***Saccobolus verrucisporus* AEB 1383 (= PDD 124538) A good match**

<u>Collected:</u> 11 June 2024; **<u>Incubated:</u>** 6 August 2024

<u>Substrate:</u> goat #2 (*Capra hircus*) dung

<u>Collection site:</u> Dargaville NZTM E1656223, N6061699

<u>Collector:</u> Ian Flux; **<u>Identifiers:</u>** Ann Bell and Dan Mahoney

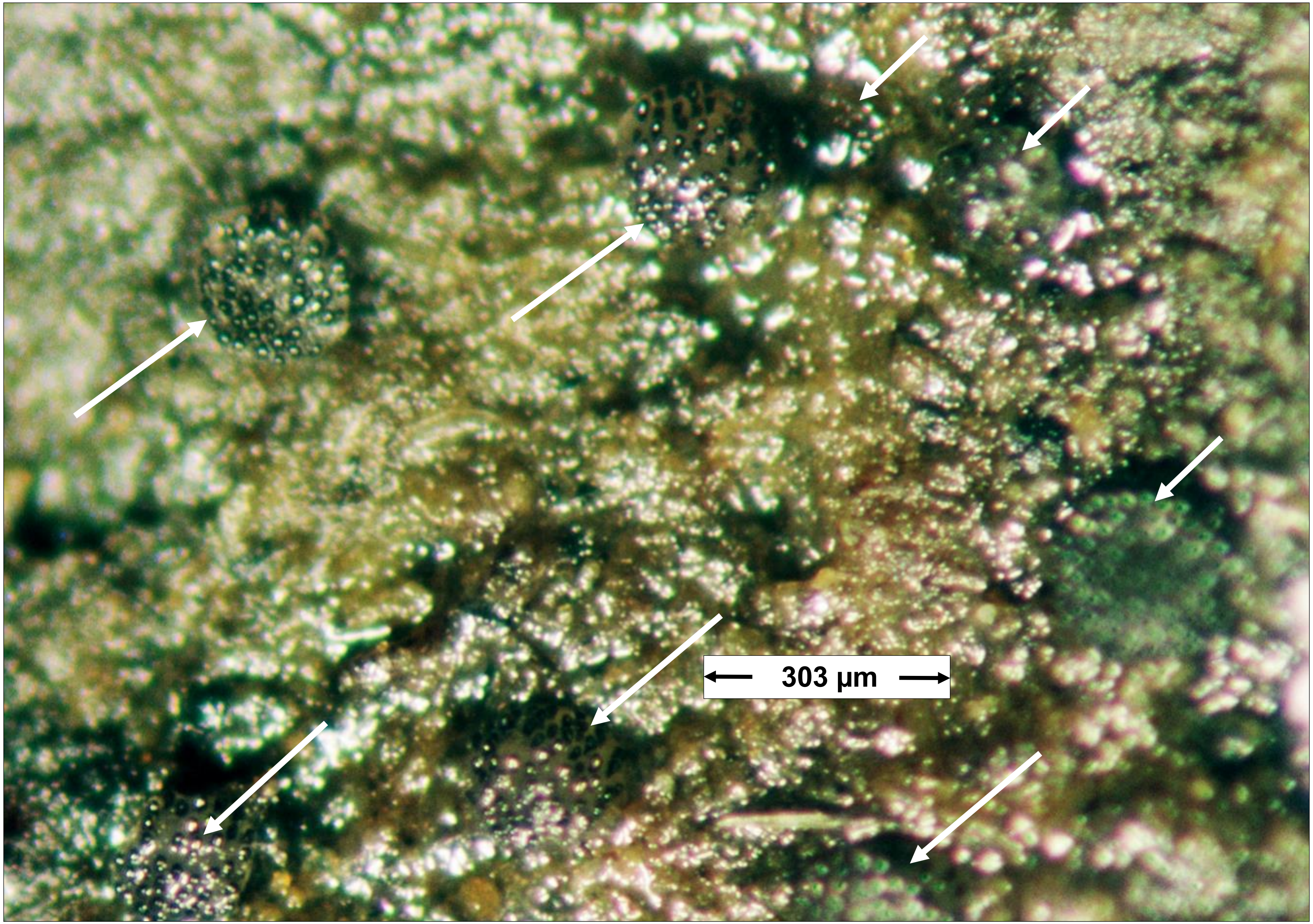
<u>Voucher materials:</u> several dried goat pellets accompanied by 1 Shear's mounting fluid (SMF) semi-permanent microscope slide; Zeiss SV 11 Stereo-zoom dissecting microscope in-situ photo of the fruiting bodies using a MC80 camera and Olympus BX51 microscopic slide photos of fruiting body details using a DP28 camera; reference consulted and Dan's brief comments.

<u>Reference consulted:</u>

Brummelen J. (van). 1967. A World-monograph of the genera *Ascobolus* and *Saccobolus* (Ascomycetes, Pezizales). Persoonia, supplement, I: 1-260. See Brummelen's description and illustrations (portions of pp. 198 & 199 on the page after next).

<u>Dan's brief comments:</u> My initial slides & photos of this fungus were in water mounts on 19 August when the ascospore clusters were often a beautiful blue-purple.

Comments from my time photographing Ann's 5 Sept. 2024 SMF slide on 10 Sept.:
Ascospore clusters roughly 36 × 11 µm with ascospores 15 × 6 µm. With difficulty I could see a large gelatinous body on one-side of the cluster. Ascospores were at first light blue to blue-purple but became very dark purple and finally brown with the surface warts at first small, scattered, evenly spaced and numerous but these becoming much larger, fewer and irregularly shaped as the ascospores finally became brown. Brummelen's configuration II was the rule and individual ascospores were symmetrical fusiform-ellipsoid with rounded apices in one view and plano-convex in another.



AEB 1383. In-situ view of superficial, sessile, flat to convex, various-sized fertile apothecia (arrowed). Note the black protruding tips of ripe asci.

BRUMMELEN, J. VAN. 1967. A world-monograph of the genera *Ascobolus* and *Saccobolus* (Ascomycetes, Pezizales). In Persoonia, Suppl. 1 See portions of pp. 198 & 199 below.

Saccobolus verrucisporus Brumm., spec. nov. — Fig. 70

Apothecia solitary or in small groups, superficial, sessile, 130–200 µm diameter, 150–200 µm high. Receptacle cylindrical or subglobular, sometimes on a small base and more or less obconical, whitish with a shade of violet; surface covered with short or long hyphae which are connected with the substratum; margin not clearly differentiated. Disk flat or convex, at first white, then pale violet, dotted with the far protruding tips of ripe asci. Hymenium 100–115 µm thick. Hypothecium very thin, of closely compacted cells 4.5–9 µm diameter, colourless. Flesh not clearly differentiated. Excipulum of one or a very few layers of intermingled hyphae 3–4.5 µm wide, which consist of more or less swollen cells 4.5–9 µm long; with pale violet, intercellular pigment. Asci broadly clavate with truncate apex, 90–110 X 26–29 µm 8-spored; the wall deep blue in Melzer's reagent. Spore-clusters compact, elongated, 33–39 X 14–16 µm, with unilateral mucilaginous substance 7–10 µm thick. Ascospores arranged according to pattern II, fusiform-ellipsoid, at first hyaline, then dark violet, 14–16 X 8–9 µm, ornamented with coarse, isolated warts. Paraphyses slender, branched, 2.3–3.4 µm thick, not enlarged upwards, colourless, with pale violet, intercellular pigment.

Known only from dung of roe-deer.

ETYMOLOGY.— From Latin, verruca, a wart and spora, a seed: with warted spores.

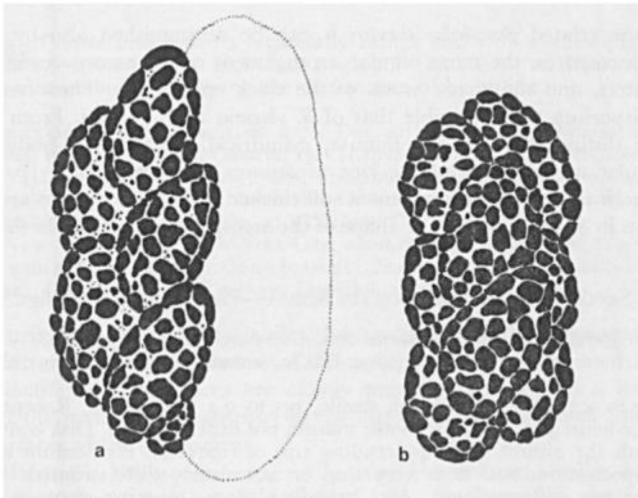
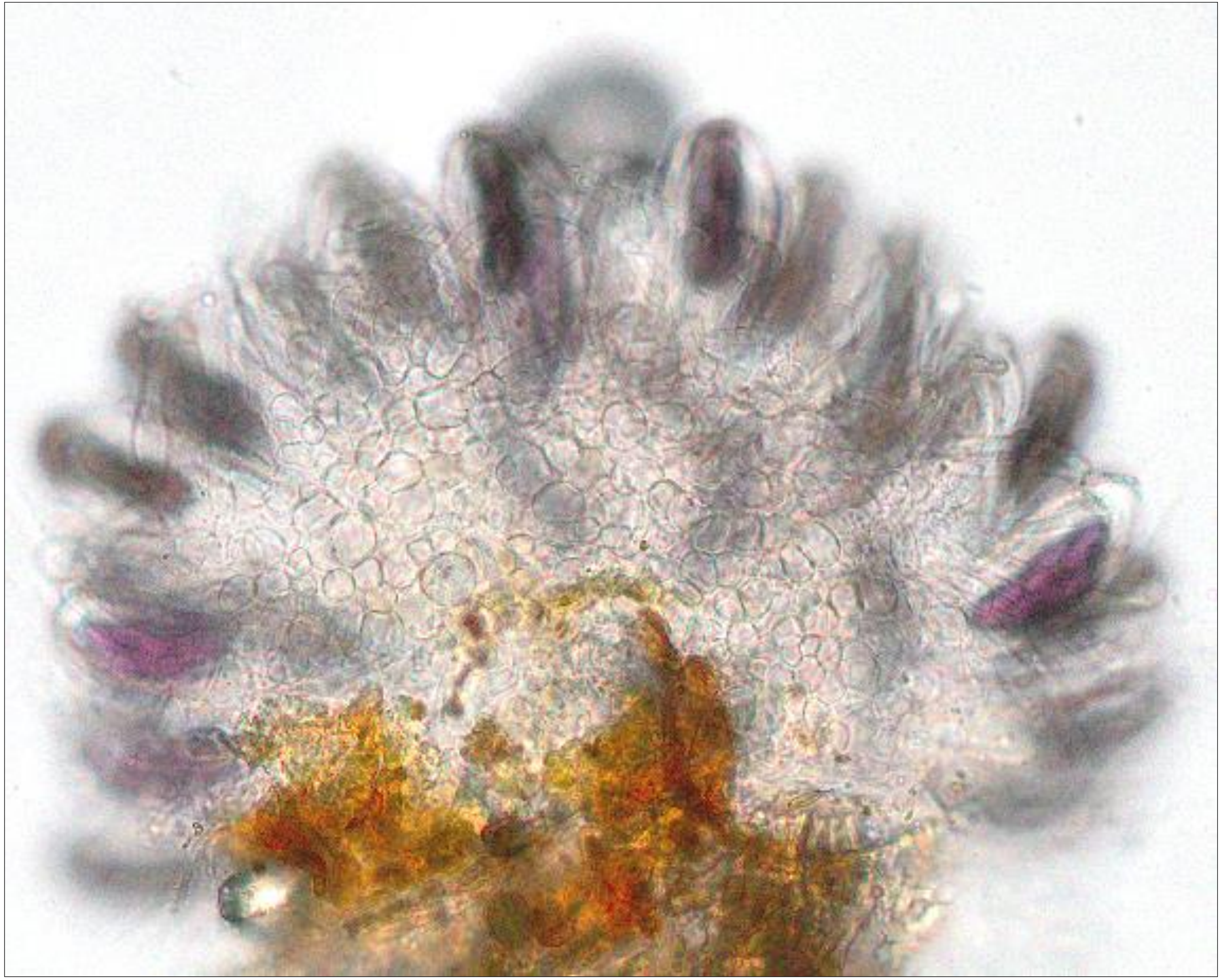
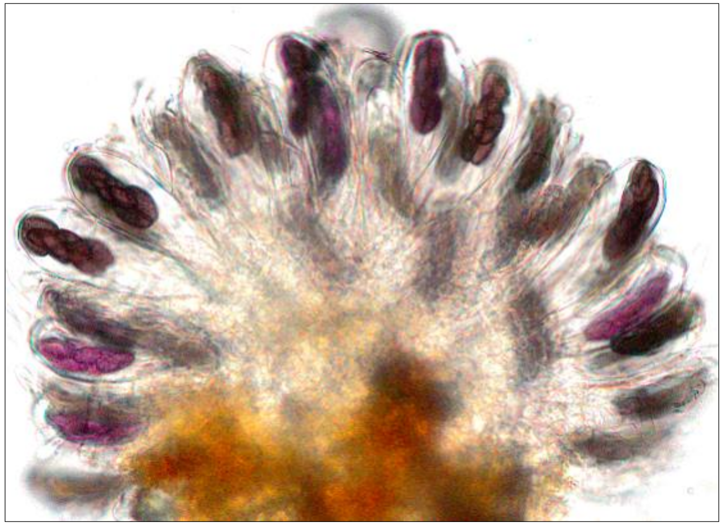


Fig. 70. — *Saccobolus verrucisporus*, spore-clusters × 1600 (from *van Brummelen 1287*).





AEB 1383. Both photos the same squashed apothecium in a water mount using the X40 objective (image variously enlarged) and brightfield microscopy. Left photo: focus on the excipular cells. Right photo: focus on the spore clusters with their early bluish & later brownish pigmentation.

AEB 1383. Water mount using the X100 objective and brightfield microscopy. Note the variously mature spore clusters (hyaline to bluish to finally brownish). An indistinct one-sided gelatinous sheath on 2 clusters is arrowed.

AEB 1383. SMF slide mount using the X100 objective and brightfield microscopy. Note the spore clusters with their brown to purple-brown ascospores; the mature brown spores ornamented with large, irregularly shaped, shallow and interconnected warts (arrowed). See the next page for a better example of these warts.

AEB 1383. SMF slide mount using the X100 objective and brightfield microscopy. Most of the spore clusters seen here contain fully mature brown ascospores. Where the focus falls on their wart-ornamented wall (arrowed), the large, irregularly shaped, shallow and interconnected warts can be clearly seen.