

***Stemonitis splendens* Rostaf. – fitting nicely into this species in Stephenson’s Myxomycetes of New Zealand (2003)**

Substrate: bark of dead *Pinus contorta*

Collection site: garden area in Lower Hutt, Kelson, New Zealand

Collection date: 9 February 2005

Collector: Ann Bell

Identifier: Dan Mahoney

Voucher material: Dried specimen SM14 (= PDD 110456) accompanied by 2 heated Shear’s mounting fluid (SMF) semi-permanent microscope slides with whole sporangia; projection slides of in-situ fruiting bodies and microscopic views of columellae, capillitia, and spores from 70% EtOH and heated SMF slides.

Photos: Originally prepared as projection slides using a Zeiss dissecting scope and an AO H20 compound scope. These digitalized with a Nikon 9000 scanner and saved as high resolution tiff files.

Brief description: The fruiting was extensive with sporangia side by side over several inches on the dead pine bark. **Sporangia** were long and cylindrical with the columella extending throughout, stalks shiny black (relatively short in relation to the sporangial length) and the hypothallus silvery; stalks plus sporangia to 1.5 cm long. **Capillitium** composed of random connections from the columella to the peripheral surface net; the peripheral net with large irregular polygonal openings (Stephenson says that these openings in the ‘meshes’ are 20–100 μm across -- and most of these in the present collection were definitely $>30 \mu\text{m}$ across). **Peridium** fugacious. **Spores** blackish in mass, yellowish-brown-lilaceous by transmitted light, globose with delicate, even, verruculose (or spinulose) ornamentation, 8–9 μm (n=10). **Plasmodium** yellowish.

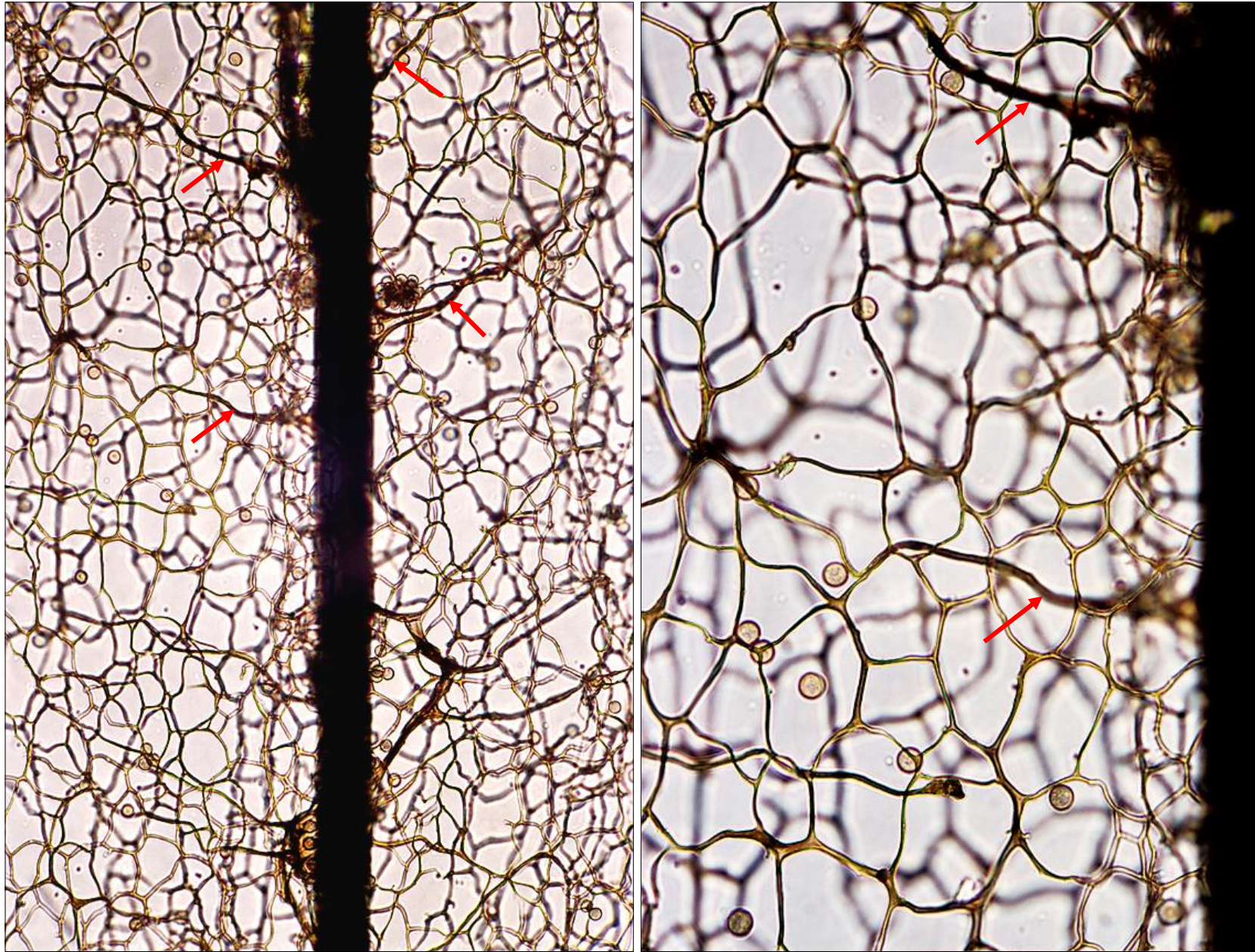
Comments: As Stephenson says, p. 133, “the distinguishing features of this species are the large overall size of the sporangia and the large meshes of the surface net.” It readily keys to this species in his key on p. 125.



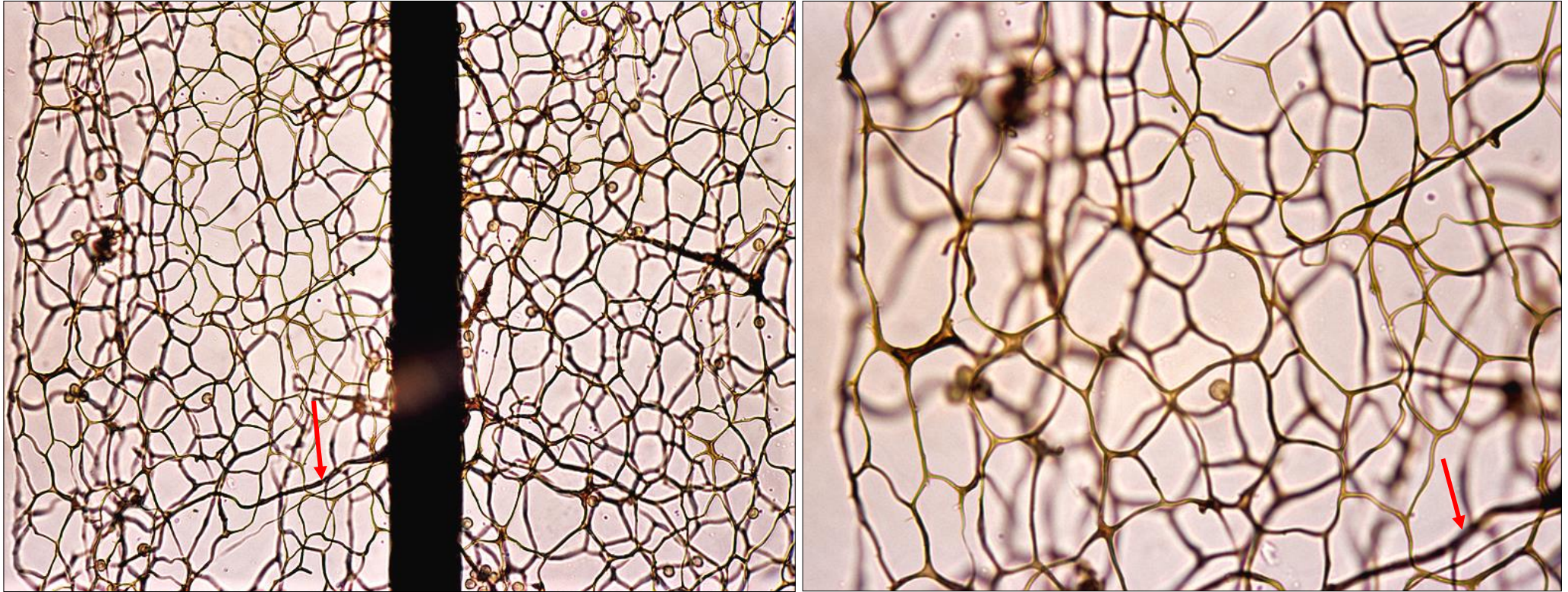
Left photo. In-situ view of entire sporangia and stalks on dead bark of *Pinus contorta*. Right photo. Closeup in-situ view (emphasis stalks and lower portions of the sporangia).



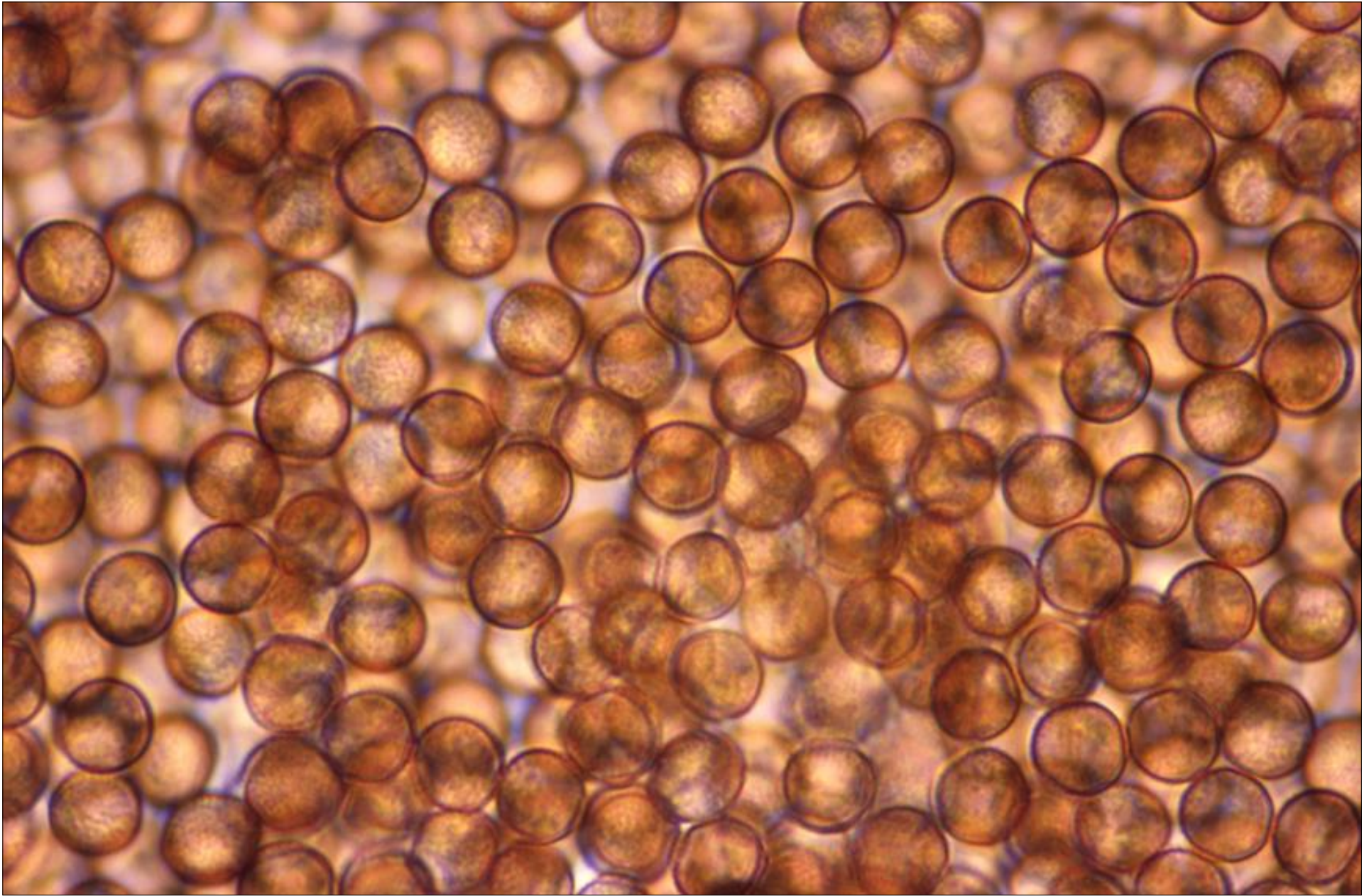
In-situ view of sporangia on dead bark of *Pinus contorta* – emphasizing those whose spores have been shed. Note the columella and coarse surface mesh of the capillitium on some sporangia.



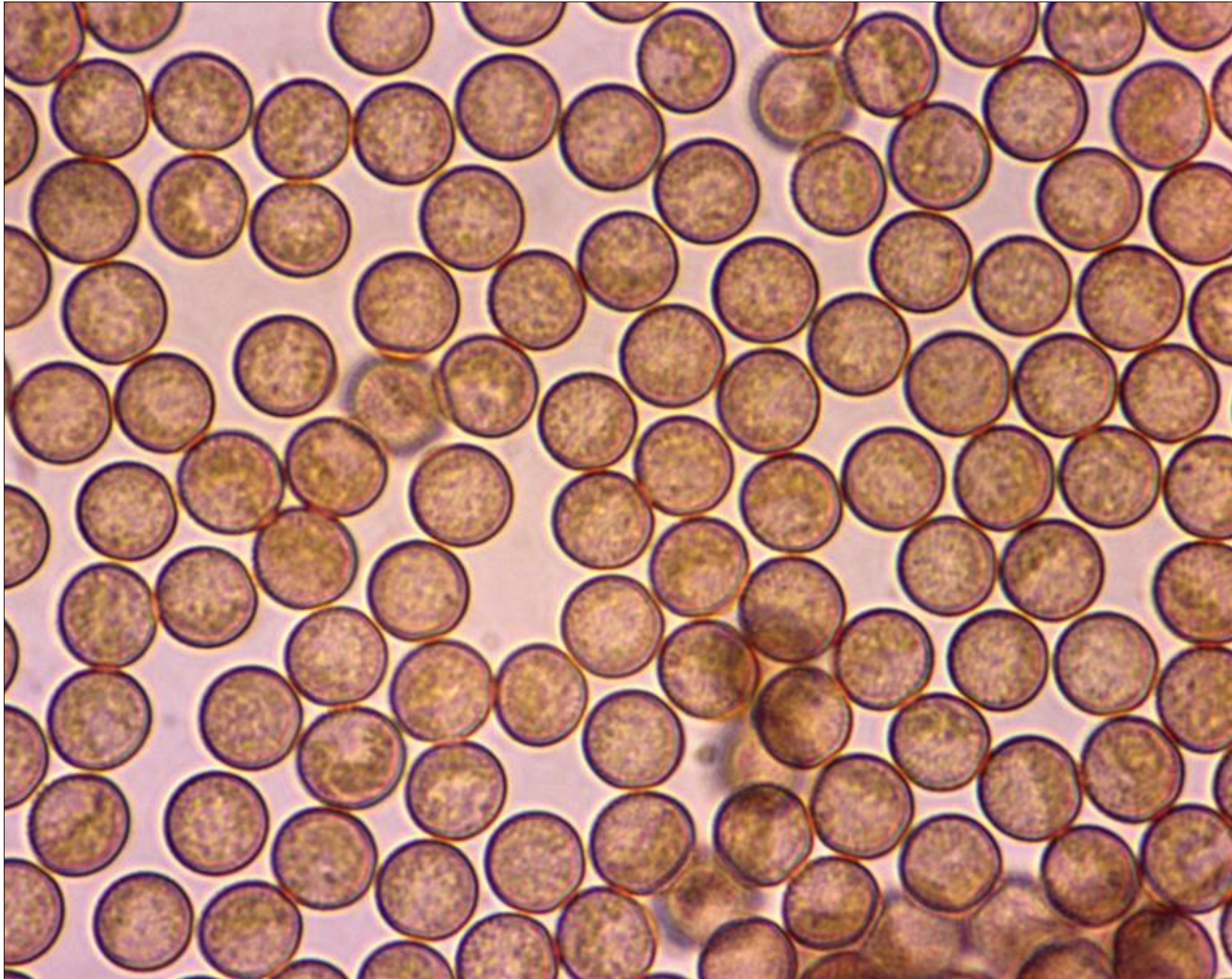
Left photo. Central black columella (55 μm wide) with the coarse surface net to its right and left. Note also the darker capillitial strands (arrowed) that connect the columella to the surface net. Right photo. A closeup of the left photo. Photos from a 70% EtOH mount under X20 and X40 objectives resp. using brightfield microscopy.



Left photo. Central black columella with the coarse surface net to its right and left. Note also the darker capillitial strands (arrowed) that connect the columella to the surface net. Right photo. A closeup of the left photo. Photos from a 70% EtOH mount irrigated with SMF under X20 and X40 objectives resp. using brightfield microscopy.



Spores in 70% EtOH (crowded spores show truer color). Photo under the X100 objective using brightfield microscopy.



Spores in median optical section. Mounted in 70% EtOH and photographed under the X100 objective using brightfield microscopy.