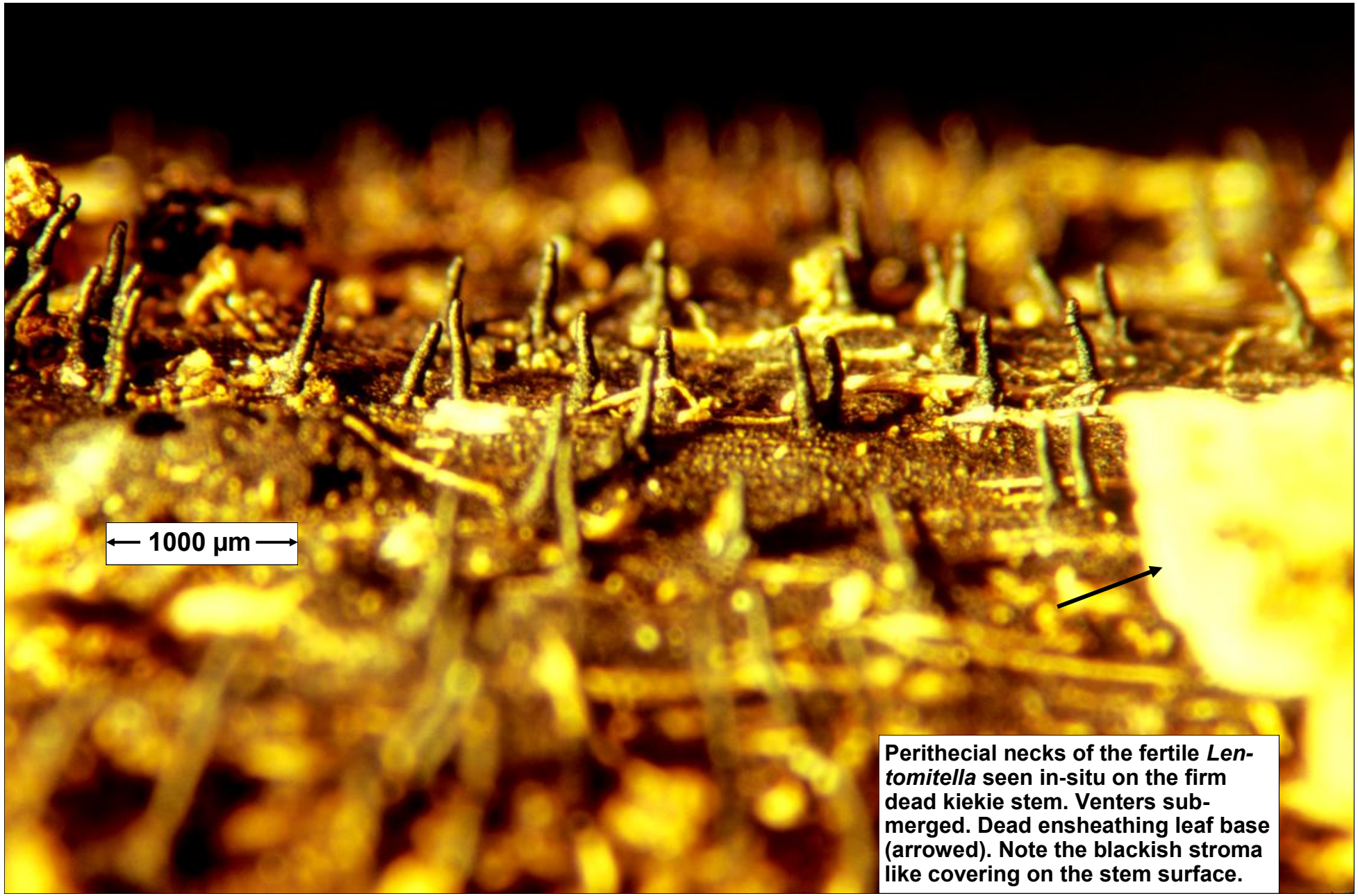
***Lentomitella investita* (Schw.) Réblová – PDD 111256 (= AEB 1272) See also 2 earlier collections of *Lentomitella investita*:**
**1) PDD 101972 (= AEB 1138)**
**2) PDD 126778 (= AEB 1292)**

**Collected:** 17 February 2016 on firm dead *Freycinetia banksii* (kiekie) stem, initiated on the firm stem beneath the dead ensheathing leaves and seen clearly in areas where the ensheathing leaves had eroded away.
**Collection site:** Rimutaka Forest Park – Orongorongo Track
**Collected and identified by:** Dan Mahoney
**Voucher materials:** Dried herbarium specimen and a semipermanent slide mount; Dan's in-situ photos of fresh fruiting bodies under a Zeiss dissecting scope & his digital photos of microscopic detail from slide mounts; Dan's brief description & comments.

**Dan's brief description and comments:** This collection was made during a very dry summer and wasn't as fresh as were the 2 previous collections above (AEB 1138 & 1292). See these earlier collections for more detailed descriptions. Slides for AEB 1272 were more difficult to make and asci harder to observe, as were the very inconspicuous longitudinal striations on the ascospores. Although present, I failed to find striations clear enough to photograph. The same black stroma was present, the same long necks, the same ascospore arrangements in the asci and the same short stipes and apical rings. Ascospores were identical with measurements 8–12 X 2.5–4 µm.

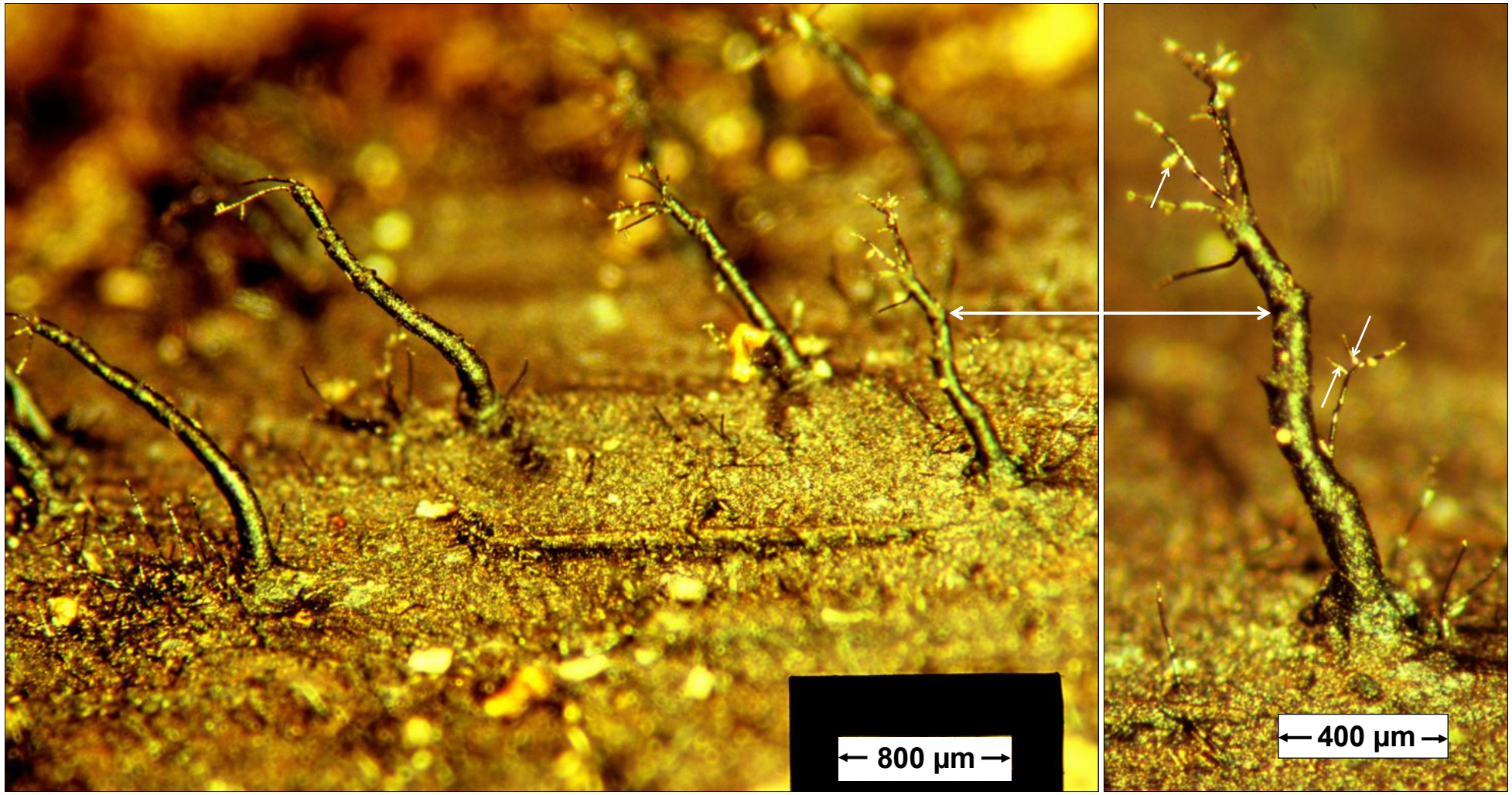
Notable was the presence of another fungus, *Helminthosporium velutinum,* on the same dead kiekie stem – a fungus not associated with the *Lentomitella investita* in earlier collections. The fertile *Lentomitella* was abundant closer to the hanging dead kiekie leaves where *H. velutinum* was absent. Then somewhat further away from the dead leafy apex was an area of overlap between the two fungi. Here the *Lentomitella* necks were fewer and all venters examined were sterile (no asci). AND here the *H. velutinum*, although less abundant than further on, was sporulating from conidiophores on the tall black *Lentomitella* necks (especially from conidiophores at the neck apices) as well as from the firm kiekie stem surface. Further still along the stem, *H. velutinum* conidiophores literally covered portions of the stem surface. Nearby, other dead kiekie stems also sported abundant *H. velutinum* conidiophores both from the dead ensheathing leaves and the underlying firm stem. Two herbarium samples were prepared from the kiekie stem and cut apart: AEB 1272 for the abundant fertile perithecial portion of the kiekie stem & AEB 1273 for the *H. velutinum* portion of the kiekie stem that also included the sterile *Lentomitella* perithecia. Although difficult to verify, it seems likely that *H. velutinum* has parasitized the *Lentomitella*.




**Perithecial necks of the fertile *Lentomitella* seen in-situ on the firm dead kiekie stem. Venters submerged. Dead ensheathing leaf base (arrowed). Note the blackish stroma like covering on the stem surface.**



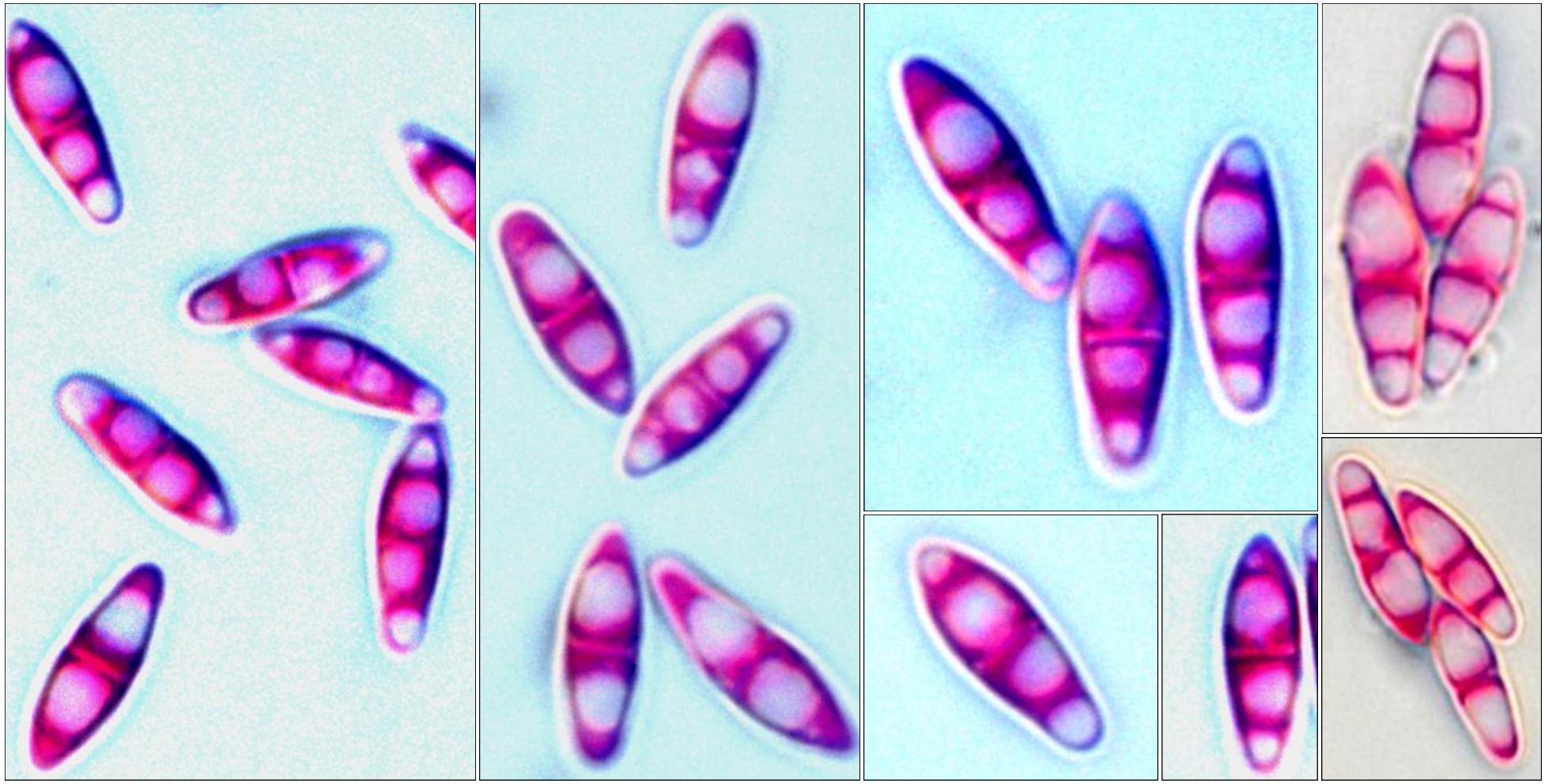

Perithecial necks in-situ on the firm dead kiekie stem. Venters submerged.




**Perithecia on the previous 2 pages were fertile. However, those shown here (just 1 cm away) are sterile, seemingly the result of parasitism by *Helminthosporium velutinum* which is abundant on the kiekie stem and the sterile *Lentomitella.* The double headed arrow points to the same sterile perithecium. Smaller single-headed white arrows point to conidia on the *H. velutinum* conidiophores.**



**Asci. Left: Water mount, X40 objective, brightfield. Middle & right same ascus in lacto-Fuchsin: Middle X40 objective, brightfield; Right X100 using phase, with emphasis on the apical ring and uppermost ascospore.**



**Ascospores from lacto-Fuchsin slide mounts, photographed under the X100 objective using brightfield microscopy. 8–12 X 2.5–4 µm, hyaline, smooth with indistinct longitudinal striations, typically fusoid-clavate, initially 2-celled with the apical cell wider (both cells in turn often dividing with age), slightly constricted at the septa (especially at the median septum) with tapering rounded apices; a clear transverse septum at the indented median & often an additional less prominent septum in each half, with a large vacuole in each cell.**