, lime nodes and the globose, faintly verruculose, violaceous spores. Mounted in 70% EtOH then irrigated with water.**

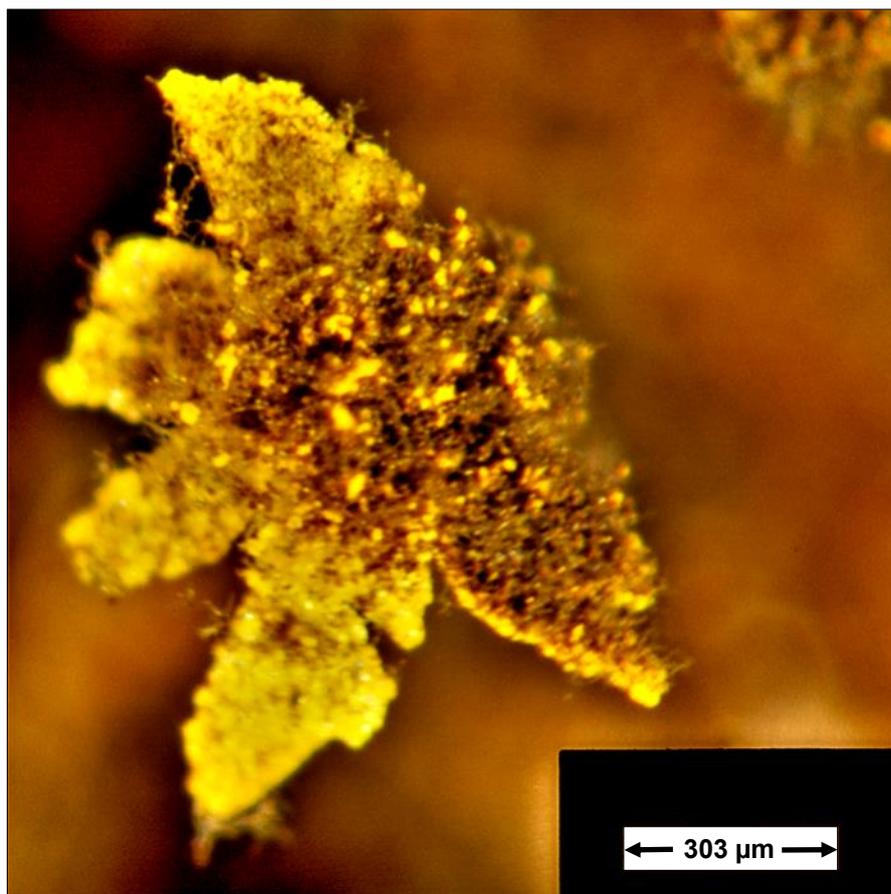
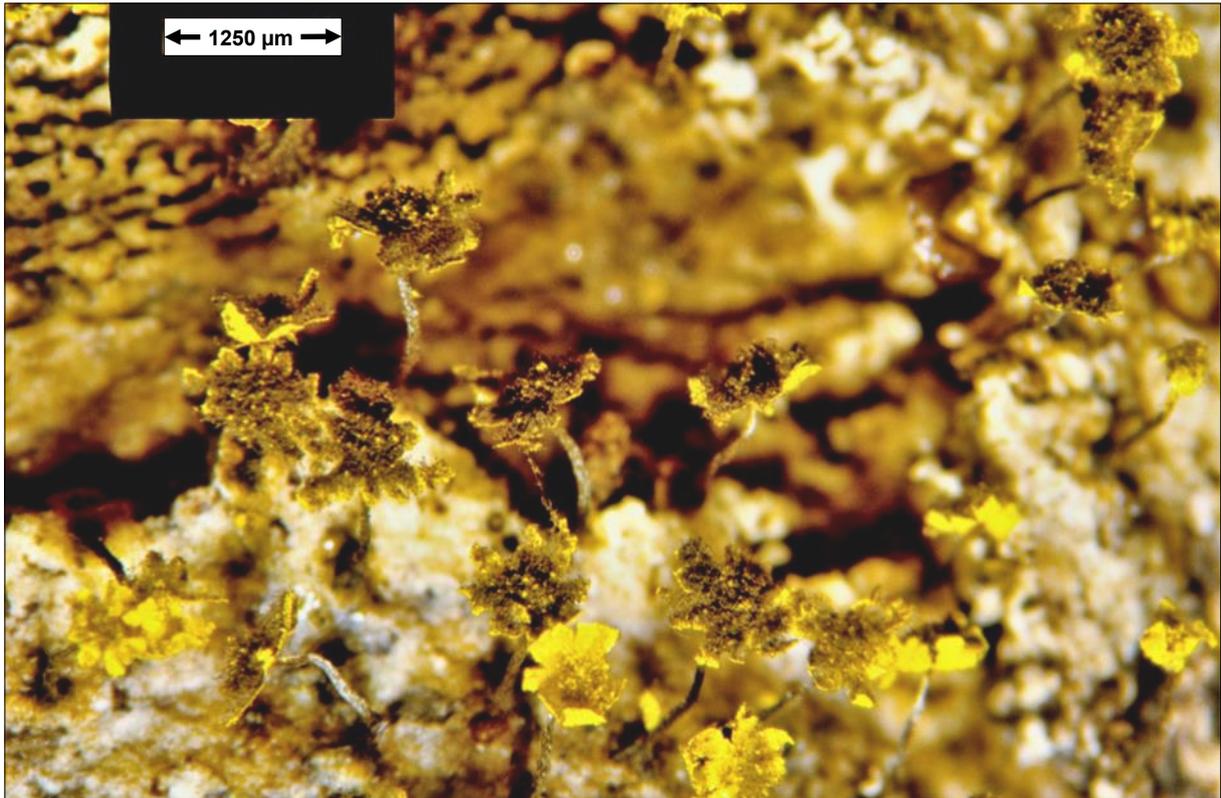


**SM2. Both photos are the from the same fruiting body stalk: Above, from the upper portion of the fibrillar stalk; below, from the basal portion with some fibrils but also miscellaneous 'packing' material (unused food?, waste?). Slide mount in lactic acid glycerine (heated).**





***Physarum viride* SM4. Photos represent younger & older in-situ fruiting bodies: Upper photo, sporotheca peridium intact; lower photo, sporotheca upper portion dehiscent, the basal portion with yellow floriform peridium, capillitium & spores persistent.**



*Physarum viride* SM4. Photos represent older in-situ fruiting bodies: Upper photo, similar to the lower photo on the previous page; lower photo, a single sporotheca with upper portion dehiscent, the basal portion with yellow flori-form peridium, capillitium with yellow lime nodes & violaceous brown spores.