

***Perichaena chrysosperma* (Curr.) Lister SM82 – a small collection with roughly 10 fruiting bodies**

**Collection site:** Catchpool Loop Track, Rimutaka Forest Park (Coast Road, Wainuiomata, Lower Hutt, New Zealand)

**Substrate:** small piece of moist unidentified dead bark

**Collection date:** 10 April 2017

**Collector:** Ann Bell

**Identifier:** Dan Mahoney

**Voucher materials:** small dried herbarium specimen SM82, including a heated SMF microscope slide; in situ dissecting scope photos of the fruiting structures and compound scope photos of microscopic detail; Dan's description (paraphrasing Steve Stephenson's 2003 description).

**Dan's description (paraphrasing Steve Stephenson's 2003 description - see the next page for his complete description):**

Fruiting bodies sessile sporangia or short plasmodiocarps, subglobose to elongated or incompletely annular and unbranched; initially ochraceous (to orangish) but becoming dark brown below and nearly black above. Peridium double, the outer layer subcartilaginous - the inner layer membranous, thin and translucent. Dehiscence not observed but a peridial difference noted at the junction between the darker slightly roughened upper portion of the sporangia and the smoother lighter lower portion. Capillitium present but not abundant, consisting of slender yellow filaments 2.5–3.5  $\mu\text{m}$  in diameter, minutely spiny, with the spines up to 3  $\mu\text{m}$  long. Spores bright yellow in mass, pale yellow by transmitted light, finely spinulose to verruculose, 9–12  $\mu\text{m}$  in diameter. Plasmodium yellowish-brown.

## Description for: 'Perichaena chrysosperma'

### Perichaena chrysosperma (Curr.) Lister

**Article:** [Stephenson, S.L. \(2003\). Myxomycetes of New Zealand. \*Fungi of New Zealand. Nga Harore o Aotearoa\* 3: xiv + 238 p. Hong Kong: Fungal Diversity Press.](#)

**Article type:** Description (NZ)

**Description:** Fruiting body a sessile to subsessile sporangium (or sometimes forming a short plasmodiocarp), scattered to gregarious, subglobose or pulvinate to elongated, arcuate, annular, branched, or partly reticulate, ochraceous to dark reddish brown or nearly black, 0.2–0.5 mm in diameter and up to 1 mm long. Hypothallus colourless, often scanty. Stalk, when present, short, thick, dark. Peridium double, the outer layer subcartilaginous, sometimes marked by reticulate ridges, the inner layer membranous, thin and translucent, dehiscence irregular, areolate or, in globose and annular fruiting bodies, circumscissile. Capillitium variable in quantity, elastic when abundant, consisting of slender yellow filaments 2–4 µm in diameter, minutely to strongly spiny, with the spines up to 6 µm long. Spores bright yellow in mass, pale yellow by transmitted light, spiny, 8–10 µm in diameter. Plasmodium white upon emerging, becoming yellowish-brown, pinkish grey, or rose.

**Habitat:** Decaying wood and bark; also occurring on bark of living tree, dead leaves, and less commonly on the dung of herbivorous animals.

**Collections examined:** PDD 15203

**Distribution:** Cosmopolitan (Martin & Alexopoulos 1969). First reported from New Zealand by Mitchell (1992), based on a specimen collected in Auckland.

**Notes:** The prominent spines on the capillitium distinguish this species from other members of the genus *Perichaena*. In moist chamber cultures, the “doughnut” shaped plasmodiocarps produced occasionally are distinctive.

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

The above description etc. is from the Landcare Research PDD website – description details section (that ended in 2011). The information is directly from Stephenson’s 2003 publication, pages 83–84.

Present PDD collection records (Apr. 2017) – Identified in order by S.D. Baker (1955), D.W. Mitchell (1956) & most recently 4 by S.L. Stephenson 1998).

<input type="checkbox"/> PDD 15203 : <a href="#">Perichaena chrysosperma (Curr.) Lister 1894</a> Data provider: PDD Collection: Herbarium Type of record: Packet Country: New Zealand Locality: One Tree Hill NZ area code: Auckland
<input type="checkbox"/> PDD 16125 : <a href="#">Perichaena chrysosperma (Curr.) Lister 1894</a> Data provider: PDD Collection: Herbarium Type of record: Packet Country: New Zealand Locality: Appleby Research Orchard NZ area code: Nelson
<input type="checkbox"/> PDD 108968 : <a href="#">Perichaena chrysosperma (Curr.) Lister 1894</a> Data provider: PDD Collection: Herbarium Type of record: Packet Country: New Zealand NZ area code: Taupo
<input type="checkbox"/> PDD 109262 : <a href="#">Perichaena chrysosperma (Curr.) Lister 1894</a> Data provider: PDD Collection: Herbarium Type of record: Packet Country: New Zealand Locality: Waitakere Ranges NZ area code: Auckland
<input type="checkbox"/> PDD 109266 : <a href="#">Perichaena chrysosperma (Curr.) Lister 1894</a> Data provider: PDD Collection: Herbarium Type of record: Packet Country: New Zealand Locality: Pureora Forest Park NZ area code: Taupo
<input type="checkbox"/> PDD 109807 : <a href="#">Perichaena chrysosperma (Curr.) Lister 1894</a> Data provider: PDD Collection: Herbarium Type of record: Packet Country: New Zealand Locality: Pureora Forest Park NZ area code: Taupo



← 1250  $\mu\text{m}$  →

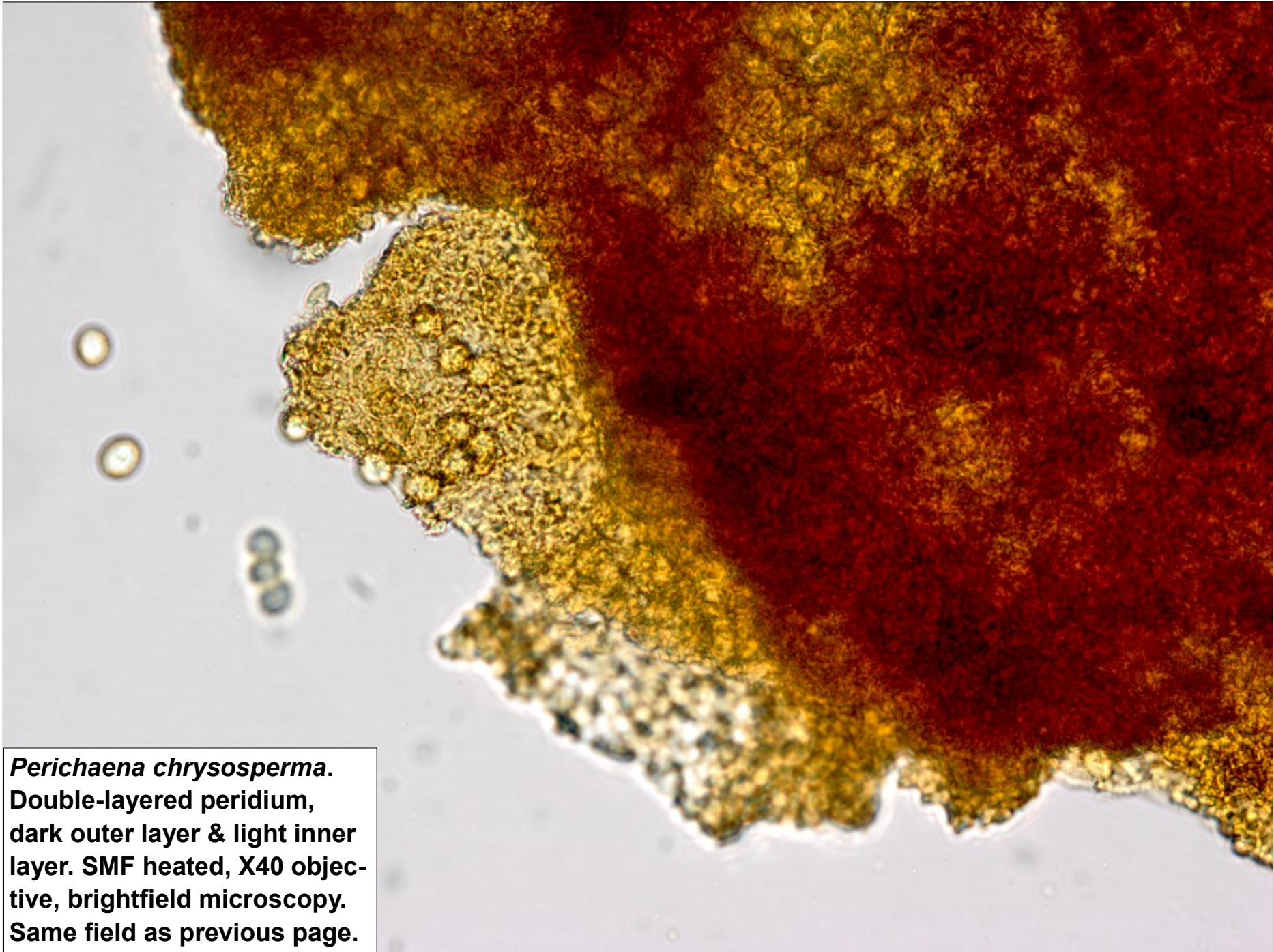
*Perichaena chrysosperma*.  
In situ view of freshly collected fruiting bodies on the dead bark substrate.



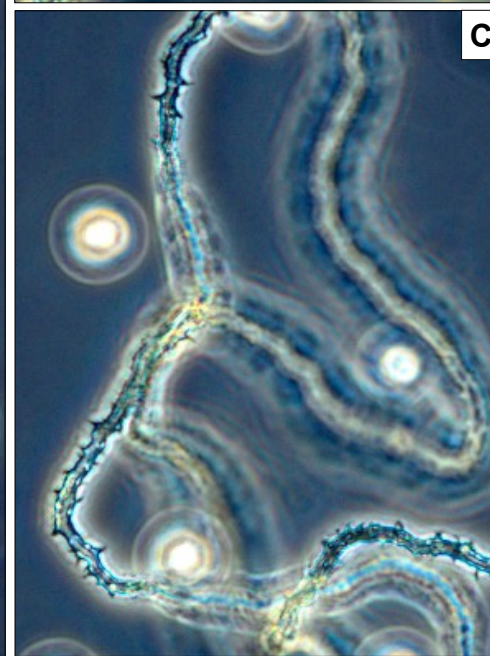
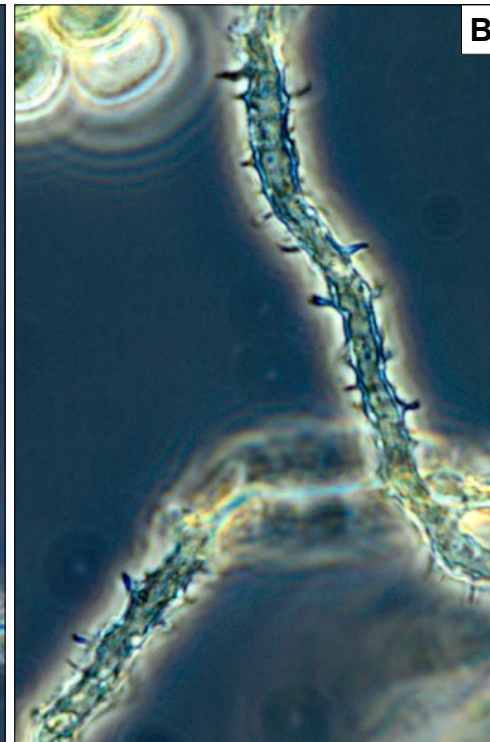
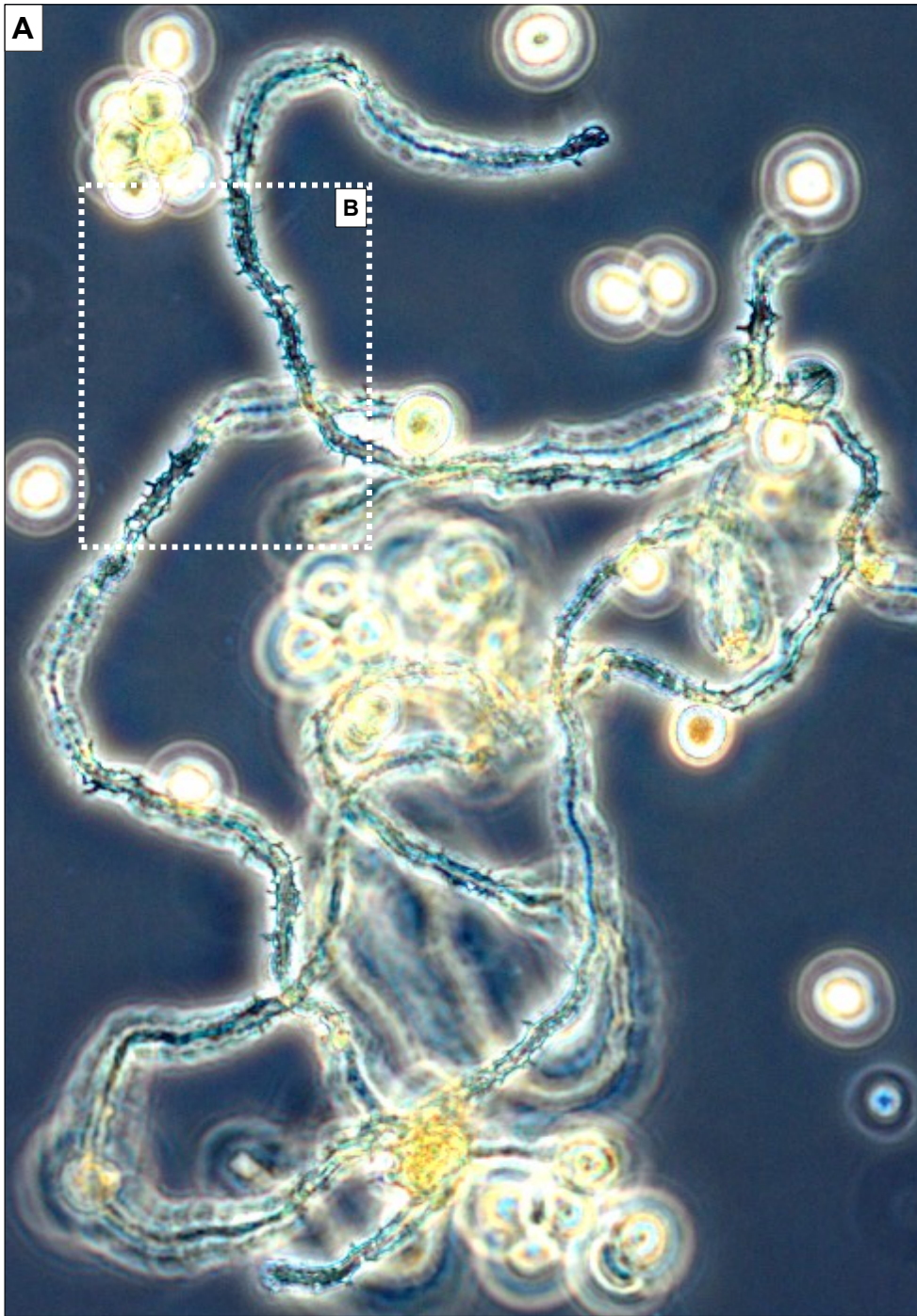
*Perichaena chrysosperma*.  
In situ view of the same  
fruiting bodies as on the  
previous page, but now  
dried and darker.



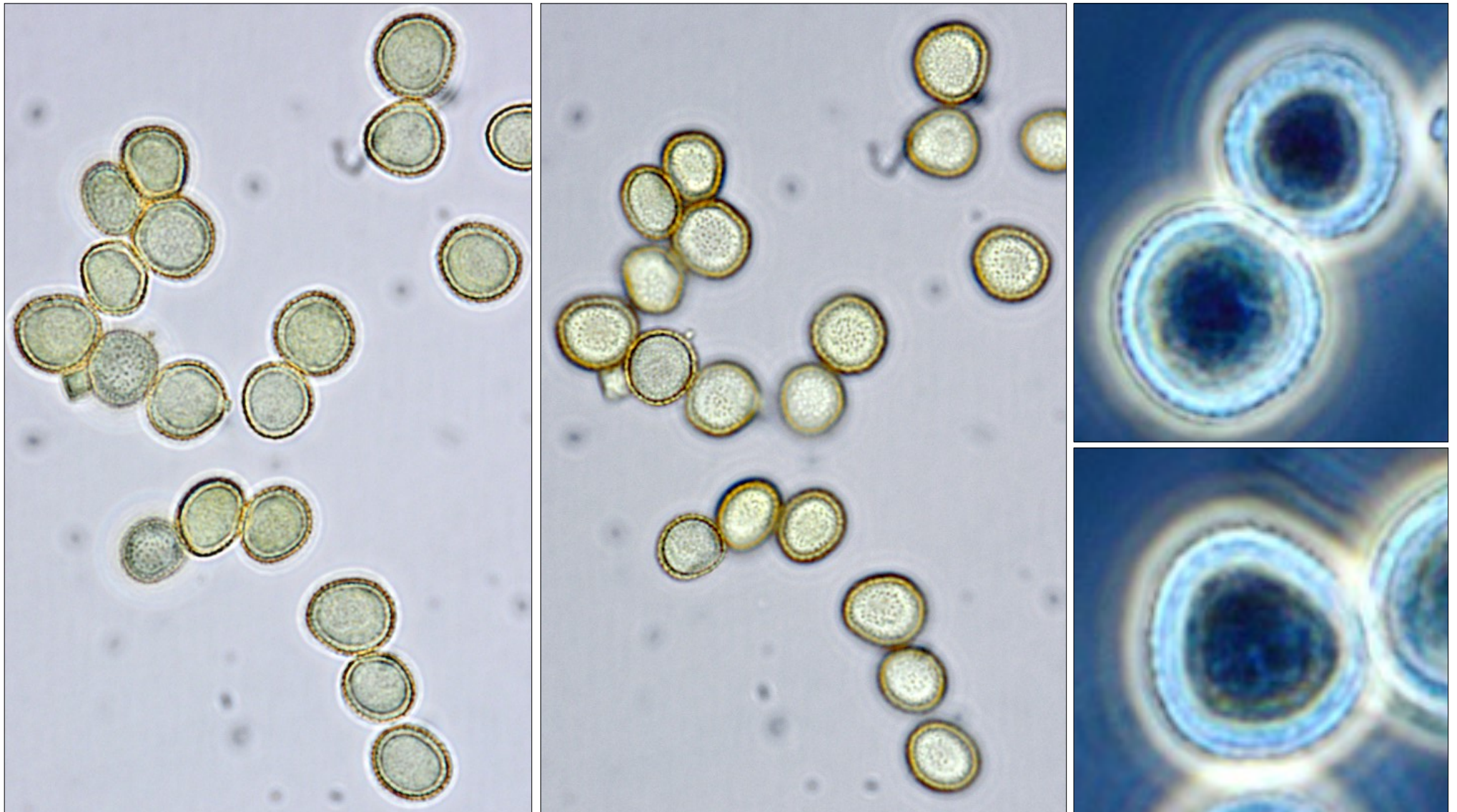
*Perichaena chrysosperma*.  
Double-layered peridium,  
dark outer layer & light inner  
layer. SMF heated, X20 objec-  
tive, brightfield microscopy.



***Perichaena chrysosperma*.**  
Double-layered peridium,  
dark outer layer & light inner  
layer. SMF heated, X40 objec-  
tive, brightfield microscopy.  
Same field as previous page.



*Perichaena chryso sperma*. Capillitial threads, emphasis small spines. A–C. SMF heated, phase microscopy. A,C. X40 objective. B. X100 objective. Note dotted insert (small B) in photo A. This portion was photographed at higher magnification in large B (upper right photo).



***Perichaena chrysosperma*. Spores. All from SMF slides heated and X100 objectives. Left and center photos same field, brightfield microscopy. Left, mostly median focus; center mostly surface focus (to emphasize surface ornamentation). Right two photos phase microscopy enlarged to show the fine verruculose-spinulose surface ornamentation as much as possible.**