

***Trichia varia* (Pers. ex J.F. Gmel.) Pers. – AEB SM12 (= PDD 110392)**

Matching the description by Steven L. Stephenson in his 2003 book *The Fungi of New Zealand*, volume 3, entitled “Myxomycetes of New Zealand”. See p. 97.

Collectors: Dan Mahoney and Ann Bell; **Identifier:** Dan Mahoney

Collection dates: Four collections – Three on 10 May 2004 and one on 13 May 2004

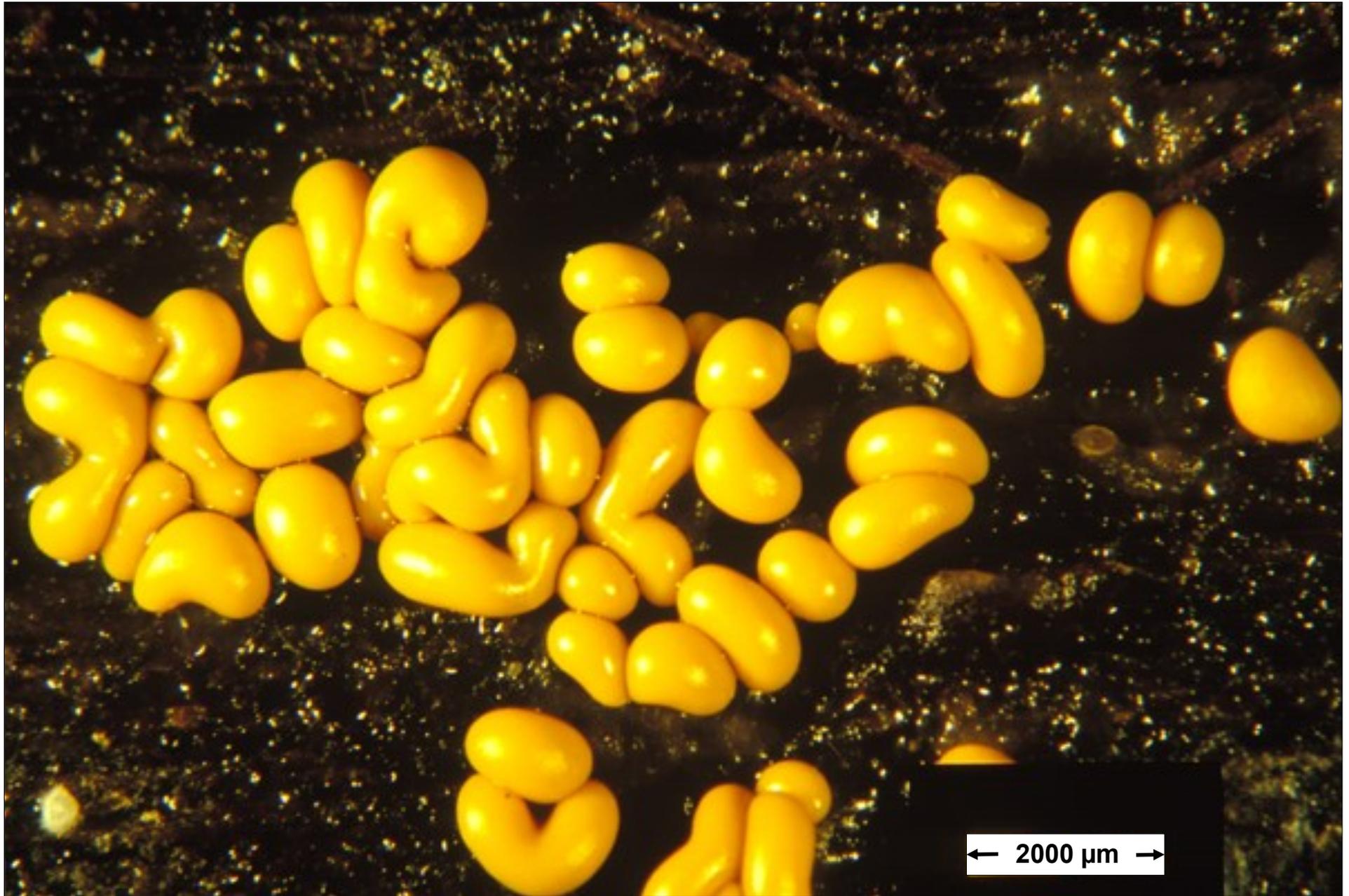
Collection sites: All collections were made in Eve’s Valley Scenic Reserve which was not far from the 18th Annual NZ Fungal Foray headquarters at the Teapot Valley Christian Camp in Teapot Valley – inland from Nelson and near Brightwater.

Substrates: Unidentified dead wood (three different unidentified species) – both decorticated and corticated and on the stroma of an old *Daldinia* species. On 10 May Dan made one collection on dead corticated wood (see photos taken after 3 days of drying on 13 May) and one on an old *Daldinia* species while Ann made one on dead decorticated wood. On 13 May Dan made another collection on quite wet, dead, decorticated wood (see immature sporangia photos of 13 May & dry mature sporangia photos 2 weeks later on 27 May). Sporangia in all collections initially appeared yellow, wet and shiny (fresh photos) but these sporangia darkened as they dried and then appeared dull yellow to faintly ochraceous.

Voucher materials: Dried herbarium material from all 4 collections accompanied by 2 Shear’s mounting fluid (SMF) semi-permanent microscope slides of squashed sporangia, initially mounted (and photographed) in 70% EtOH; numerous Ectochrome slides of intact and broken sporangia (dissecting scope in-situ shots of fresh and dried material) and capillitium and spores (compound scope using 70% EtOH mounts); Dan’s description.

Brief description and comments: **Sporangia** plasmodiocarpous, numerous, separate to gregarious, sessile, smooth (finely granular upon drying), yellow to yellow brown and varying from globular to subglobular, ellipsoid to elongate (or capsular) and then often bent into “L” or “S” shapes. No stalks of any kind were seen in these collections. Sporangia were shiny, wet and quite yellow when first collected – mostly somewhat immature (see photos taken during the foray), but these darkened slightly as they dried and then appeared more dull yellow to faintly ochraceous or slightly yellow brown (see photos taken several weeks after the foray). Sporangial sizes varied depending on their shapes with globular, ovoid to ellipsoid sporangia .31–.63 mm diam and elongate (or variously bent elongate) sporangia .63–1.25 × .4–.5 mm (n=10 overall). **Peridium** hyaline, thin, persistent and not opening unless disturbed (and then irregularly). **Capillitium** of longish yellow elaters, ca 6 µm wide, usually simple but occasionally branched once (rarely more), free ends tapered to a point, ornamented along their length with 2(–3) overlapping spiral bands that protruded from one side of the elater (the other side flattish). **Spores** globose, finely spinulose (Stephenson says “delicately warted”), yellow in mass (fainter as seen individually in slide mounts), 12–14 µm in diam (n=10).

According to Stephenson (p. 98) “the single most important distinguishing feature of *Trichia varia* is the capillitium, which is made up of elaters with two widely spaced spiral bands that protrude more on one side than the other”.



AEB SM12. An in-situ view of fresh moist slightly immature sporangia on dead, quite wet, decorticated wood. Dan's collection & photo on 13 May 2004. Nikkormat camera, 55 mm lens, photo a scanned Ectochrome slide.



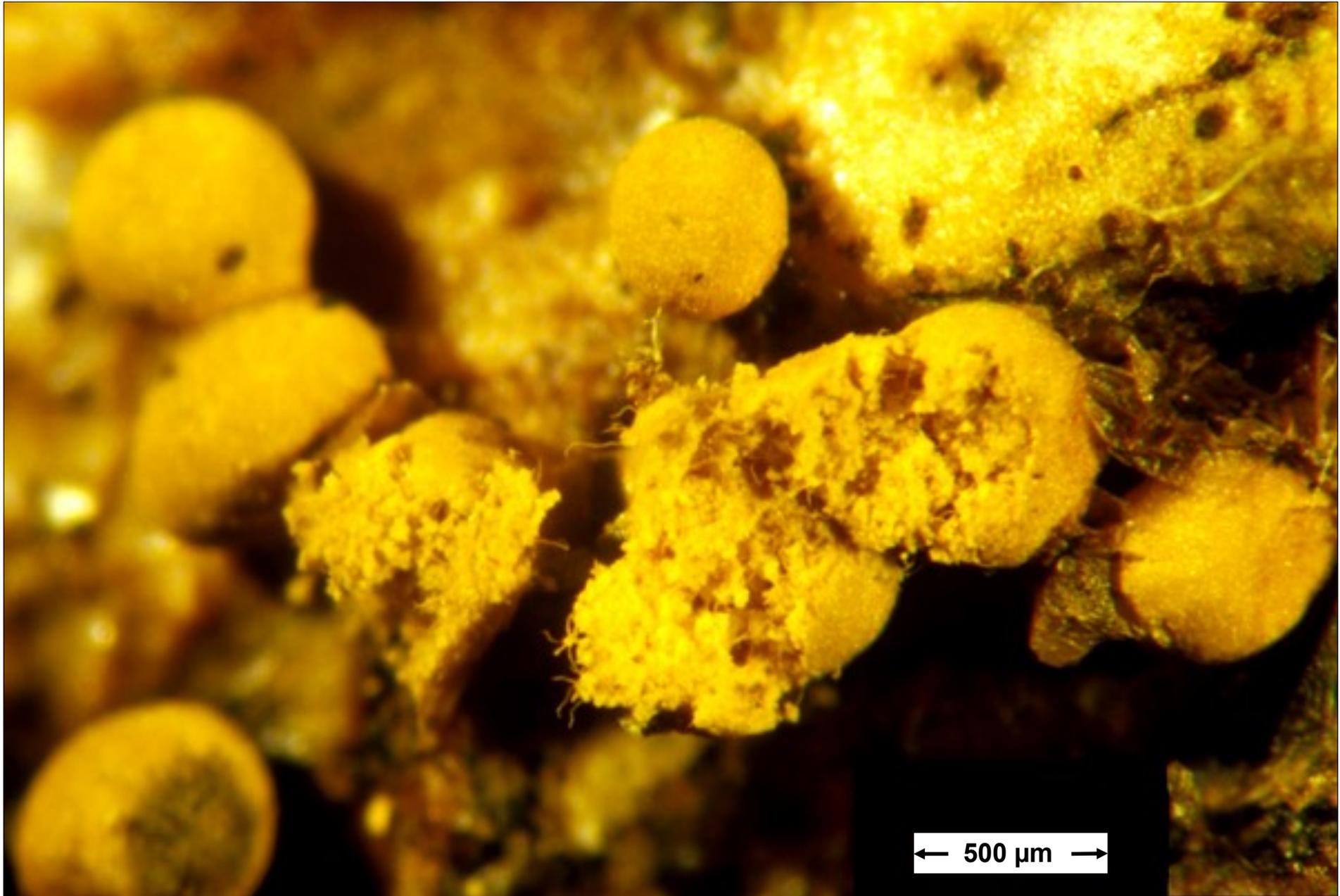
AEB SM12. A closeup in-situ view of immature sporangia from the previous page.



AEB SM12. An in-situ view of a red mite among the fresh immature sporangia on dead, wet, decorticated wood. Matthew Shaw kindly identified the mite as a fast-moving anystid predator.



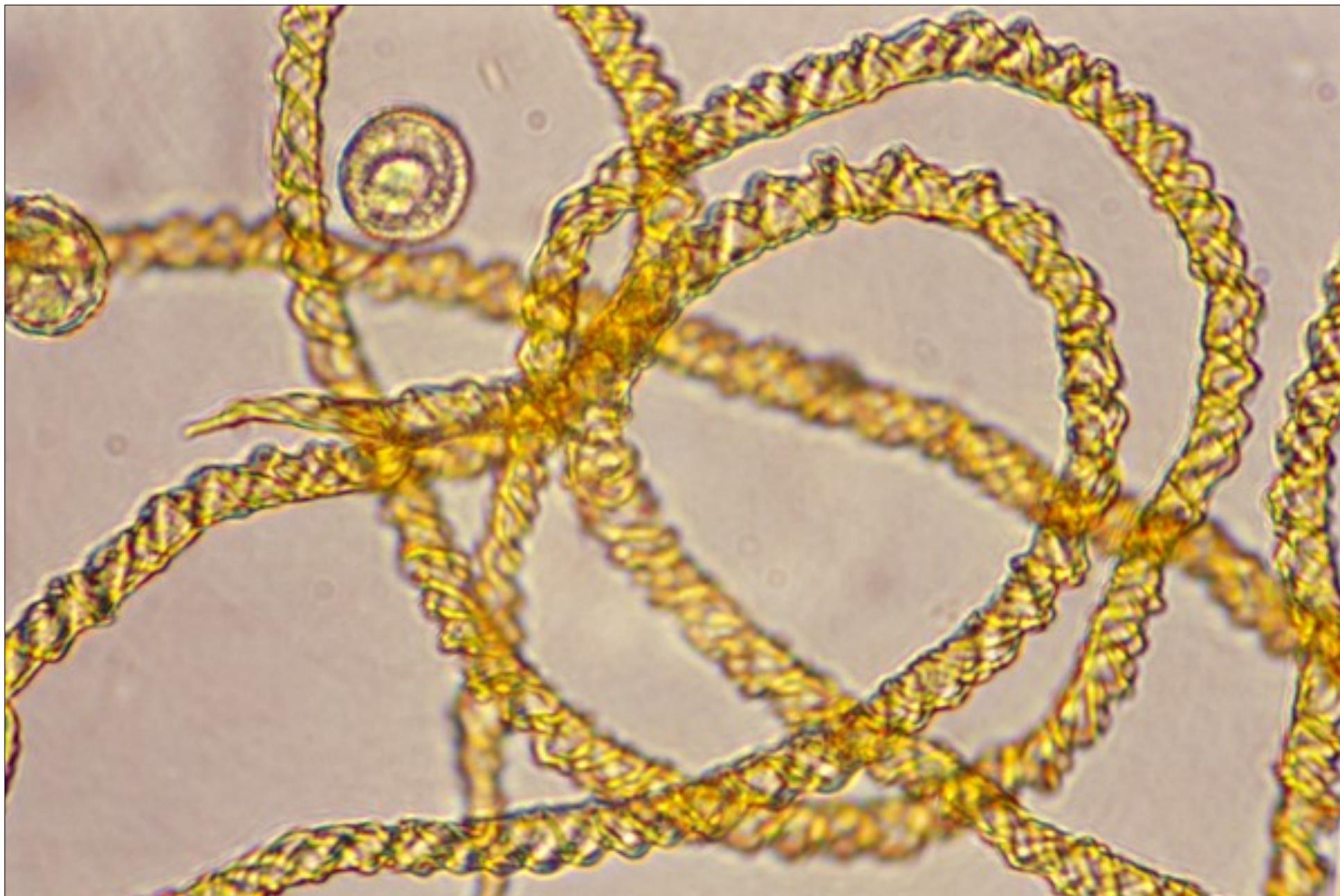
AEB SM12. An in-situ view of dry mature sporangia on dead, now dry, decorticated wood. The same collection (and nearly the same view) as the first 2 pages (without the mite). Here photographed 2 weeks later on 27 May.



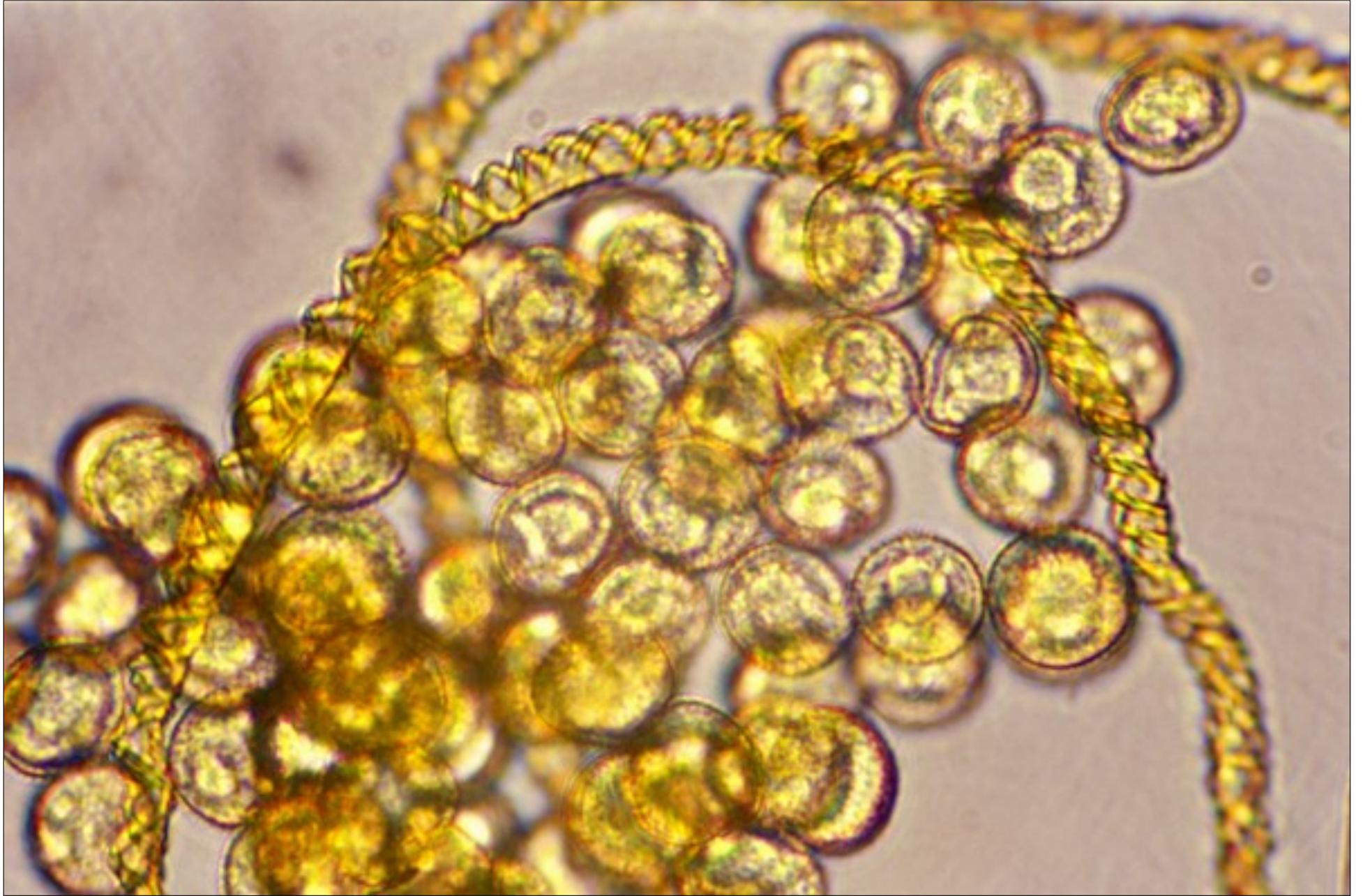
AEB SM12. An in-situ view of dry mature sporangia on dead, corticated wood – shown breaking open to expose their capillitia and spores. Dan's collection 10 May, but dried 3 days and photographed on 13 May.



AEB SM12. Capillitial elaters in a 70% EtOH mount, using the X40 objective & brightfield microscopy. Photo 17 May. The elaters are simple with free ends tapered to a point & ornamented along their length with two widely spaced spiral bands that protrude more on one side than the other.



AEB SM12. Capillitial elaters in a 70% EtOH mount, using the X100 objective & brightfield microscopy. Photo 17 May. The elaters are simple with free ends tapered to a point & ornamented along their length with two widely spaced spiral bands that protrude more on one side than the other.



AEB SM12. Spores & capillitial elaters in a 70% EtOH mount, using the X100 objective & brightfield microscopy. Photo 17 May. Spores are globose, finely spinulose, yellow in mass but more faintly so as seen individually at higher magnifications in slide mounts, 12–14 μm in diameter.