

***Arcyria obvelata* (Oder) Onsberg, in *Mycologia* 70: 1286 (1978)
SM91 (= PDD 117236)**

Collection site: Wainuiomata Recreation Area, Gums Loop Track (See yellow line on map insert. Dark green areas are plantation eucalypts.) The collection was made near the beginning of the Track – note the red arrow.

Substrate: *Arcyria obvelata* occupied a limited area on a dead decaying wood fragment.

Collection date: 28 December 2019

Collector: Ann Bell; **Identifier:** Dan Mahoney

Voucher materials: Dried herbarium specimen [SM91 (= PDD 117236)] accompanied by 3 Shear's mounting fluid (SMF) semi-permanent slide mounts; Dan's in situ Zeiss dissecting scope photos [Kodak Professional Portra 160 color neg. film, (best ones digitally scanned)] and Olympus BX51 compound scope with DP25 camera for digital photos of microscopic detail.

Publications and online references consulted:

- 1) Onsberg P. 1978. Notes on Danish Myxomycetes II *Arcyria obvelata*: A New Name For *Arcyria (Trichia) nutans*. *Mycologia* 70(6): 1284-1286. This brief article validates the change from the more commonly used *Arcyria nutans*. But Google “Mushroom observer: Name *Arcyria obvelata*” for some who use one name or the other.
- 2) Stephenson, S.L. 2003. The Fungi of New Zealand Volume 3: Myxomycetes of New Zealand. Fungal Diversity Research Series 11: 1-238. See his description and comments reproduced on the next page of this pdf.
- 3) Clive Shirley's hiddenforest.co.nz - Having Googled this address, follow slime molds under the site map to the *Arcyriaceae* and look at 4 beautiful in-situ macro images of *Arcyria obvelata*.



The description and comments below are from “Stephenson, S.L. 2003. The Fungi of New Zealand Volume 3: Myxomycetes of New Zealand. Fungal Diversity Research Series 11: 1-238.” pp. 64–66. They can be viewed online under ‘Descriptions’ (*Arcyria obvelata*) on the New Zealand Fungi Landcare Research Databases website. Annotations (in red) are my own with reference to SM91 (= PDD 117236).

Distribution: Cosmopolitan (Martin & Alexopoulos 1969). First reported (as *Arcyria flava*) from New Zealand by Lister & Lister (1905), based on a specimen collected in Taranaki. Also known from Auckland, Bay of Plenty (Cheesman & Lister 1915), Dunedin, Southland, and Stewart Island.

Habitat: Decaying wood.

Notes: The pale yellow colour and greatly expanding (to the point of becoming “fluffy” in mature specimens) capillitium make *Arcyria obvelata* an easy species to recognise in the field (my 1st 3 photos in this pdf). This species is listed as *A. nutans* in most taxonomic treatments of the myxomycetes

Illustrations: Martin & Alexopoulos (1969), Nannenga-Bremekamp (1991), Neubert et al. (1993), Lado & Pando (1997), Ing (1999).

Description: Fruiting body a stalked sporangium, crowded, initially 1.5–2.0 mm tall but expanding to 4–12 mm. Sporotheca cylindrical, bright to pale yellow, fading to pale ochraceous or beige (rarely with pale flesh-coloured tints), 0.3–0.5 mm in diameter. Stalk weak, slender, beige or yellow, usually very short. Hypothallus contiguous for a group of sporangia, colourless. Peridium persisting in mature fruiting bodies only as a distinct calyculus, the latter small, shallow, flaccid, translucent, spiny-reticulate on the inner surface. Capillitium strongly elastic, deciduous, flaccid and drooping, consisting of filaments 3–4 µm in diameter, sculptured with half-rings, spines, and fragmentary reticulations (4th photo in this pdf). Spores pale yellow in mass, nearly colourless by transmitted light, 6–8 µm in diameter, nearly smooth but with a few scattered warts (5th & 6th photos in this pdf). Plasmodium watery white.

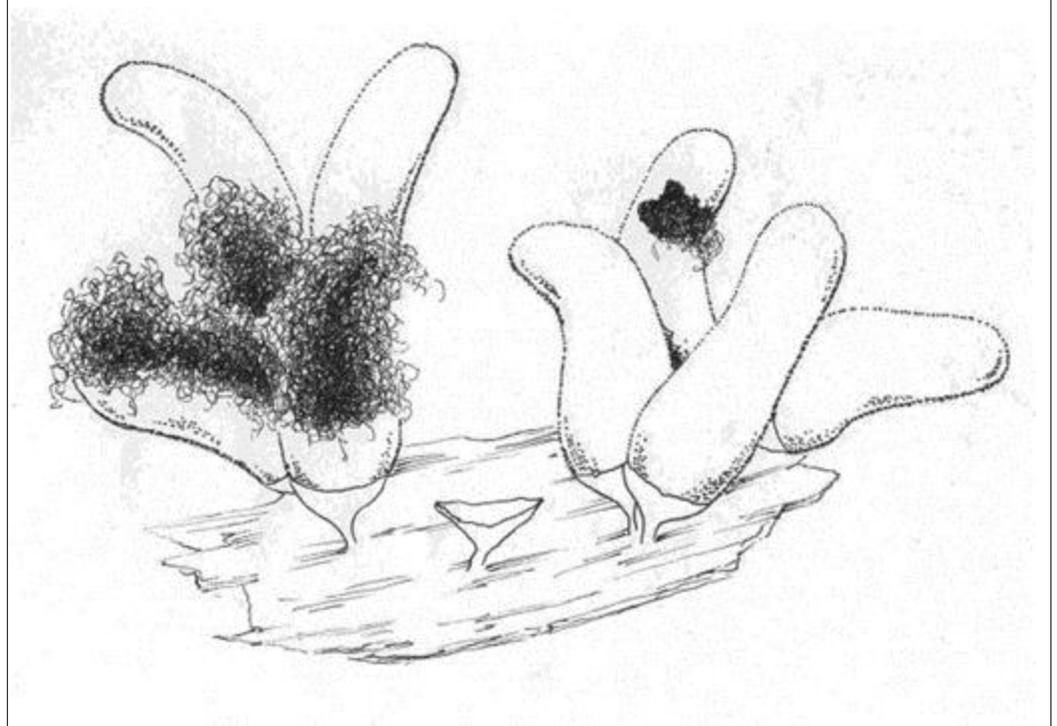
Taxonomic Name *Arcyria obvelata* (Oeder) Onsberg 1979 [1978]

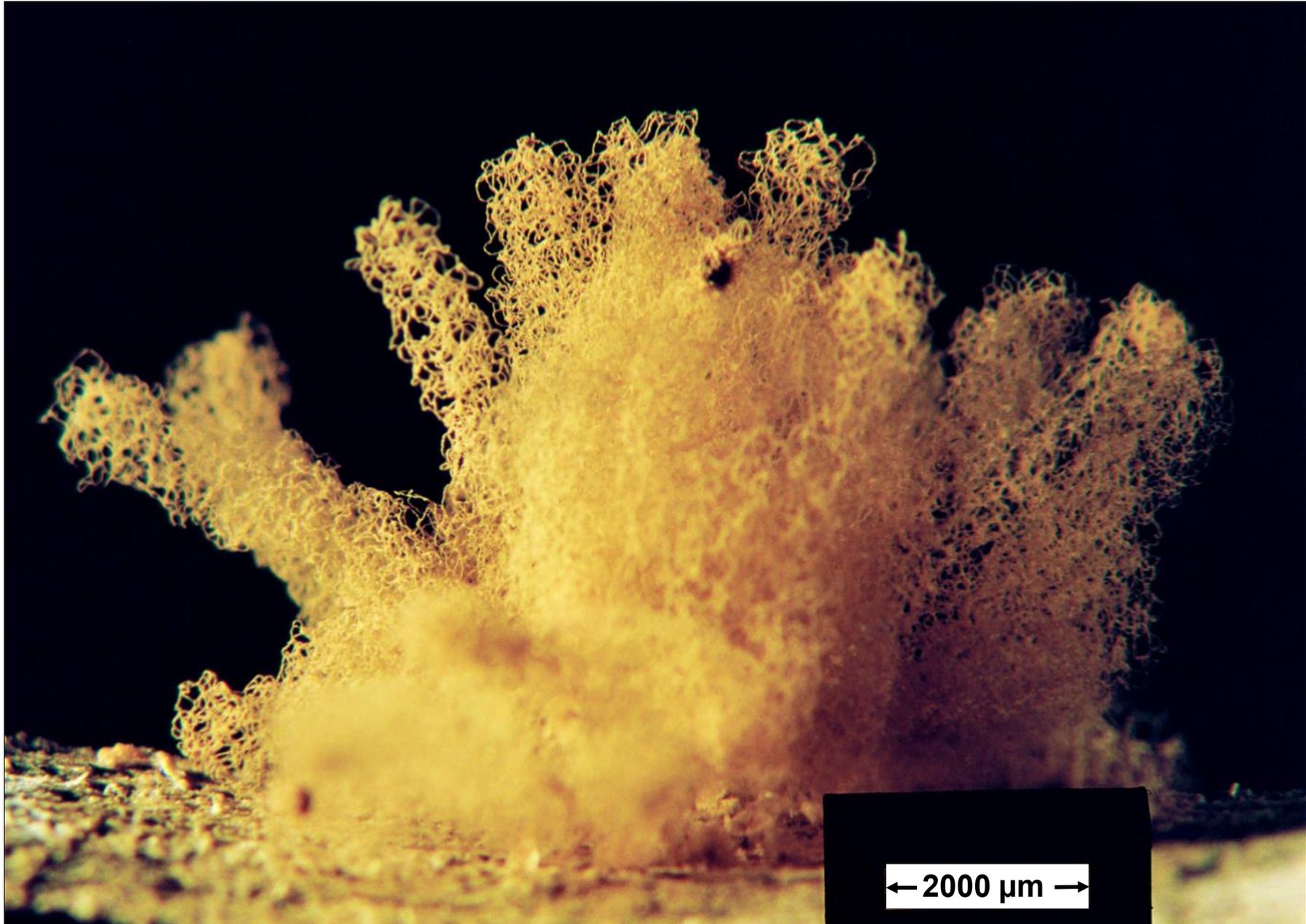
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Literature Reference Stephenson, S.L. 2003: Myxomycetes of New Zealand. Fungi of New Zealand. 3. Fungal Diversity Press.

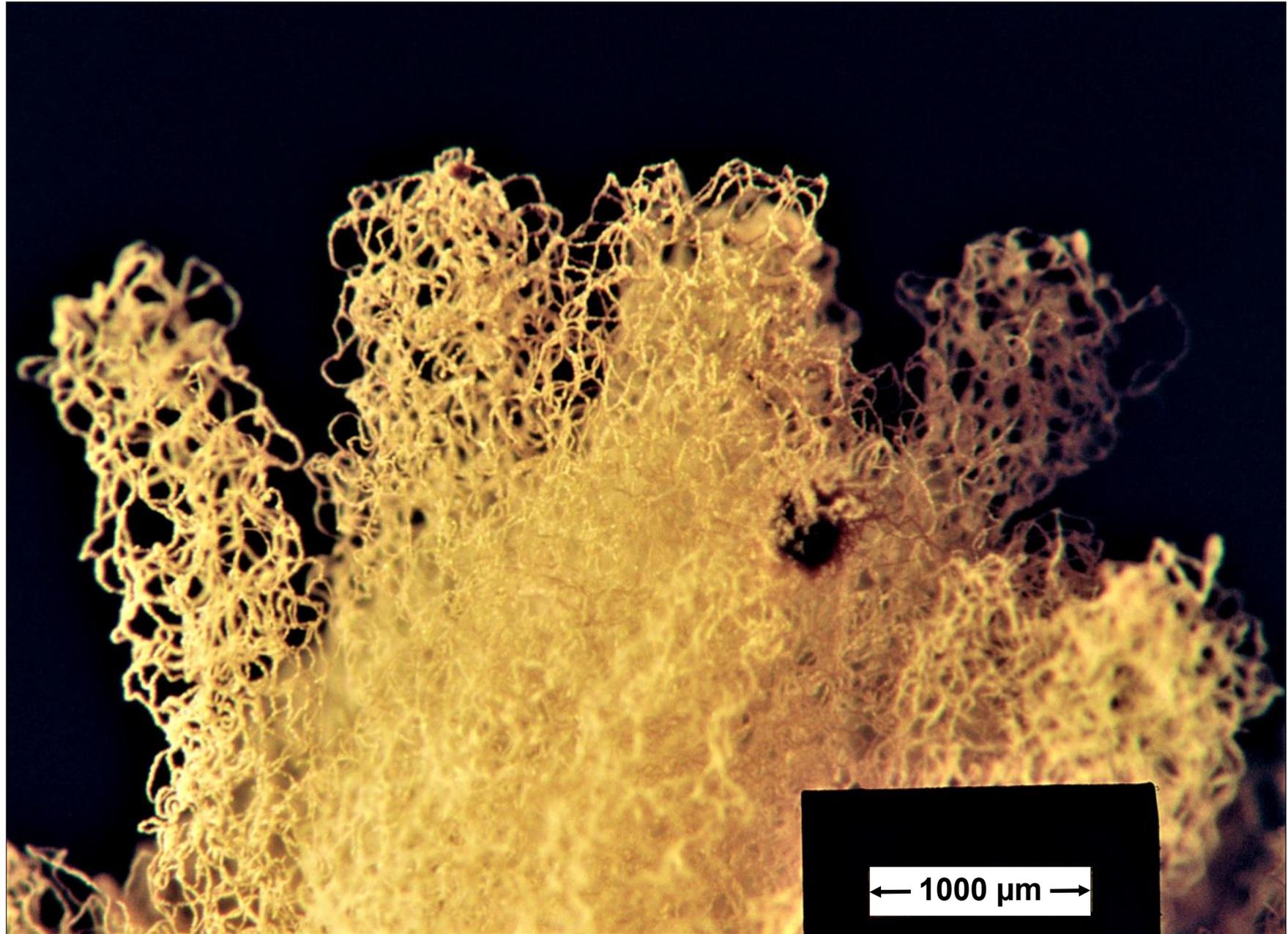
Caption Sporangia of *Arcyria obvelata*. Those on the left are beginning to expand. Each sporangium (before expansion) is about 2 mm tall.

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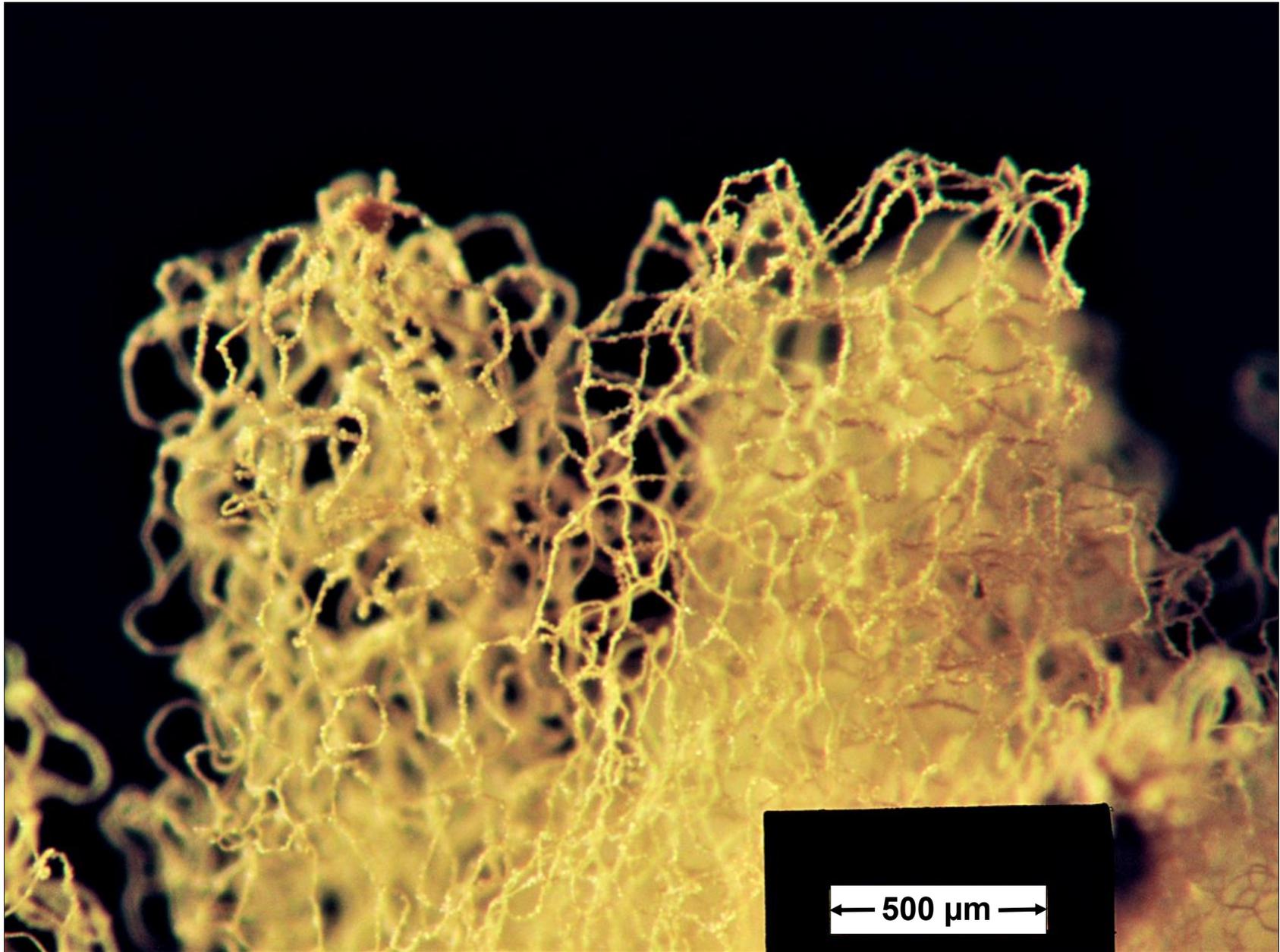




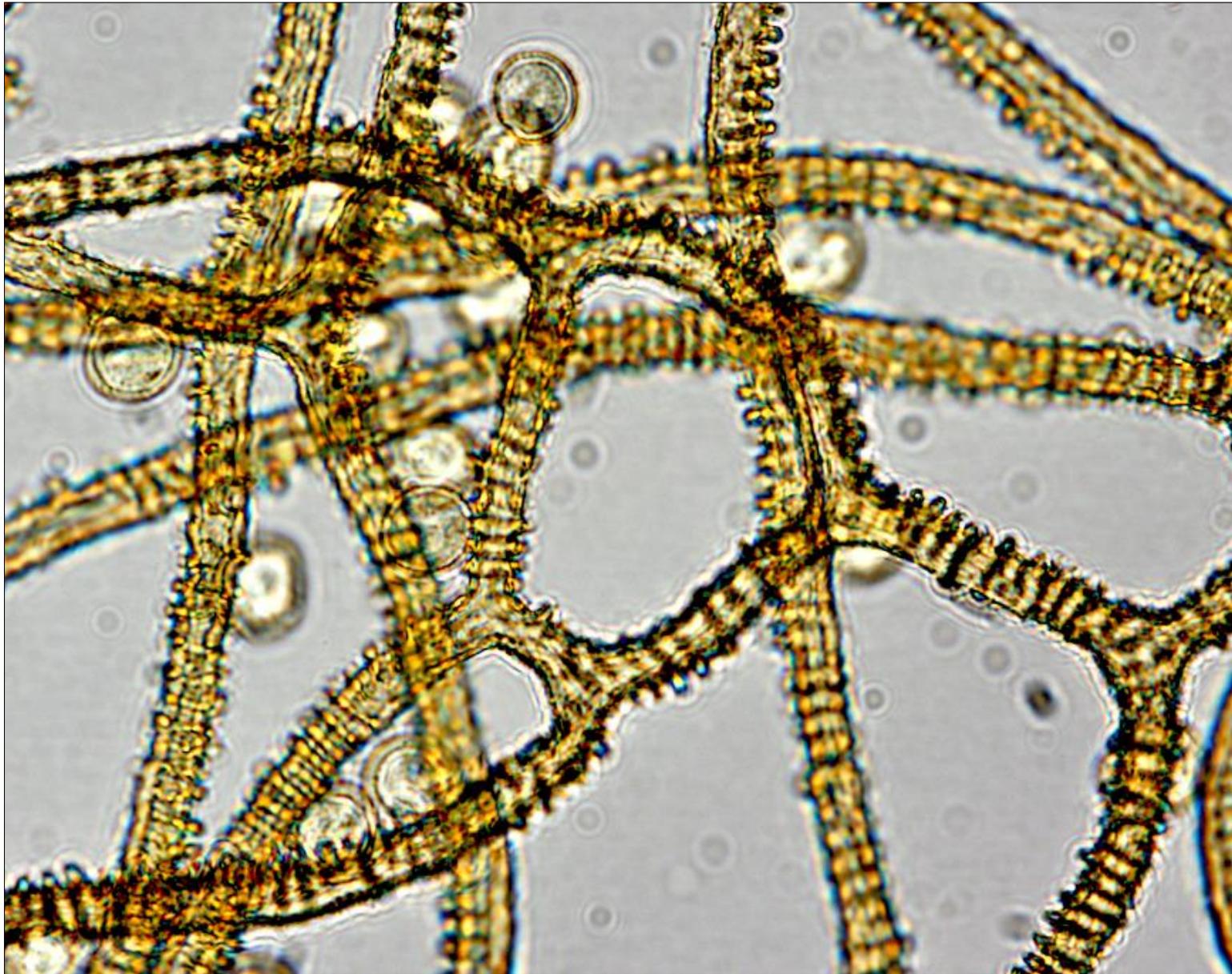
Fully expanded, elastic, capillitial netting seen in-situ on the dead wood substrate. The cluster of basal calyculi from which these arose not visible until the loosely attached netting detaches.



Closeup of the expanded, elastic, capillitial netting seen on the previous page.



Closeup of the expanded, elastic, capillitial netting seen on the previous page.



Ornamented capillial threads and spores. Slide mount 70% EtOH irrigated with SMF & gently heated, photographed under the X100 objective using brightfield microscopy. Thread width 5–6 μm including their surface half-rings, full rings and warty/spiny ornamentation.



Capillitial threads & spores. Emphasis spores. Slide mount 70% EtOH irrigated with SMF & gently heated, photographed under the X100 objective using brightfield microscopy. Right photo further enlarged. Spores globose, 8–9 μm , faintly roughened (spinulose/verruculose) occasionally unevenly so with small areas of darker roughness.