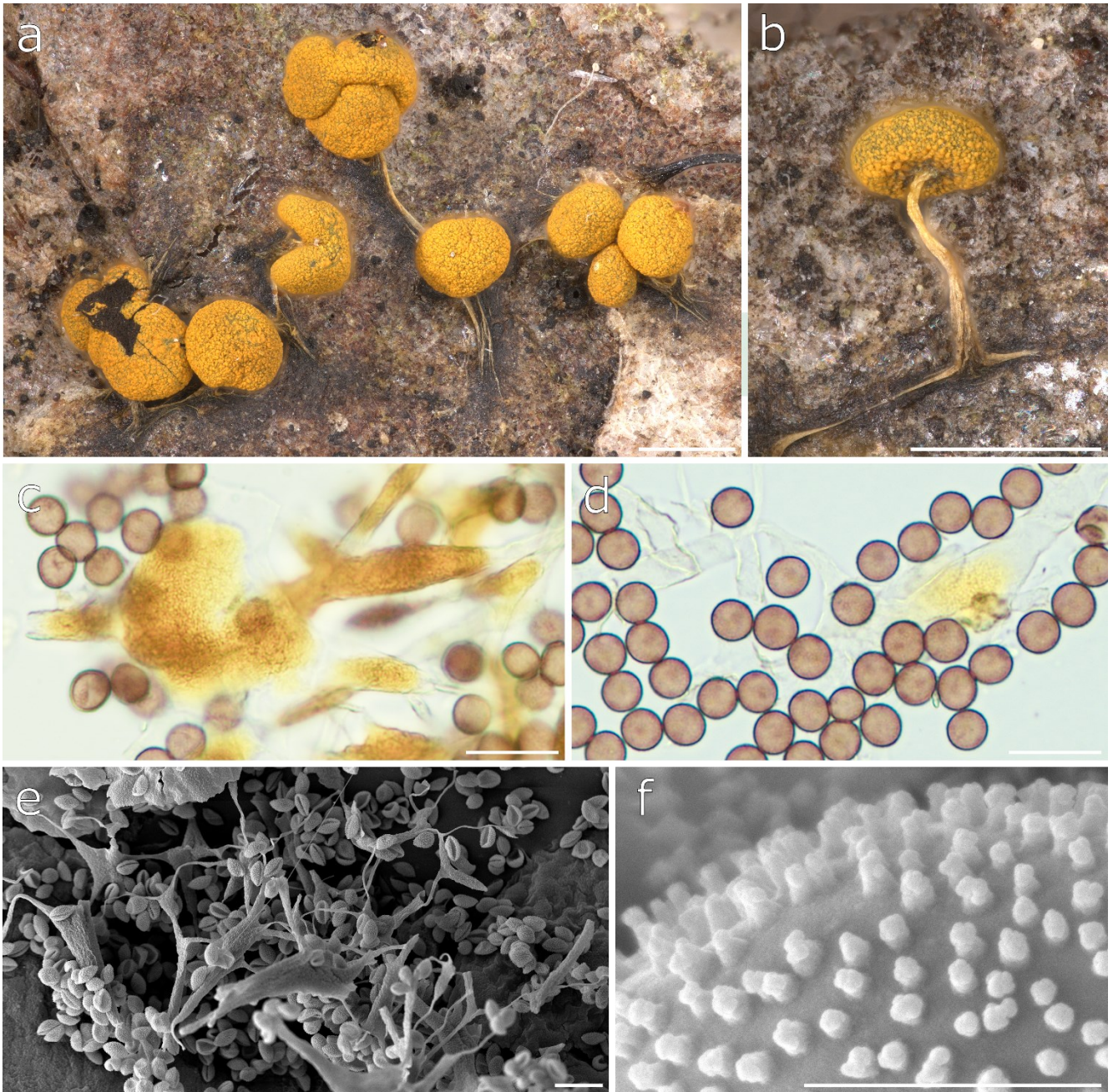
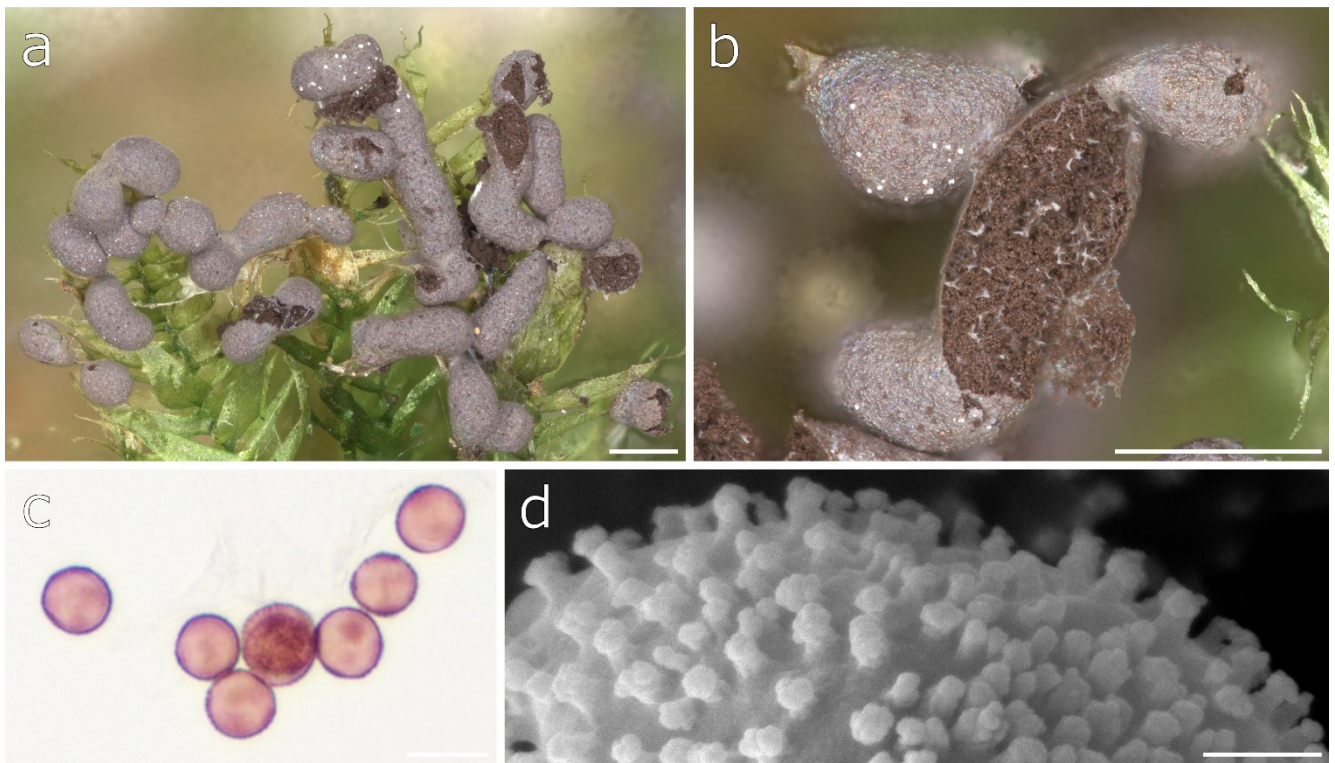


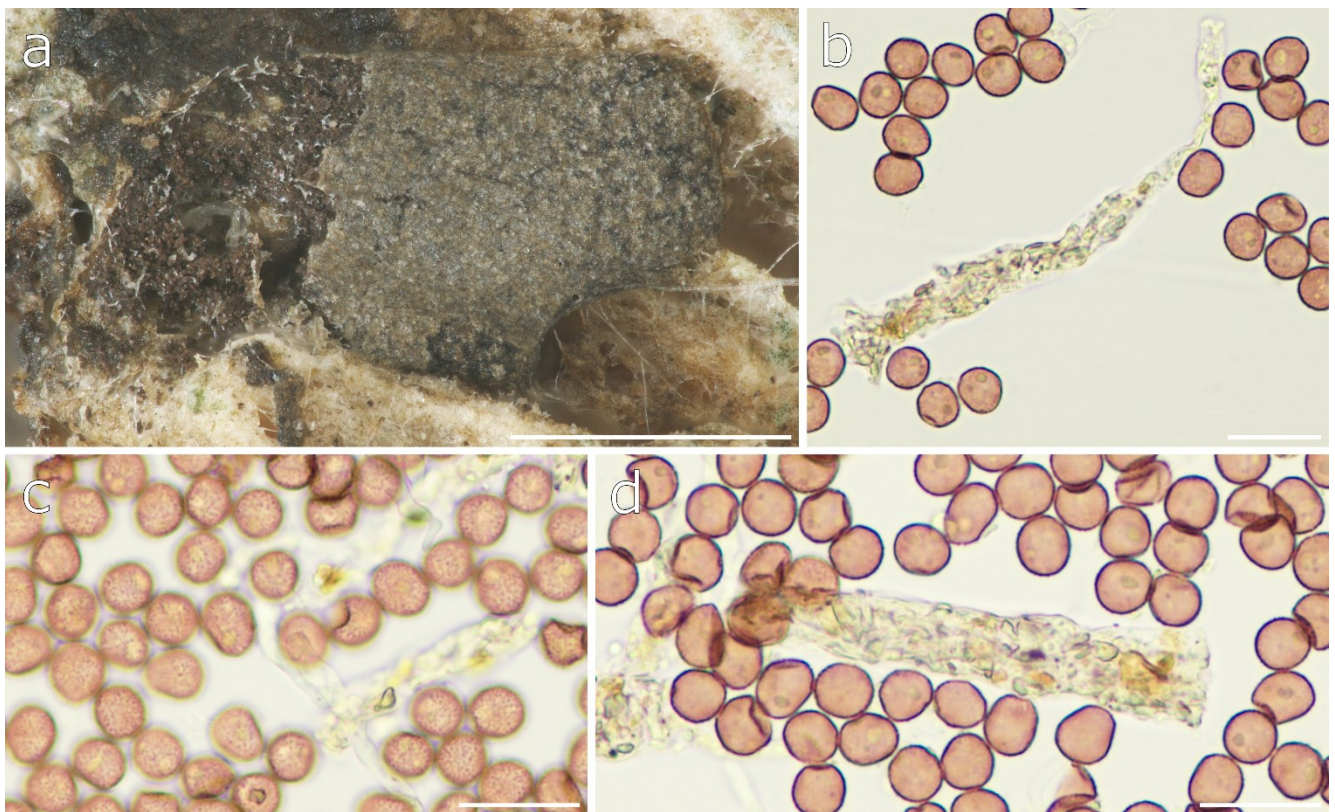
Supplementary figures (S3–S31)



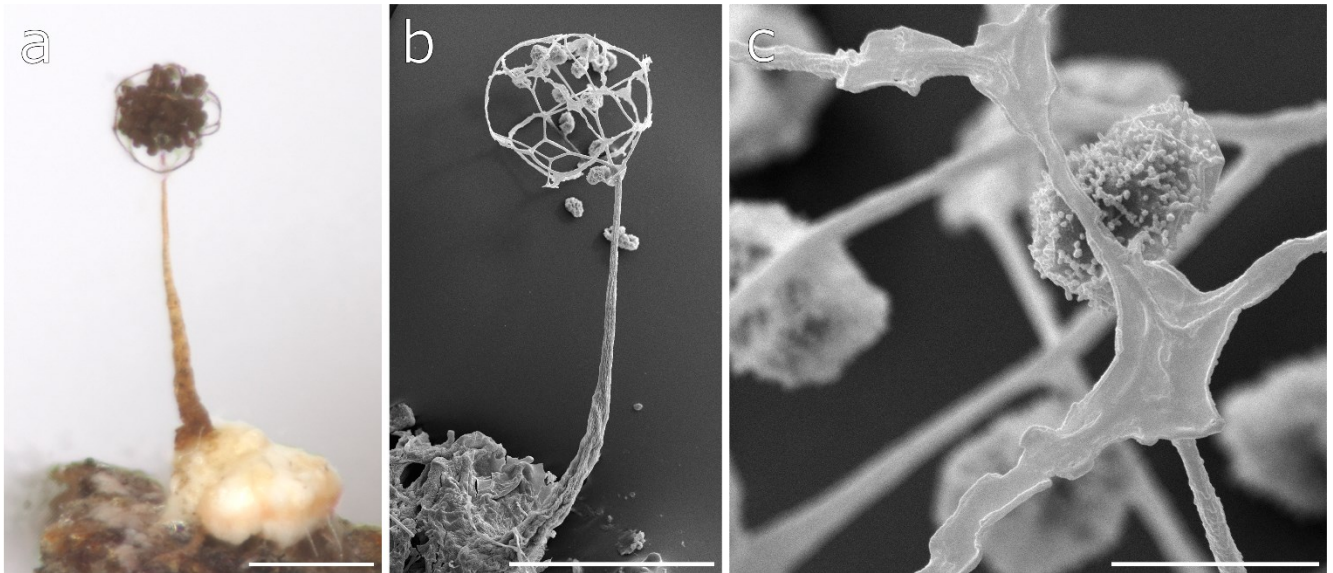
**Figure S3.** *Badhamia bethelii* (a, b, d: LE F-348857, c, e, f: LE F-348858). a, b — sporangia, c, d — capillitium and spores in transmitted light (TL), e, f — capillitium and spores in scanning electron microscope (SEM). Scale bars: a, b — 500  $\mu\text{m}$ , c–e — 20  $\mu\text{m}$ , f — 3  $\mu\text{m}$ .



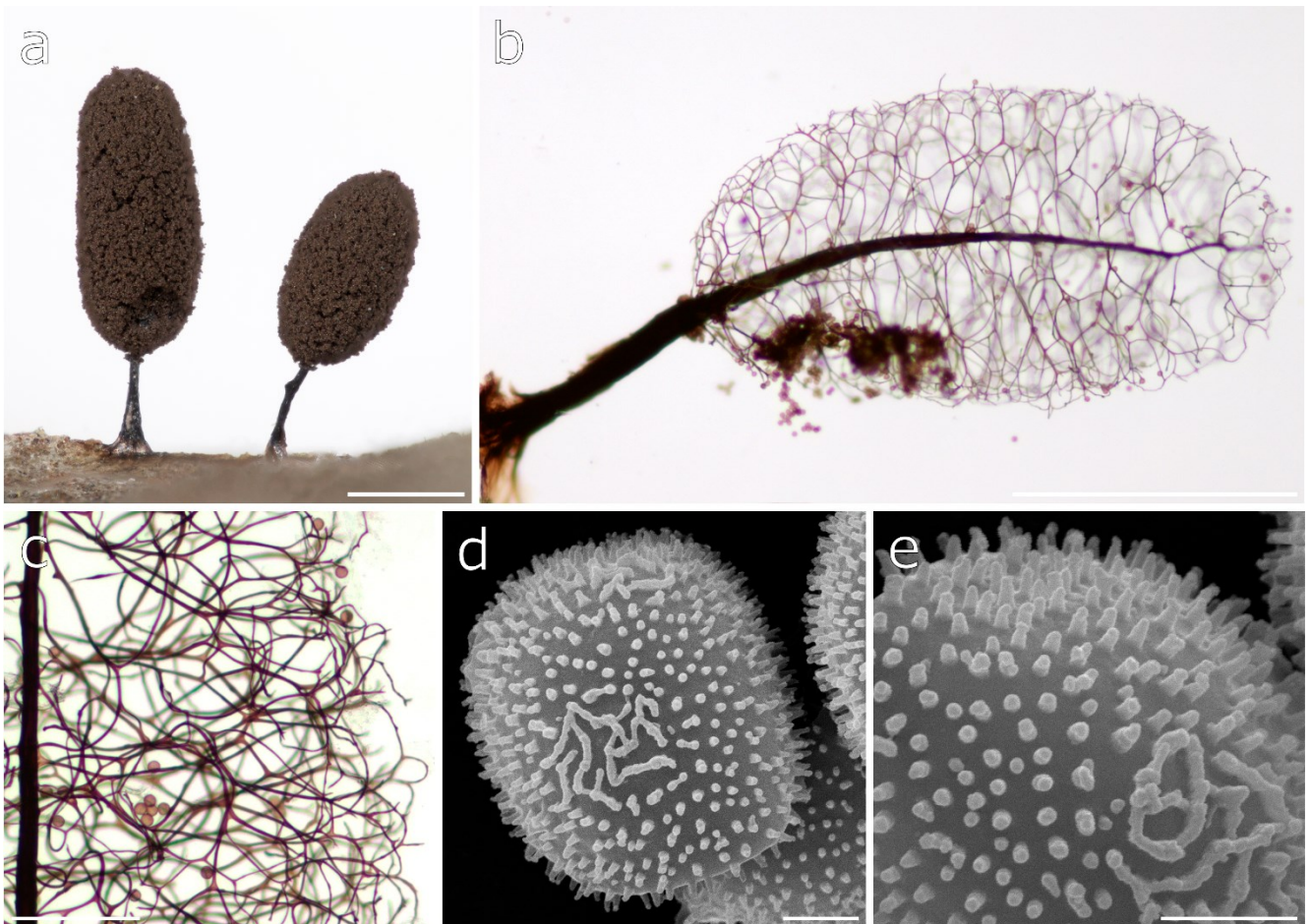
**Figure S4.** *Badhamia* cf. *foliicola* (LE F-348913). a, b — sporangia, c — spores in TL, d — spores in SEM. Scale bars: a, b — 500  $\mu$ m, c — 10  $\mu$ m, d — 1  $\mu$ m.



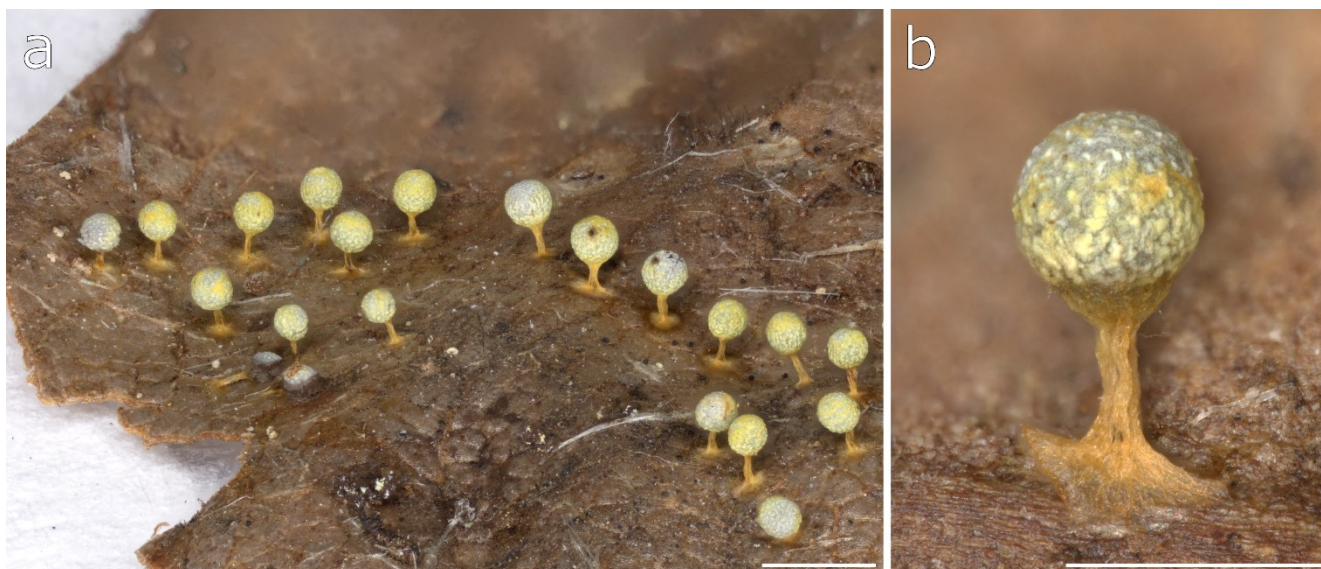
**Figure S5.** *Badhamiopsis* cf. *ainoae* (LE F-349083). a — sporocarp, b-d — capillitium and spores in TL. Scale bars: a — 500  $\mu$ m, b-d — 20  $\mu$ m.



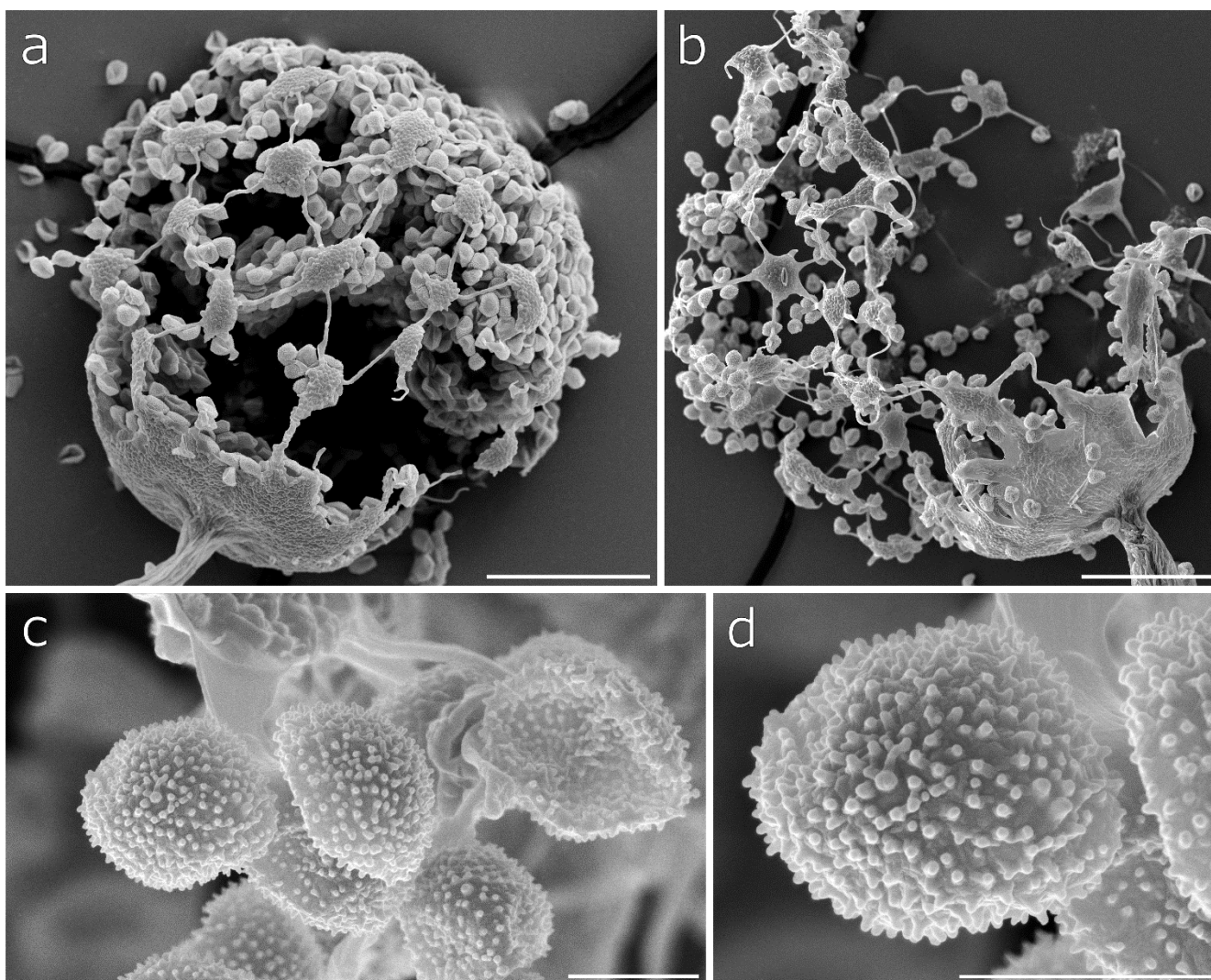
**Figure S6.** *Clastoderma pachypus* (LE F-348998). a, b — sporangia, c — capillitium and spore. Scale bars: a, b — 100  $\mu\text{m}$ , c — 10  $\mu\text{m}$ .



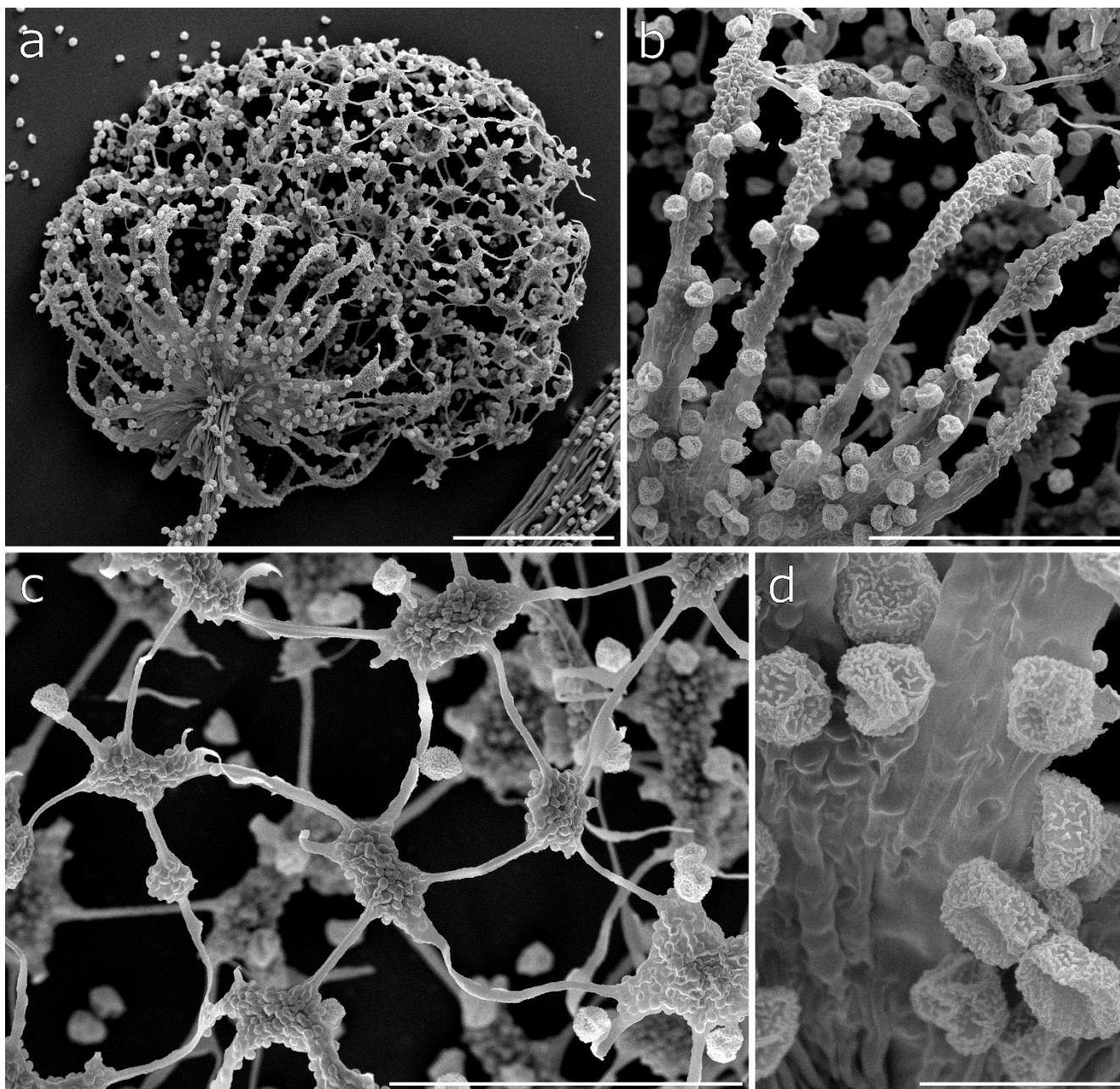
**Figure S7.** *Comatricha anomala* (LE F-348761). a — sporangia, b, c — sporangium in TL, d, e — spores in SEM. Scale bars: a, b — 500  $\mu\text{m}$ , c — 100  $\mu\text{m}$ , d, e — 2  $\mu\text{m}$ .



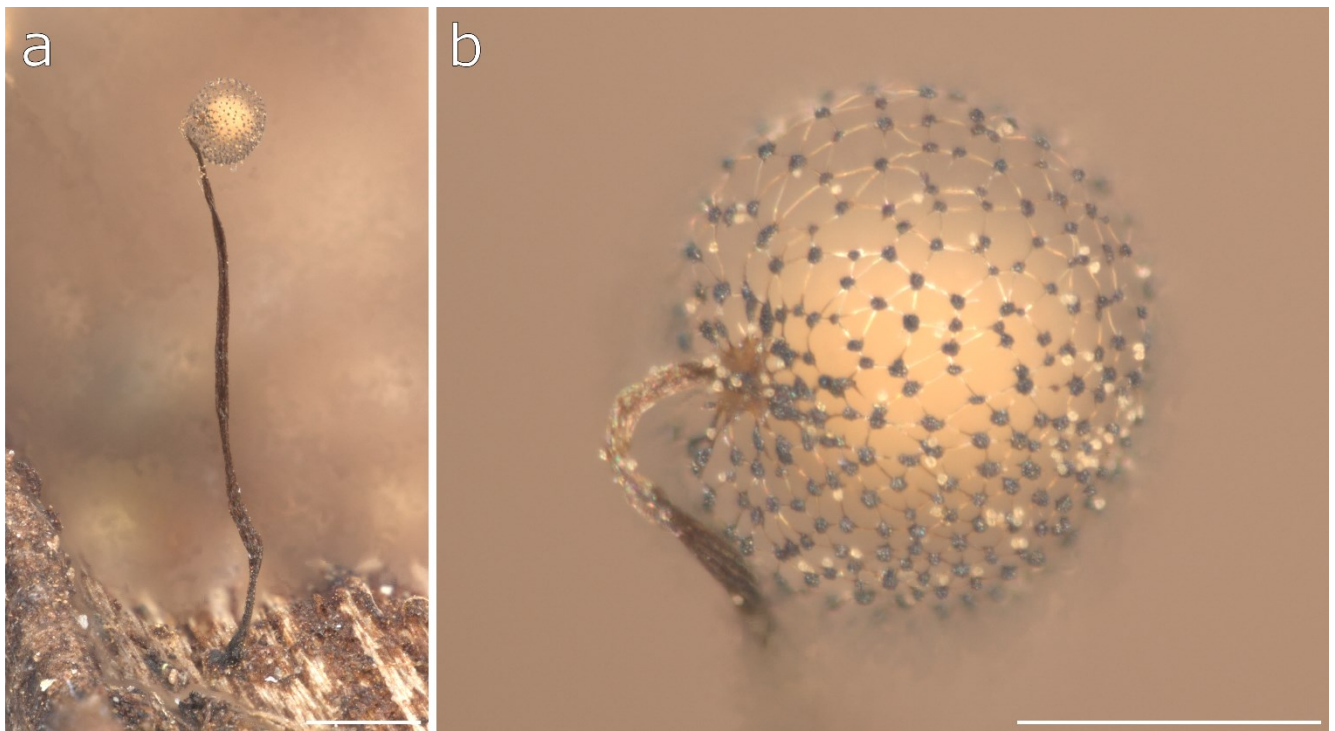
**Figure S8.** *Craterium aureum* (LE F-348884). a, b — sporangia. Scale bars: a — 1 mm, b — 500  $\mu$ m.



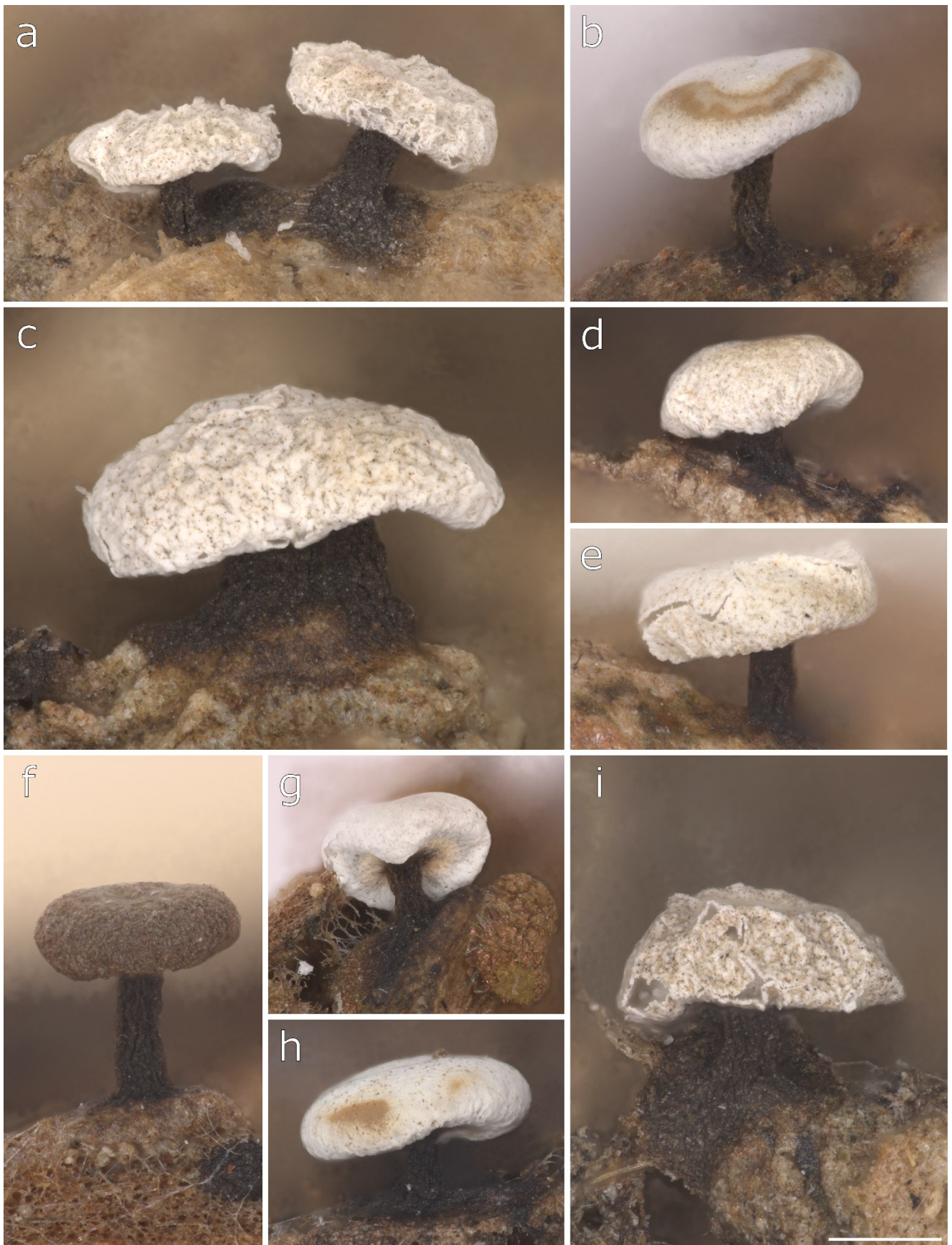
**Figure S9.** *Cribraria pertennis* (LE F-348915). a, b — sporotheca in SEM, c, d — spores in SEM. Scale bars: a, b — 500  $\mu$ m, c, d — 5  $\mu$ m.



**Figure S10.** *Cribraria splendens* (LE F-348938). a — sporotheca, b, c — peridial net, d — spores. Scale bars: a — 100  $\mu\text{m}$ , b, c — 50  $\mu\text{m}$ , d — 10  $\mu\text{m}$ .



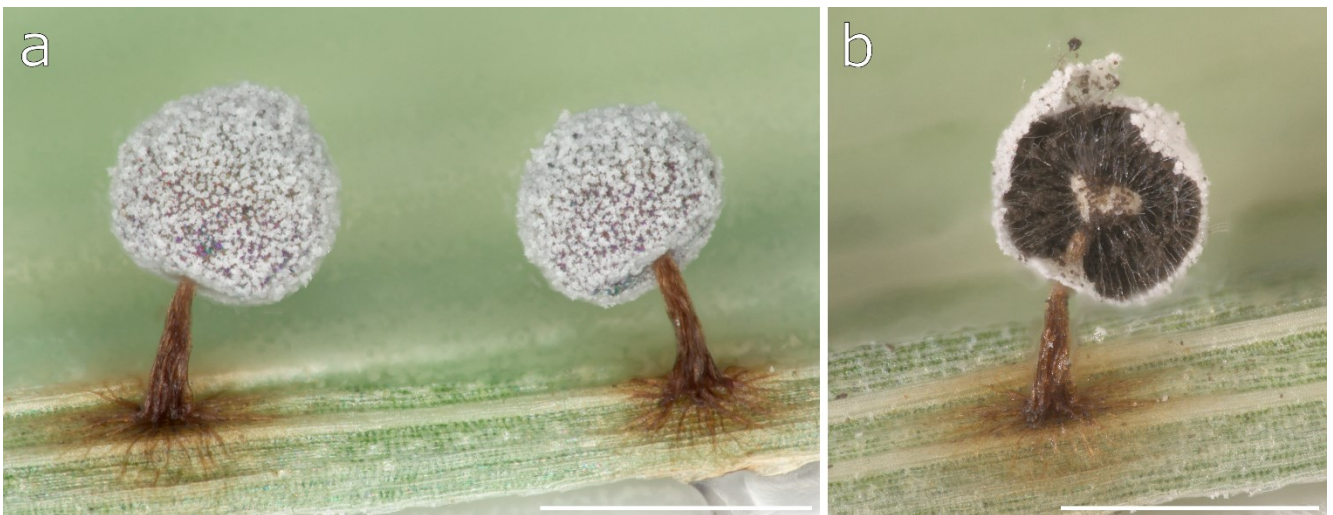
**Figure S11.** *Cribraria tenella* var. *concinna* (LE F-348900). a — sporangium, b — peridial net. Scale bars: a — 500  $\mu\text{m}$ , b — 200  $\mu\text{m}$ .



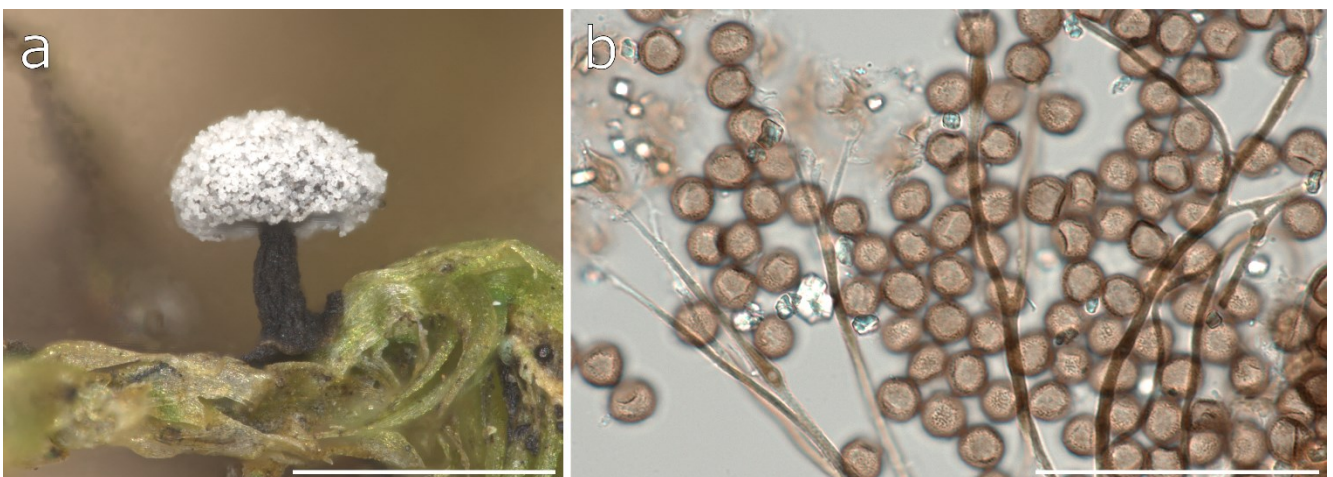
**Figure S12.** *Diderma ussuriense* sp. nov. (a: MYX 10176, b: MYX 10192, c: MYX 10194, d: MYX 10199, e: MYX 10190, f: MYX 10452, g: MYX 10214, h: MYX 22427, i: MYX 10174). a–i — sporangia. Scale bar: a–i — 500  $\mu$ m (same scale).



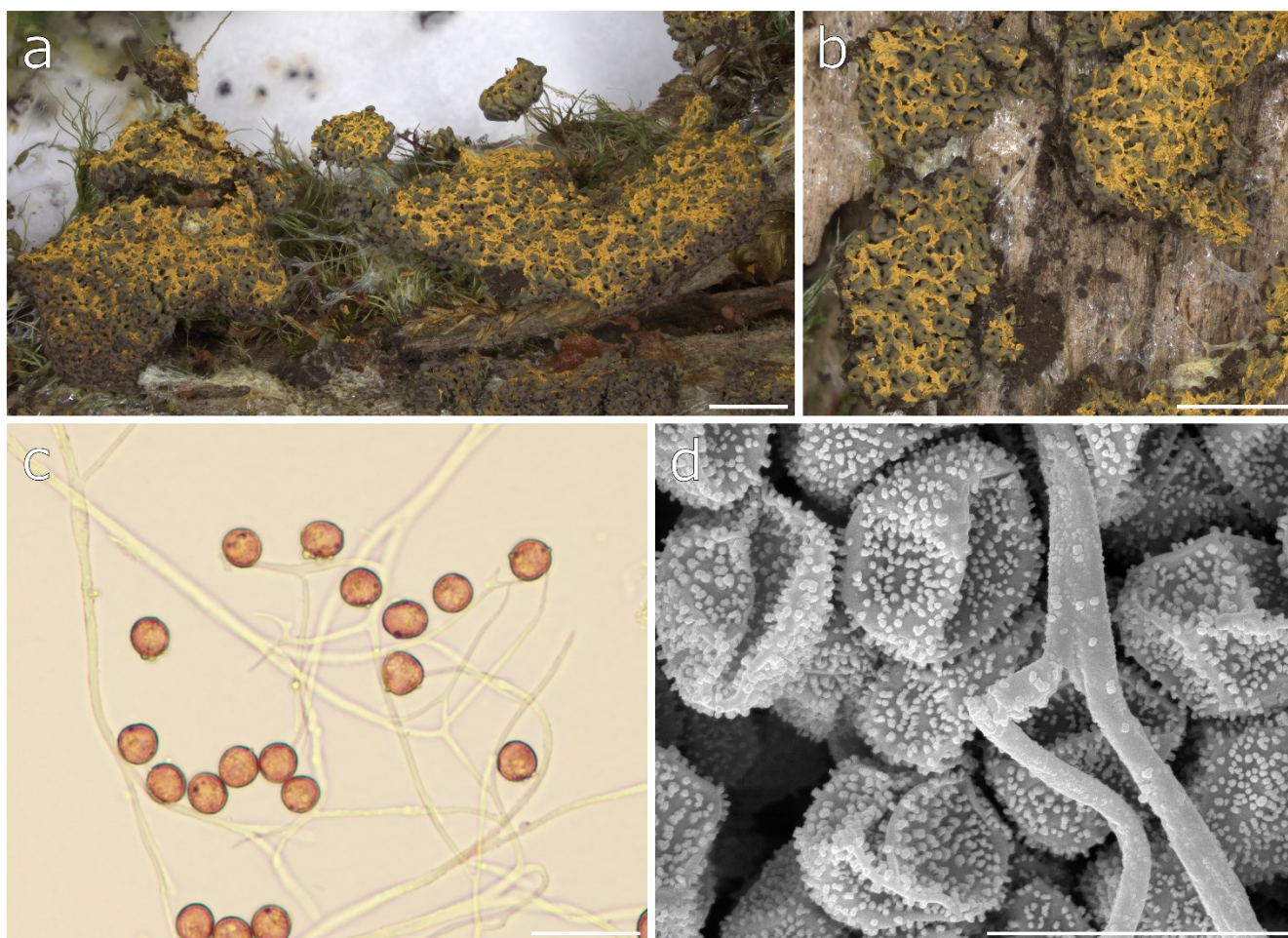
**Figure S13.** *Didymium anellus* (a: LE F-348808, b: LE F-348921). a, b — sporocarps. Scale bars: a, b — 1 mm.



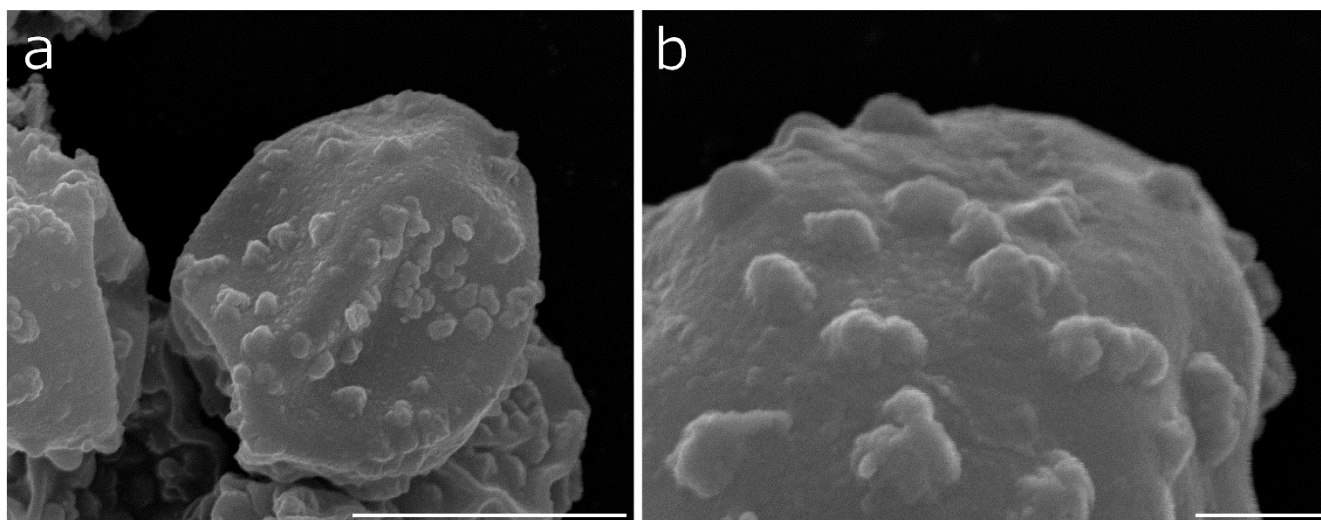
**Figure S14.** *Didymium bahiense* (LE F-348956). a, b — sporangia. Scale bars: a, b — 500  $\mu$ m.



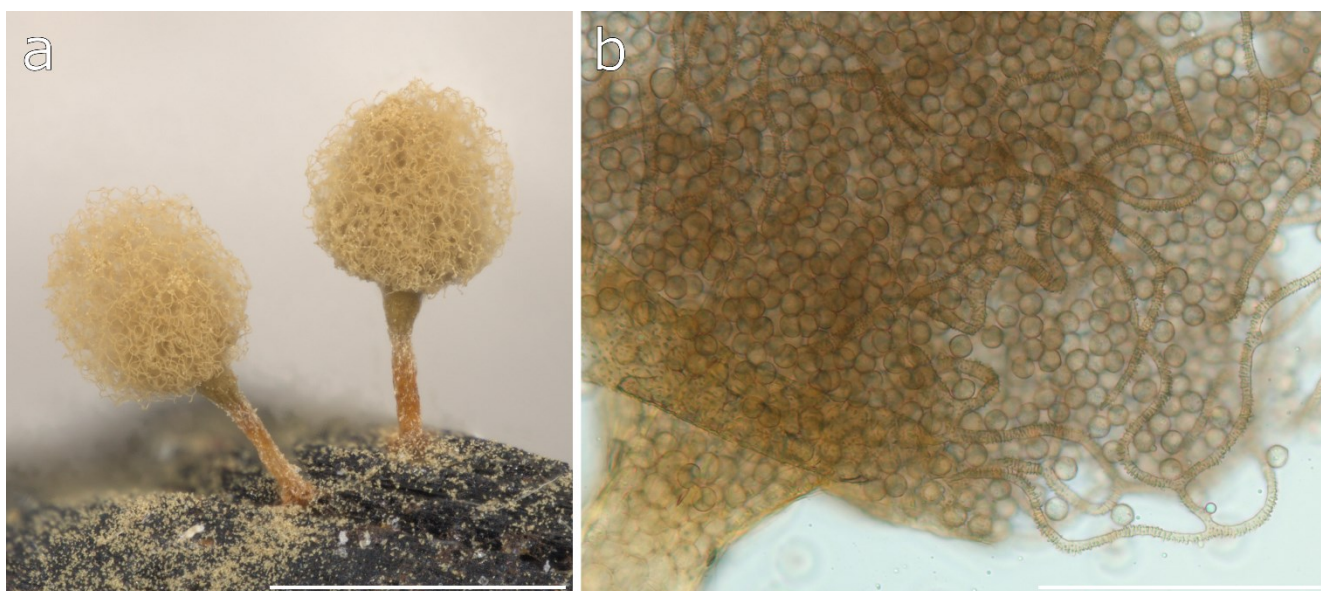
**Figure S15.** *Didymium clavus* (LE F-348876). a — sporangium, b — capillitium and spores in TL. Scale bars: a — 500  $\mu$ m, b — 50  $\mu$ m.



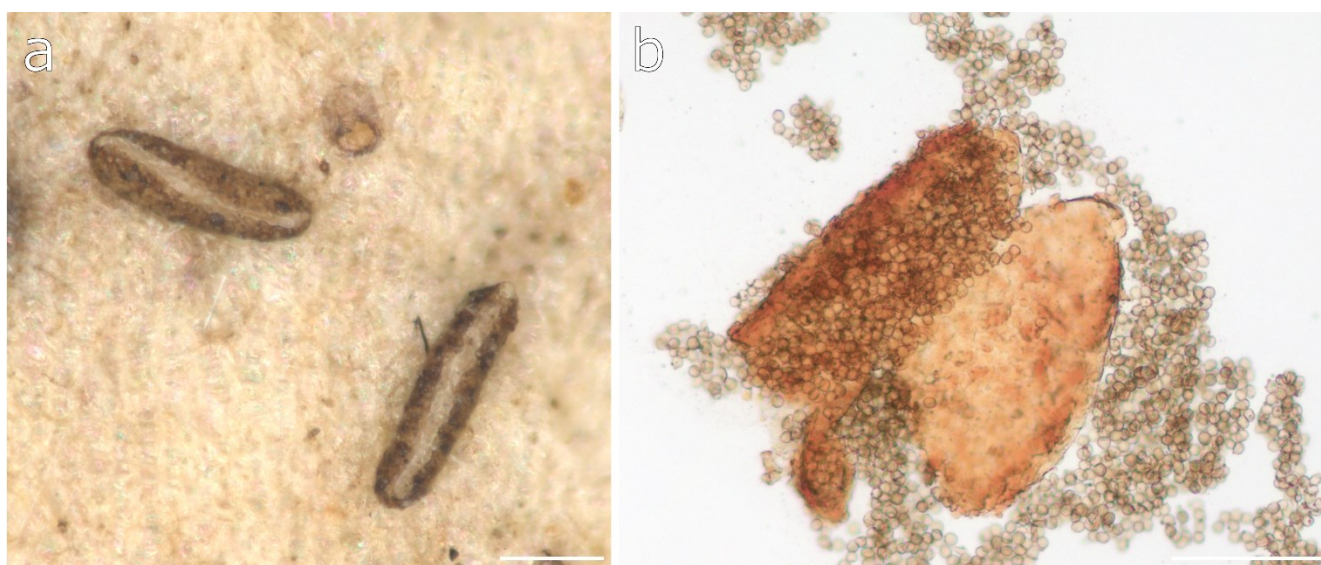
**Figure S16.** *Erionema aureum* (LE F-348952). a, b — aethalia, c — capillitium and spores in TL, d — capillitium and spores in SEM. Scale bars: a, b — 2 mm, c — 20  $\mu$ m, d — 10  $\mu$ m.



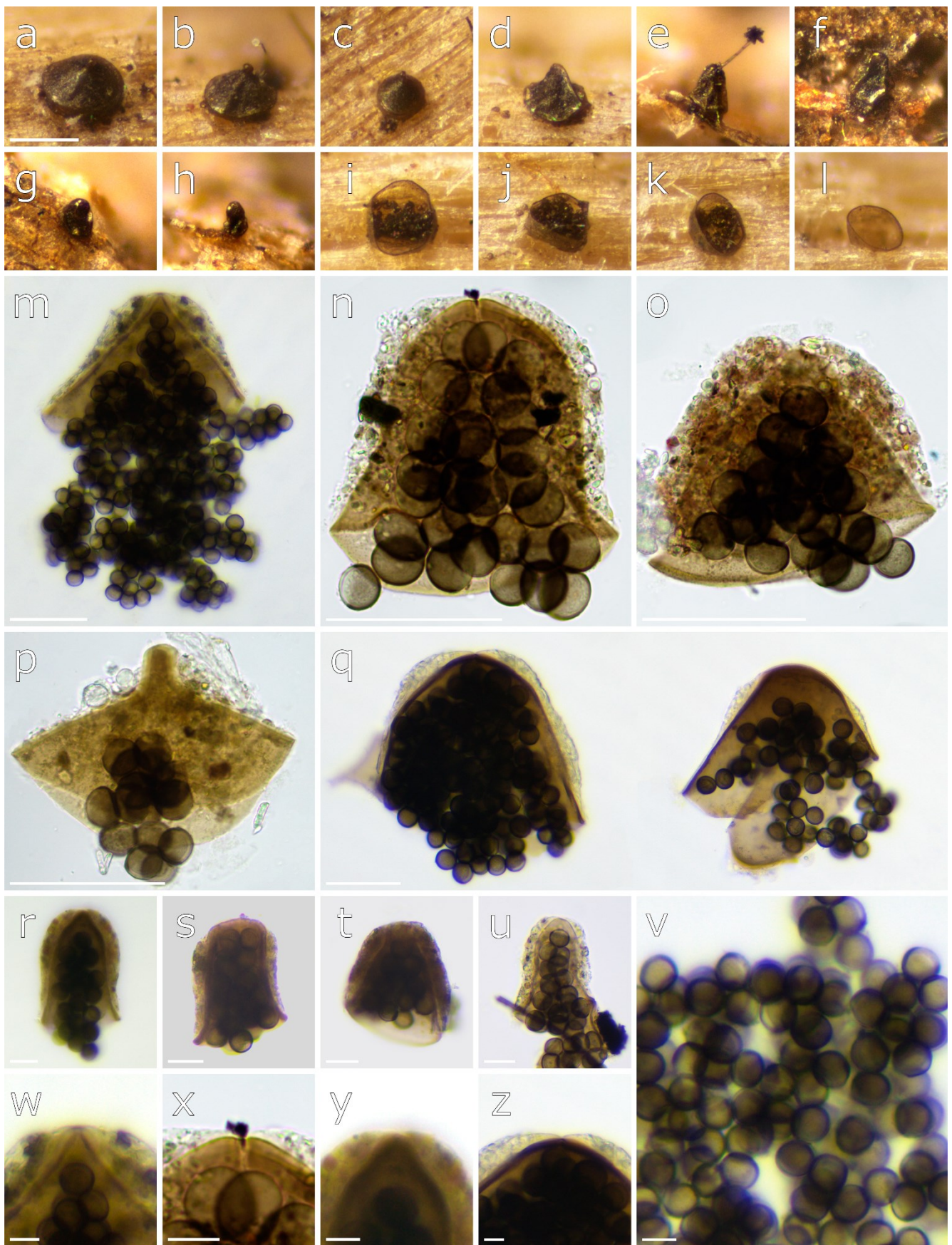
**Figure S17.** *Fuligo luteonitens* (LE F-348859). a, b — spores in SEM. Scale bars: a — 5  $\mu$ m, b — 1  $\mu$ m.



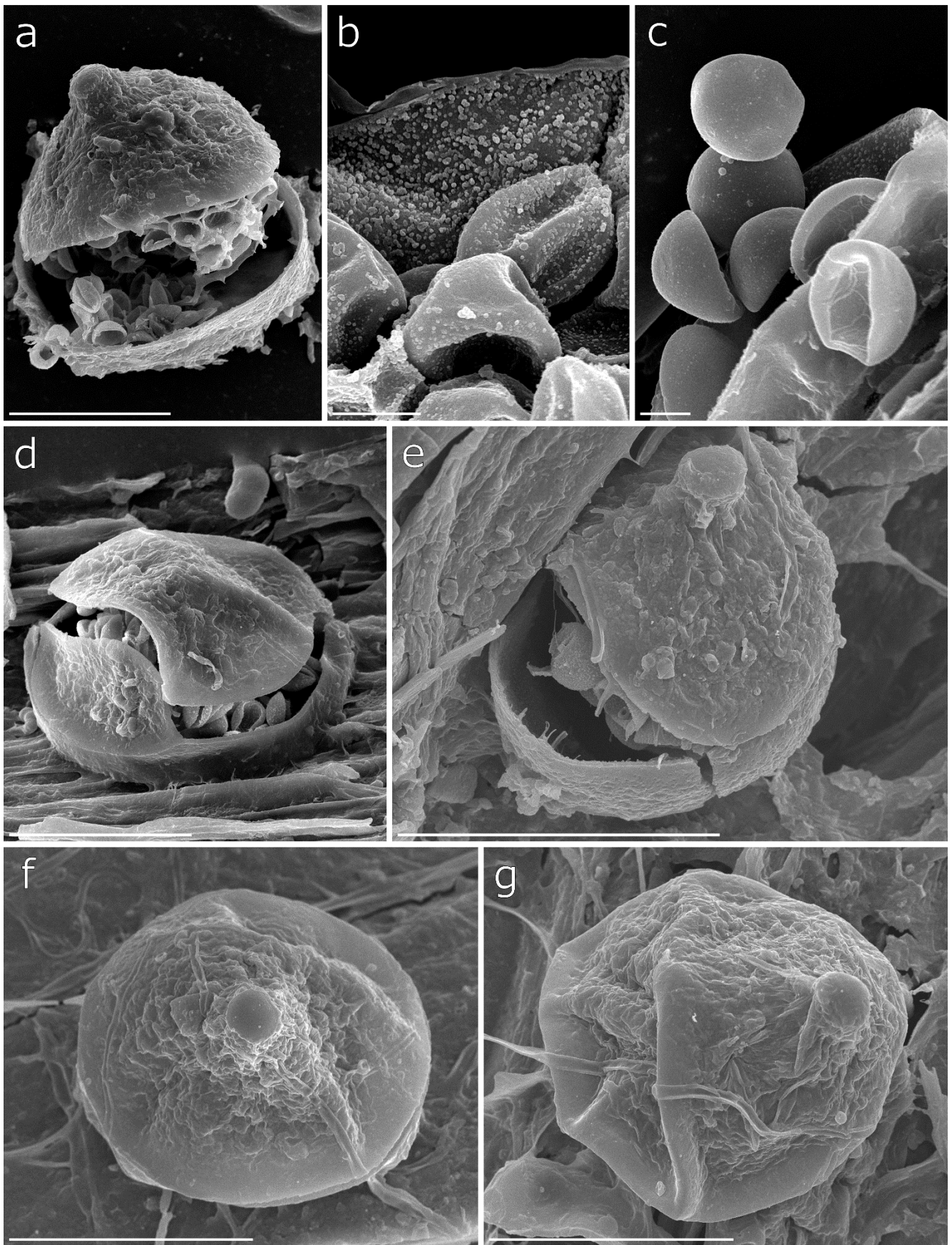
**Figure S18.** *Heterotrichia pomiformis* (a: LE F-348779, b: unvouchered specimen). a — sporangia, b — capillitium and spores in TL. Scale bars: a — 1 mm, b — 100  $\mu$ m.



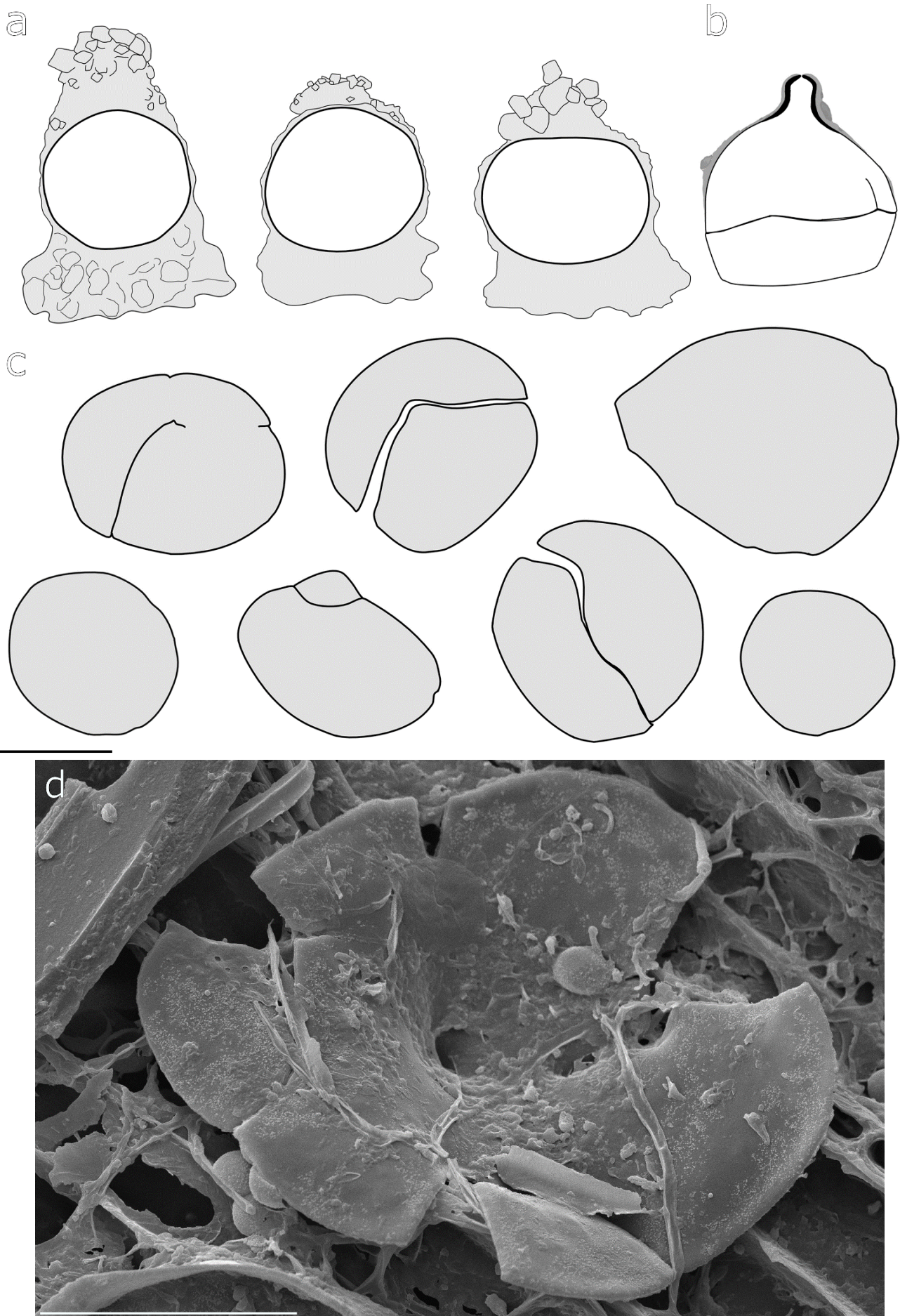
**Figure S19.** *Licea biforis* (a: LE F-349117, b: LE F-349020). a — sporangia, b — sporangium in TL. Scale bars: a, b — 100  $\mu$ m.



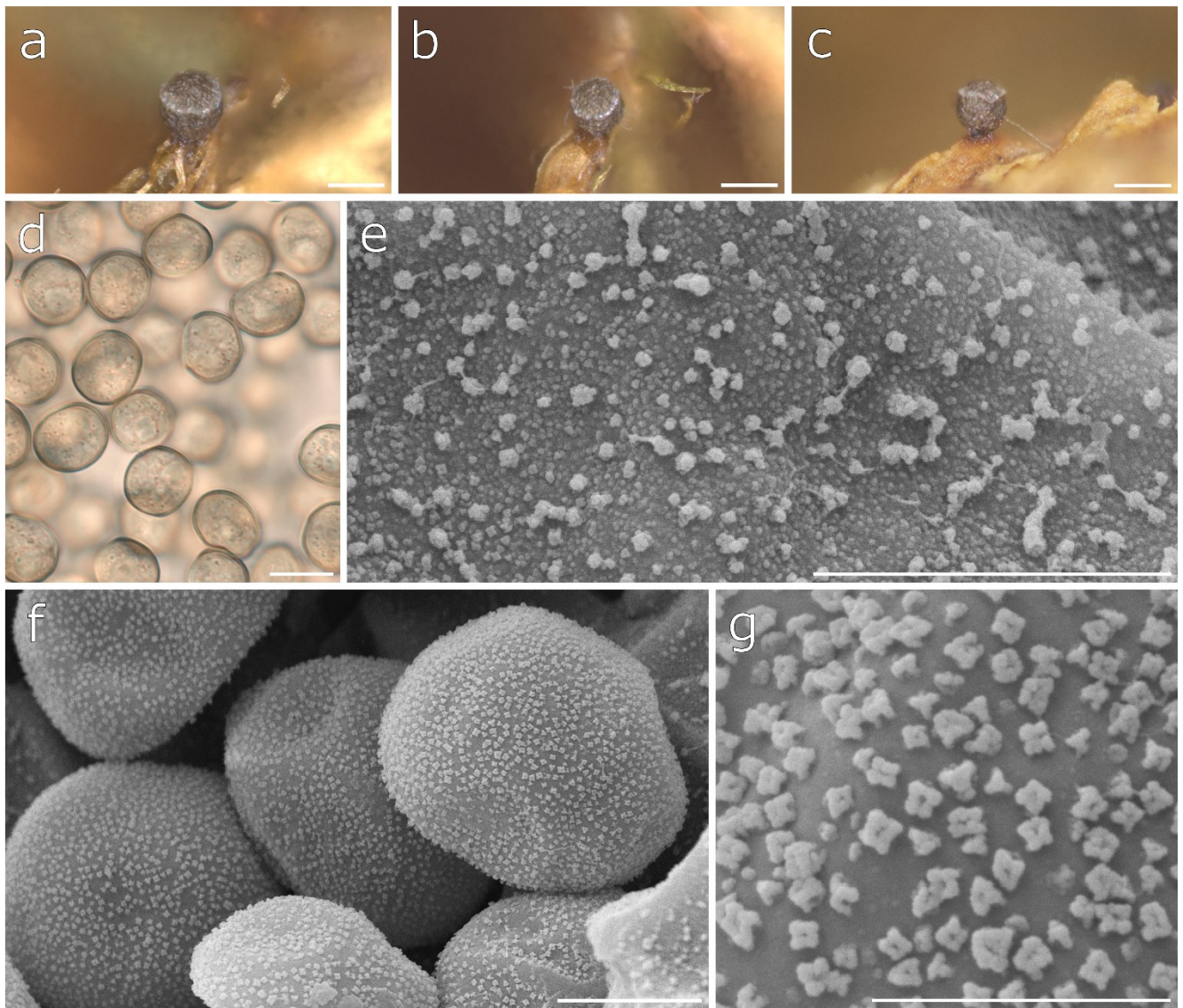
**Figure S20.** *Licea conica* sp. nov. (a–d, i–m, p, v, w: MYX 10295, e–h, n–o, r–u, x, y: MYX 10270, q, z: MYX 10300). a–l — sporangia, m–q — sporangia in TL, r–u, w–z — sporangia apices in TL, v — spores in TL. Scale bars: a–l — 100 μm (same scale), m–q — 50 μm, r–u — 20 μm, v–z — 10 μm. Note: all photographs were obtained using a Micromed 3 (var. 3 LED M) microscope.



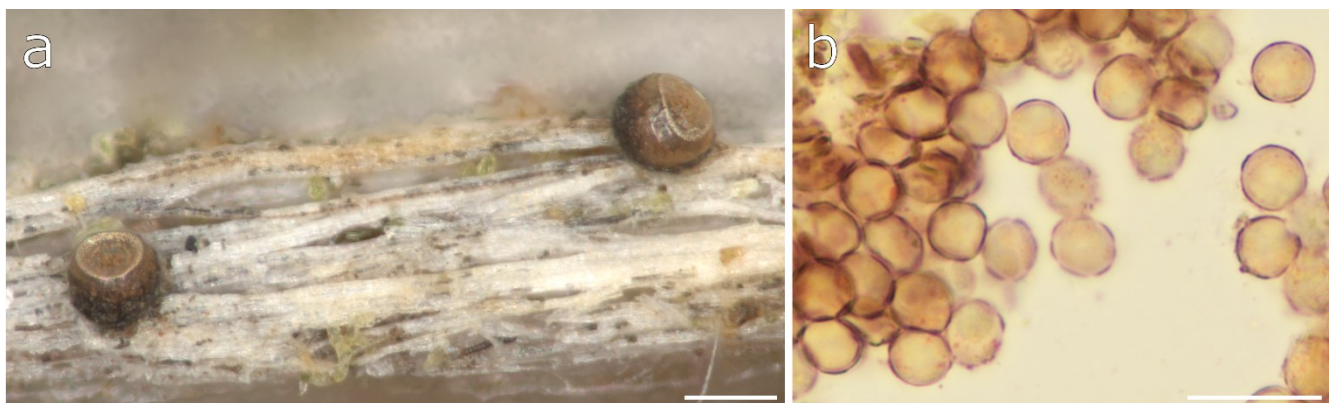
**Figure S21.** *Licea conica* sp. nov. (a, b, e–g: MYX 10295, c: MYX 10270, d: MYX 11329). a, d–g — sporangia in SEM, b, c — inner peridium and spores in SEM. Scale bars: a, d–g — 50 μm, b, c — 5 μm.



**Figure S22.** Schematic of the structure of sporangia of *Licea pseudoconica* (a) and *Licea conica* sp. nov. (b), variations in the shape of the upper part of the sporangium of *L. conica* (c, d). (d: LE F-349180). Scale bars: 50  $\mu$ m



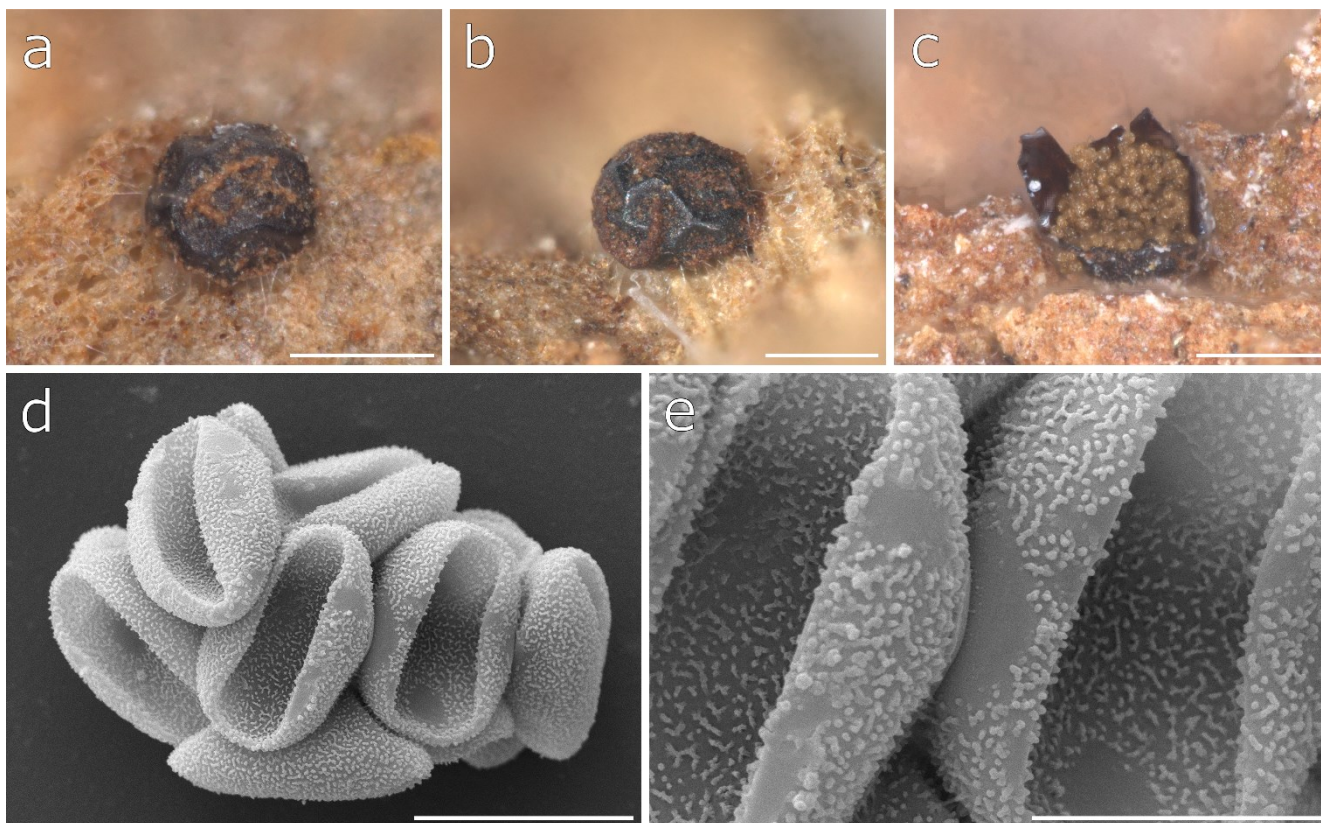
**Figure S23.** *Licea* cf. *craterioides* (LE F-349034). a–c — sporangia, d — spores in TL, e — inner peridium in SEM, f, g — spores in SEM. Scale bars: a–c — 100  $\mu\text{m}$ , d — 10  $\mu\text{m}$ , e, f — 5  $\mu\text{m}$ , g — 2  $\mu\text{m}$ .



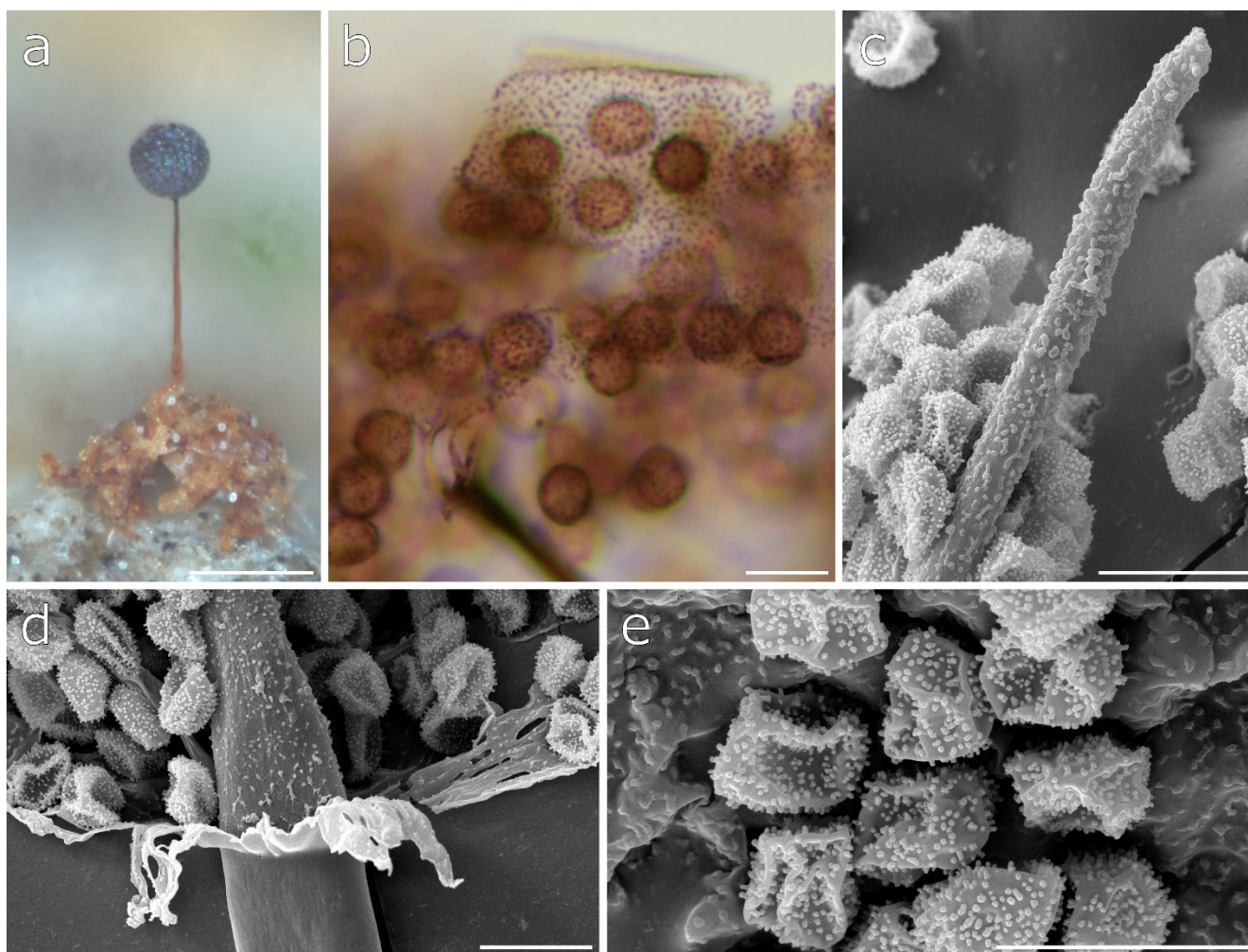
**Figure S24.** *Licea kleistobolus* (LE F-349188). a — sporangia, b — spores. Scale bars: a — 100  $\mu\text{m}$ , b — 20  $\mu\text{m}$ .



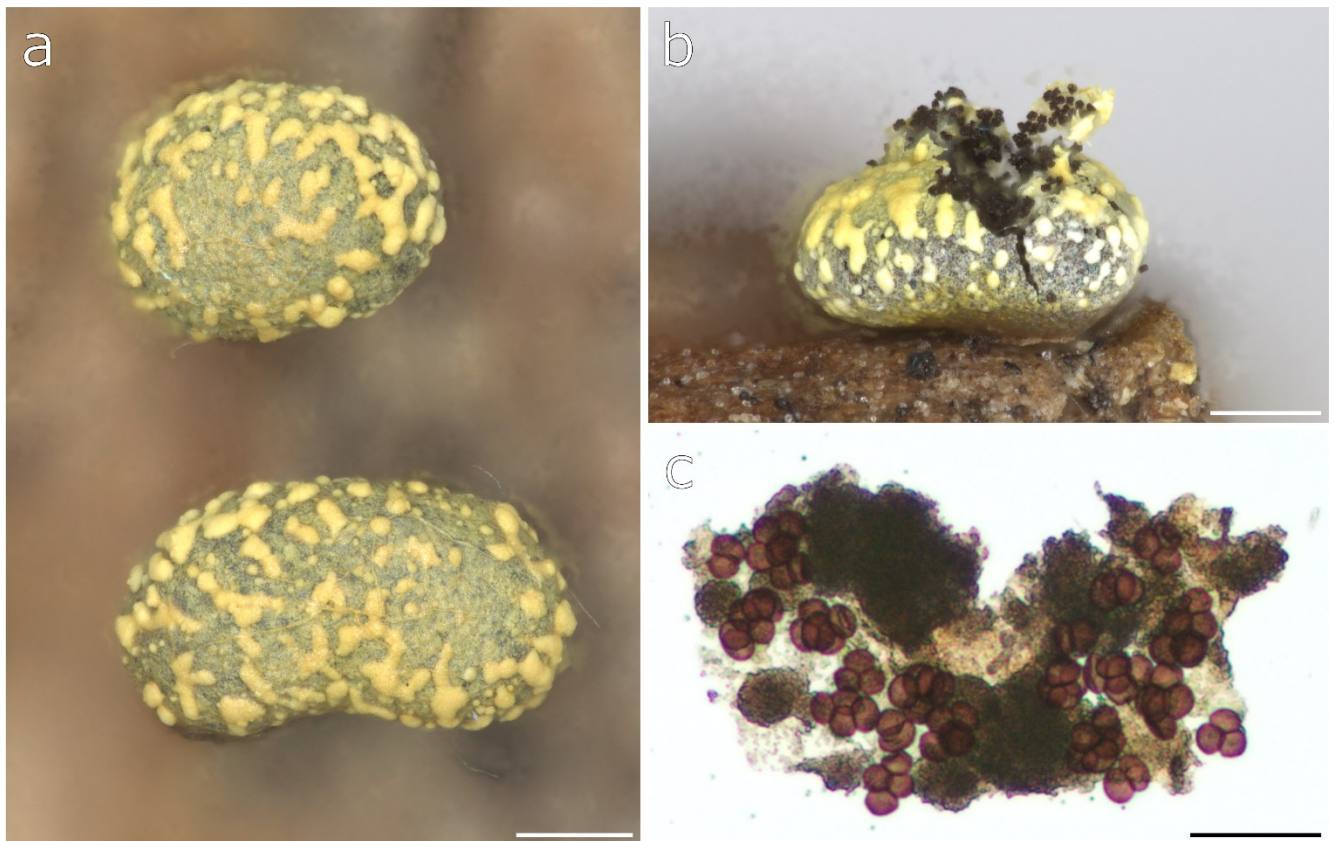
**Figure S25.** *Licea pseudoconica* (LE F-349035). a, b — sporangia. Scale bars: a — 200  $\mu\text{m}$ , b — 100  $\mu\text{m}$ .



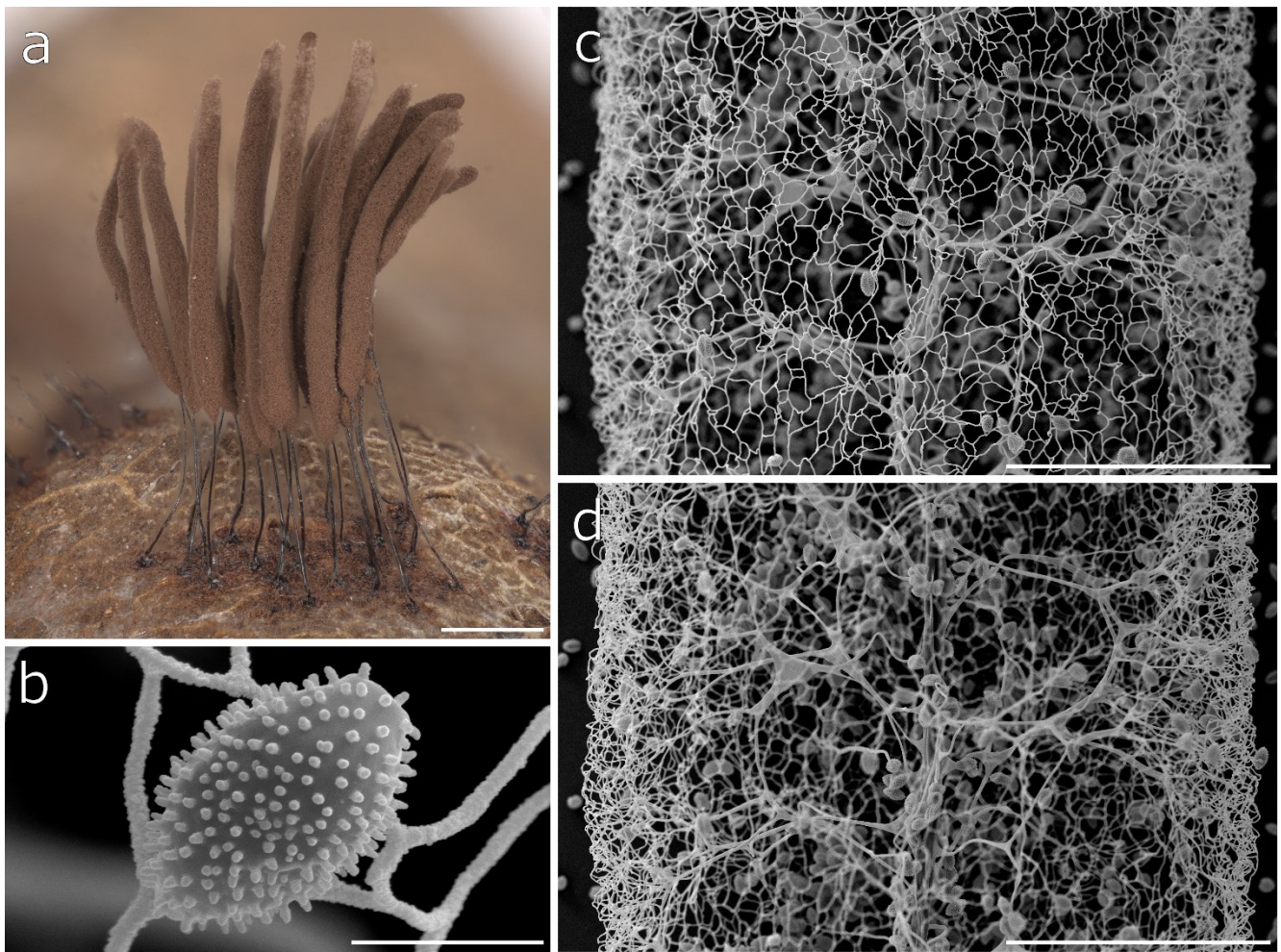
**Figure S26.** *Licea synchrysozona* (a, c, d, e: LE F-349028, b: LE F-349022). a–c — sporangia, d, e — clustered spores in SEM. Scale bars: a–c — 200  $\mu\text{m}$ , d — 10  $\mu\text{m}$ , e — 5  $\mu\text{m}$ .



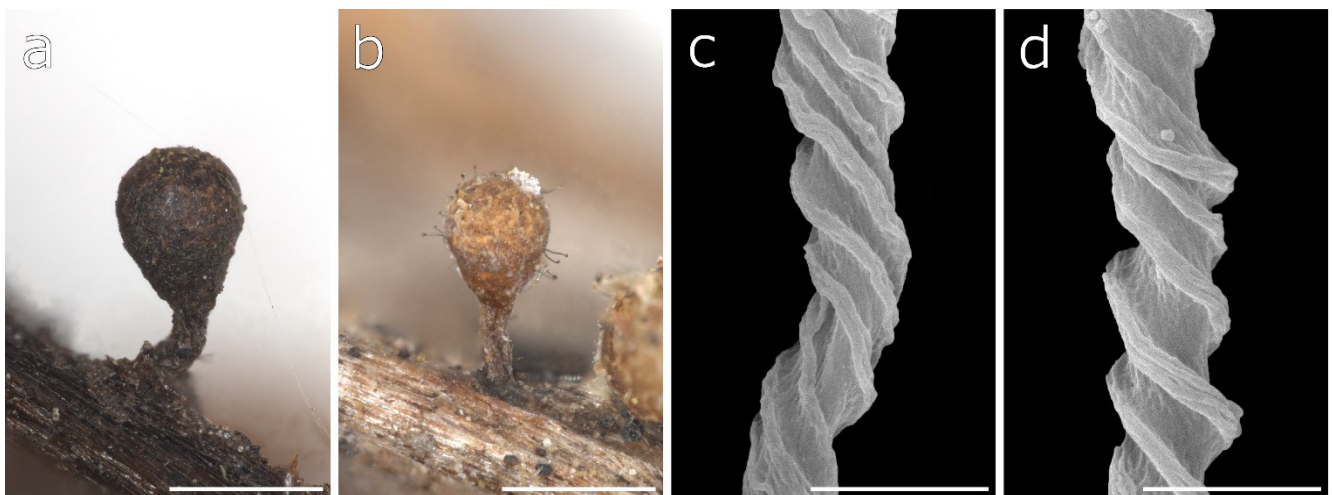
**Figure S27.** *Macbrideola scintillans* var. *verrucosa* (a: LE F-349167, b: LE F-349088, c–e: LE F-349165). a — sporangium, b — verrucose peridium, spores and columella in TL, c — columella, d — peridial collar and columella, e — verrucose inner peridium and spores. Scale bars: a — 100  $\mu\text{m}$ , b–e — 10  $\mu\text{m}$ .



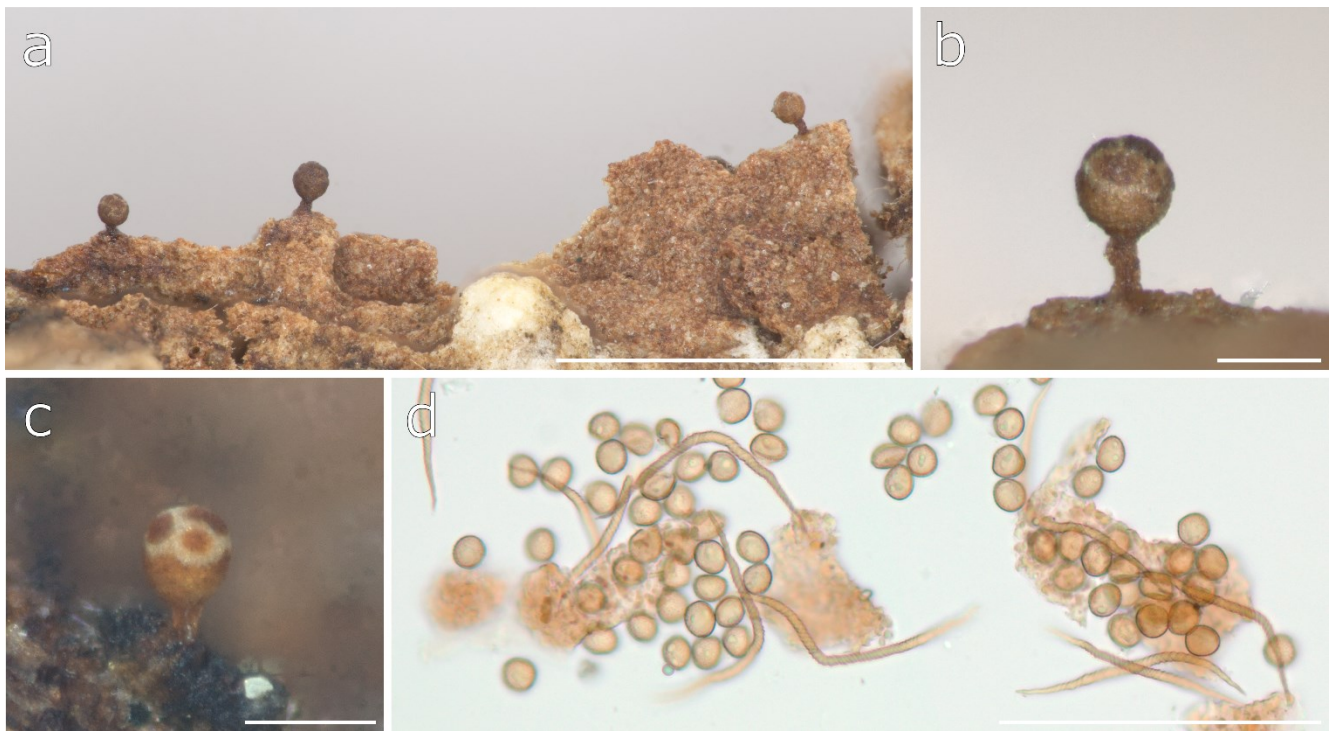
**Figure S28.** *Nannengaella lakhanpalii* (LE F-349057). a, b — sporangia, c — clustered spores and peridium in TL. Scale bars: a, b — 200  $\mu\text{m}$ , c — 50  $\mu\text{m}$ .



**Figure S29.** *Stemonitis herbatica* (LE F-348810). a — sporangia, b — spore in SEM, c, d — capillitial net in SEM. Scale bars: a — 1 mm, c, d — 100  $\mu\text{m}$ , b — 5  $\mu\text{m}$ .



**Figure S30.** *Trichia* cf. *taeniifila* (LE F-348773). a, b — sporangia, c, d — elaters in SEM. Scale bars: a, b — 500  $\mu\text{m}$ , c, d — 5  $\mu\text{m}$ .



**Figure S31.** *Trichia titanica* (a: LE F-349102, b: LE F-349025, c, d: unvouchered specimen). a–c — sporangia, d — elaters and spores in TL. Scale bars: a — 1 mm, b–d — 100  $\mu\text{m}$ .