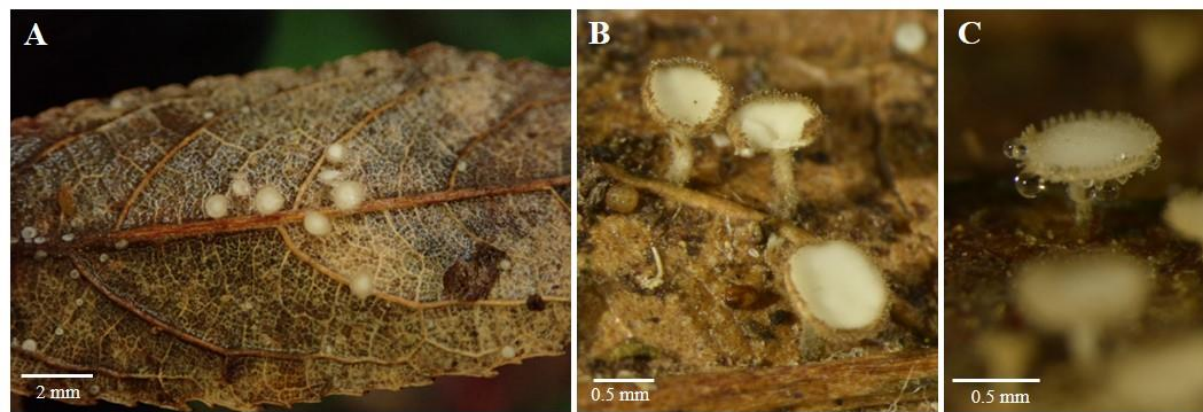


Maximum-likelihood (ML) tree of *Brunnipila* base on ITS, bootstrap=100

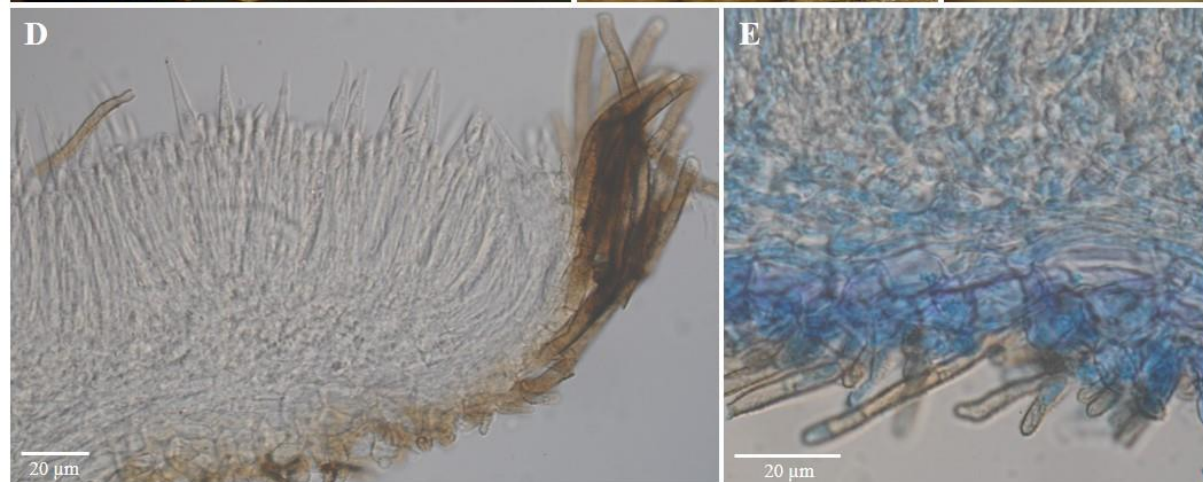
sequence reference:

- Šandová, M., Nilsson, R. H., & Kolařík, M. (2018). Relationships within *Capitotricha bicolor* (Lachnaceae, Ascomycota) as inferred from ITS rDNA sequences, including some notes on the *Brunnipila* and *Erioscyphella* clades. *Mycological Progress*, 17, 89-101.
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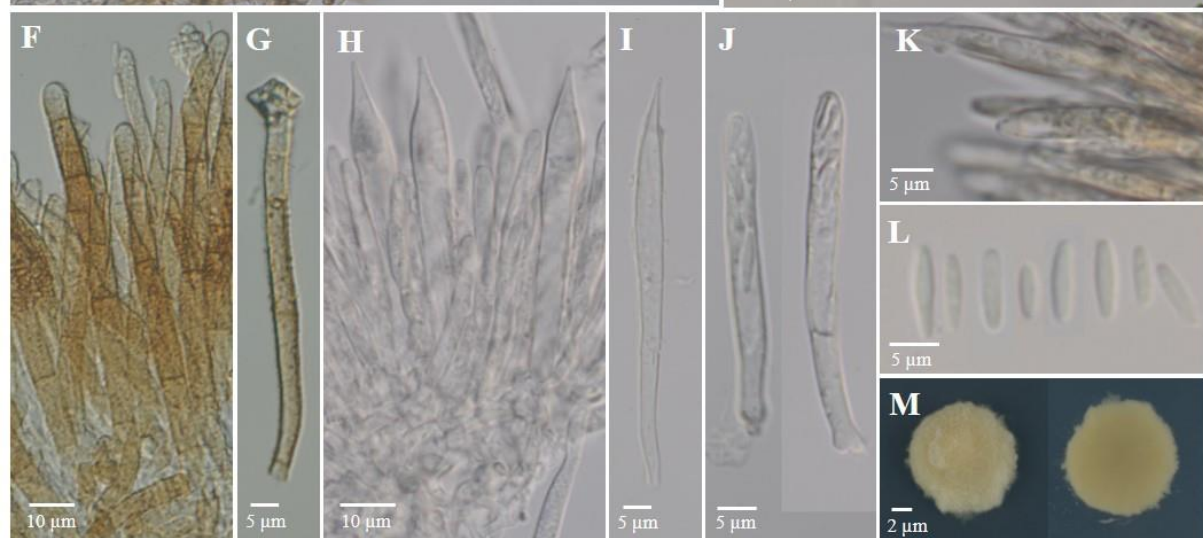


PD2303_23_Brunnipila fuscescens

Description: **Apothecium** scattered on fallen leaf, cupulate, 0.5-0.9 mm diam, 0.3-0.5 mm high. **Disc** concave or flat, sometimes convex, margin with brown hair. **Receptacle** stipitate, cover hair. **Stip** central, cylindrical. **Hair** 20.0-113.4 x 3.1-5.0 μm , cylindrical, apex round, septate, brown, apex lighter in color, granulated on surface, apex with crystals. **Ectal excipulum** 11.6-32.6 μm thick, textura angularis, cell 6.8-23.3 x 4.6-14.5 μm , hyaline to light brown. **Medullary excipulum** 16.1-60.8 μm thick, textura intricata, cell 1.4-4.9 μm wide, hyaline. **Asci** cylindrical 44.5-55.5 x 3.3-4.0 μm , inoperculate, apex amyloid, arise from croziers, 8-spored. **Ascospores** subcylindrical to fusoid, 4.6-8.7 x 1.2-1.5 μm , hyaline, aseptate, smooth. **Paraphyses** lanceolate with sharp top, 2.5-6.2 μm at widest, aseptate, hyaline, exceeding the asci 13.7-29.5 μm . **Colony** form spore on PDA at 20°C after 1 month, 9.7-11.2 mm diam, irregular margin, cream yellow, reverse side same color.



Note: *B. fuscescens* usually grows on the cupules or leaves of *Fagus*, but the substrate of PD2303_23 cannot be determined. The ascus of *B. fuscescens* is 30–44 x (3–)3.5–4.5 μm , shorter than PD2303_23, and ascospores ((5.8 –)6.5–8.5(–10.5) x 1.3–1.9 μm) is slightly longer than PD2303_23. In addition, the stip of *B. fuscescens* on *Quercus* leaves are short, the hairs are usually darker, and the ascospores are wider (Suková, 2005), PD2303_23 is relatively similar to *B. fuscescens* on *Fagus*. PD2303_23 is relatively close to Japanese materials (AB267645, AB481255) in ML tree. The substrates of the two materials are *Citrus junos* leaves and unidentified leaves, but no description has been found.



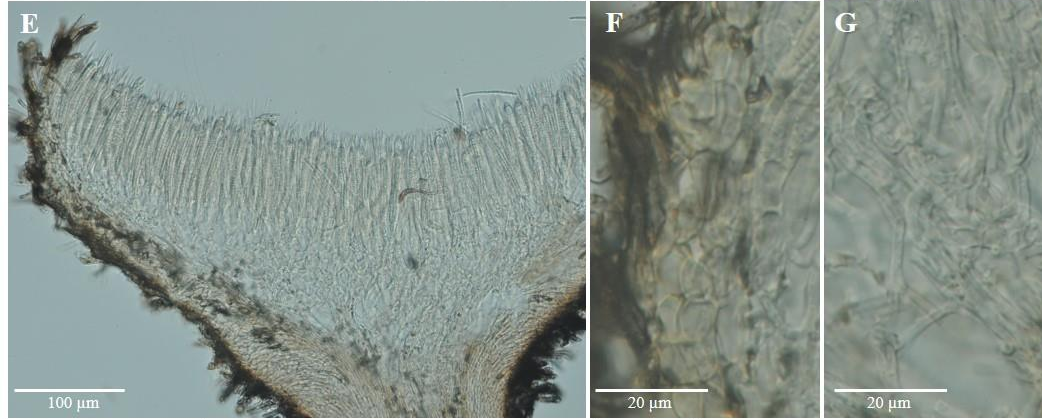
Reference: Suková, M. (2005). A revision of selected material of lignicolous species of *Brunnipila*, *Capitotricha*, *Dasyscyphella* and *Neodasyscypha* from the Czech Republic. *Czech Mycology*, 57(1/2), 139.

NT2405_09_Brunnipila fuscescens (A-C) Apothecium. (D) Vertical section of apothecium. (E) Ectal excipulum. (F-G) Hair. (L-I) Paraphyses. (J) Asci. (K) Amyloid reaction (in IKI). (L) Ascospores. (M) Colony on PDA.

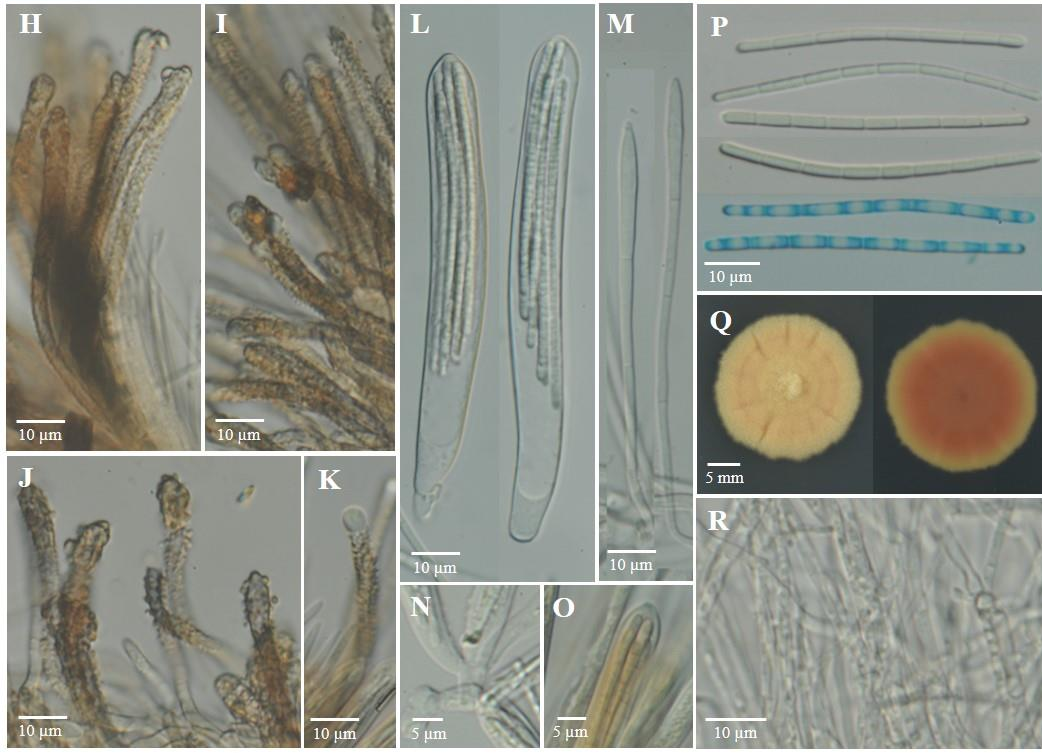


NT2405_09_Brunnipila sp.?

Description: **Apothecium** gregarious or scattered on culms of *Yushania niitakayamensis*. **Disc** white to beige, concave to flat, margin with brown hair. **Receptacle** stipitate, cover brown hair. **Stip** central, cylindrical, base dark brown. **Hair** 38.5-99.4 x 2.6-4.5 μm , cylindrical, swollen top, brown, surface covered with rough granule, top attached irregular resinous substance, resinous substance hyaline to brown, sometimes with smooth spherical top. **Ectal excipulum** 14.9-71.9 μm thick, textura angularis to prismatica, cell 6.5-10.8 x 4.0-8.2 μm , light brown. **Medullary excipulum** 14.0-94.3 μm thick, textura intricata, cell 1.0-2.1 μm wide, hyaline. **Asci** 93.5-103.7 x 9.3-11.5 μm , cylindrical, amyloid, simple-septate ascus base, 8-spored, multi-seriate. **Ascospores** 53.5-64.9 x 1.2-2.1 μm , filiform, 7 septate, hyaline. **Paraphyses** lanceolate, 2.5-3.8 μm at widest, septate, hyaline, exceeding the asci 1.0-23.3 μm . **Colony** form spore on PDA at 20°C after 1 month, 21.3-22.3 mm diam, velutinous, radially sulcate, peach color, reverse side salmon pink, hyphae 1.1-2.5 μm wide, hyaline.



Note: NT2405_09 was identified as the genus *Brunnipila* due to the brown color of the hairs and the resinous materials at the top. *Brunnipila* species growing on Poaceae stems includes *B. pseudocannabina*, *B. palearum* and *B. calycioides* (on *Juncus trifidus*), but ascospores all are narrowly fusoid and do not match the size (*B. pseudocannabina* ascospores: 10–15×2–3 μm , 0-1 septate; *B. palearum* ascospores: 10.0–14.5 × 1.5–2.0 μm , non-septate; *B. calycioides* ascospores: 13.2– 16 × 2.4–2.7 μm , non-septate) (Tochihara et al., 1985; Šandová et al., 2018), there are no other *Brunnipila* species with filiform ascospores, and NT2405_09 may be a new species.



Reference:

Tochihara, Y., Sasagawa, R., & Hosoya, T. (1985). Enumeration of remarkable Japanese discomycetes (11): Notes on three species of Lachnaceae new to Japan with one new combination. *Z. Mykol*, 6(49).

Šandová, M., Nilsson, R. H., & Kolařík, M. (2018). Relationships within *Capitotricha bicolor* (Lachnaceae, Ascomycota) as inferred from ITS rDNA sequences, including some notes on the *Brunnipila* and *Erioscyphella* clades. *Mycological Progress*, 17, 89-101.

NT2405_09_Brunnipila sp. (A-D) Apothecium. (E) Vertical section of apothecium. (F) Ectal excipulum. (G) Medullary excipulum. (H-K) Hair. (L) Asci with ascospores. (M) Paraphyses. (N) Asci base. (O) Amyloid reaction (in IKI). (P) Ascospores. (Q) Colony on PDA. (R) Hyphae (1/3PDA).

ITS and LSU

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