

***Hemitrichia serpula* (Scop.) Rostaf. ex Lister SM3 (= PDD 110383)**

Collected: During a tramp from the Rimutaka Forest Park to the Orongorongo Valley (nearest town Wainuiomata)

Collection date: December 16, 1998

Collectors: Dan and Parnell Mahoney and Julie Fiene

Identifier: Dan

Photographed: January 15, 1999

Voucher materials: Dried herbarium specimen accompanied by lactic acid glycerin slides of capillitium and spores, and scanned projection slides of plasmodiocarp, capillitium and spores

Brief annotated description:

Plasmodiocarp covering an area approx. 2 inches square on the underside of a piece of dead wood, forming an extensive dull tawny or dull golden yellow reticulum (the peridium was completely intact at the time of collection but extensive longitudinal splitting occurred between Dec. 16th and Jan. 15th as the specimen lay in a partially opened Petri dish in the lab. As the peridium split, this exposed a darker yellowish mass of capillitium and spores which 'fluffed' up slightly from the original location of the peridium. Gerry Keating took the plasmodiocarp photo at this stage.). **Capillitium** sparingly branched, composed of highly coiled and congested yellowish threads of uniform diameter, mostly 7.5 μm [when slides were prepared this capillitial mass stretched and stretched – very elastic (to 6 inches or more without breaking). In fact, I had the feeling that I could have pulled off the entire capillitial network had I continued to pull – like pulling a wool thread on the arm of a sweater and unraveling the arm.]. The threads were supposedly hollow (i.e. tubular) although this was not readily observed. No free capillitial ends were noted and the whole mass seemed to be attached to the basal portion of the plasmodiocarp. Two or more spiral bands uniformly ornamented all of the threads, with short spine-like extensions occurring irregularly along their length. **Spores** were dull yellowish in mass and globose to subglobose. Those measured were mostly 14-15 μm in diameter, counting the height of the reticulate ridges on their surfaces (these were approx. 1 μm in height). The reticulate ridging was variable with ridging widely spaced on the spore surface.

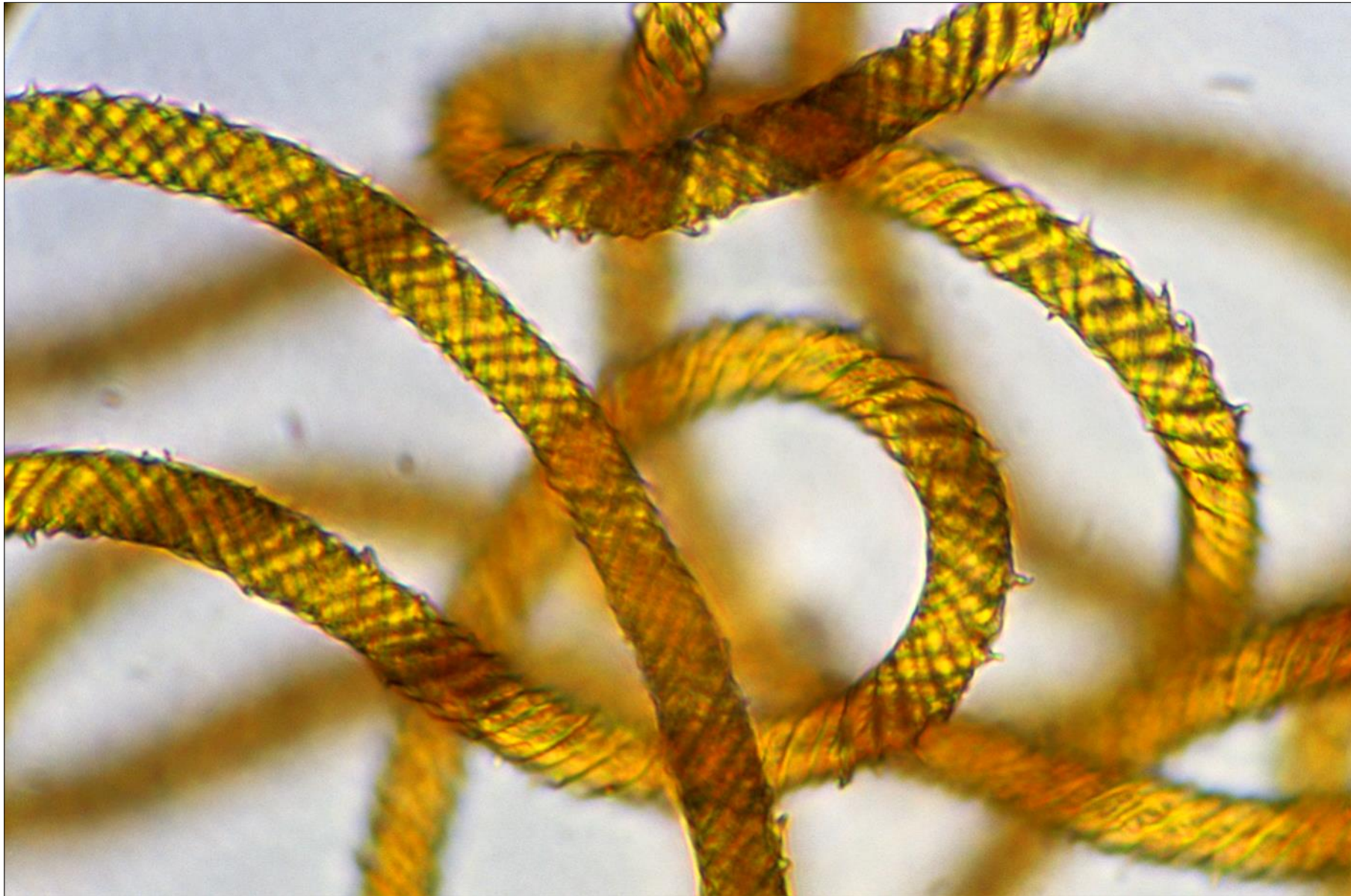
All in all, the species is very distinctive with its beautiful reticulate plasmodiocarp, its regular spirally-ornamented and spiny capillitium which lacks free ends and its large globose reticulate spores with their irregular and widely spaced ridges.



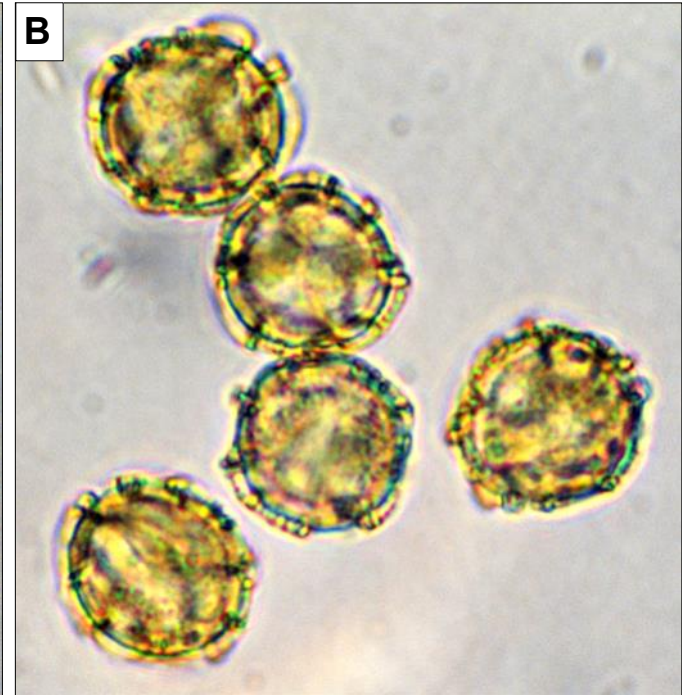
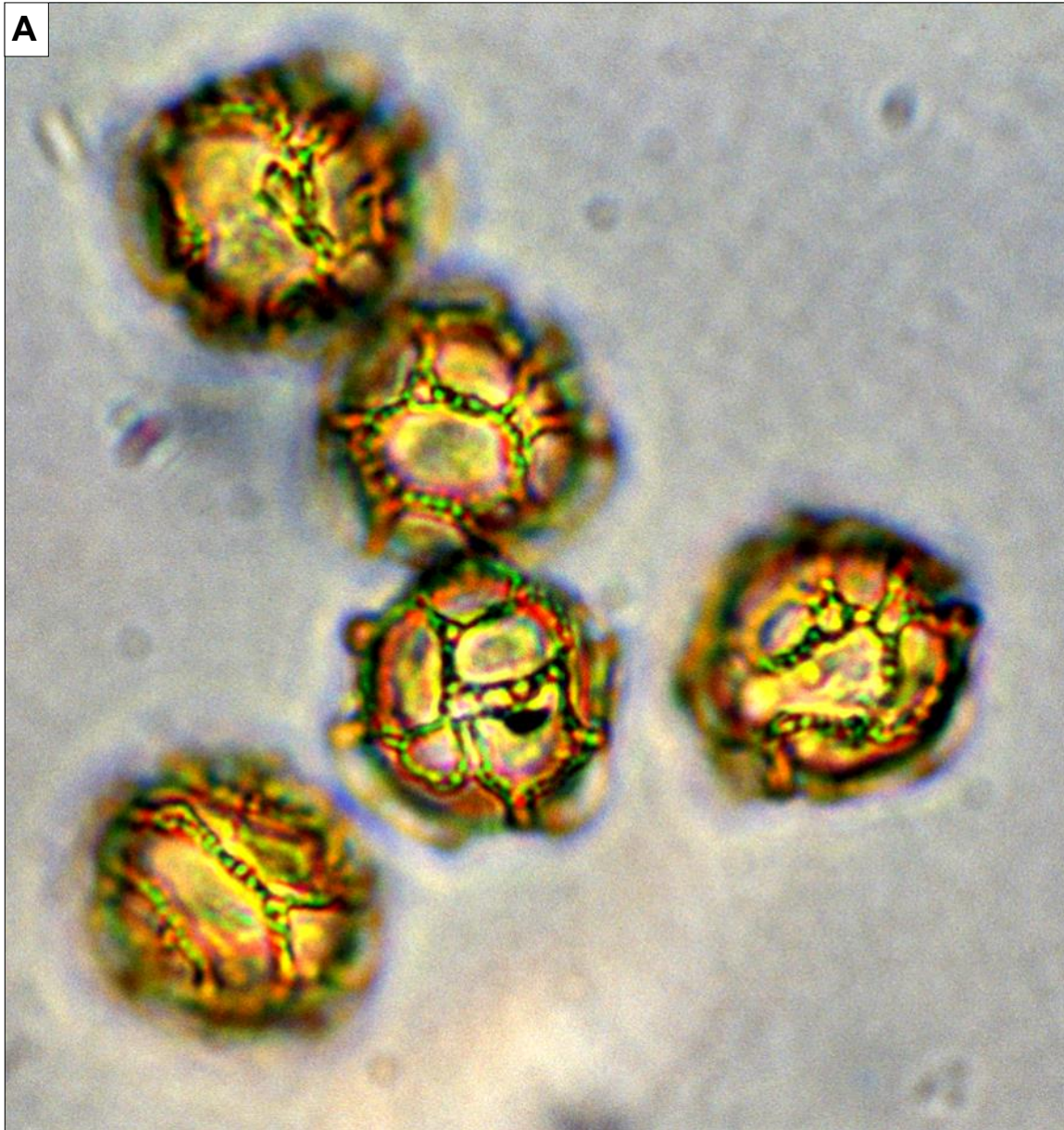
Plasmodiocarp in situ on wood, peridium mostly longitudinally split exposing the darker, yellow-colored capillitium/spore mass. The peridium was completely intact at the time of collection but extensive longitudinal splitting occurred between Dec. 16th and Jan. 15th as the specimen lay in a partially opened Petri dish in the lab. As the peridium split, this exposed the yellowish mass of capillitium and spores which 'fluffed' up slightly from the original location of the peridium. Photo, courtesy of Gerry Keating.



Capillitial threads in a water mount, photographed under the $\times 40$ objective using brightfield microscopy. Note the characteristic spines and spiral ornamentation.



Capillitial threads in a water mount, photographed under the $\times 100$ oil immersion objective using brightfield microscopy. Note the characteristic spines and spiral ornamentation.



A–C. The same cluster of spores in a water mount, photographed under the $\times 100$ oil immersion objective using brightfield microscopy. A. Upper surface focus. B. Mid spore focus. C. Lower surface focus. Note the surface reticulate ornamentation in 'A' & 'C'.