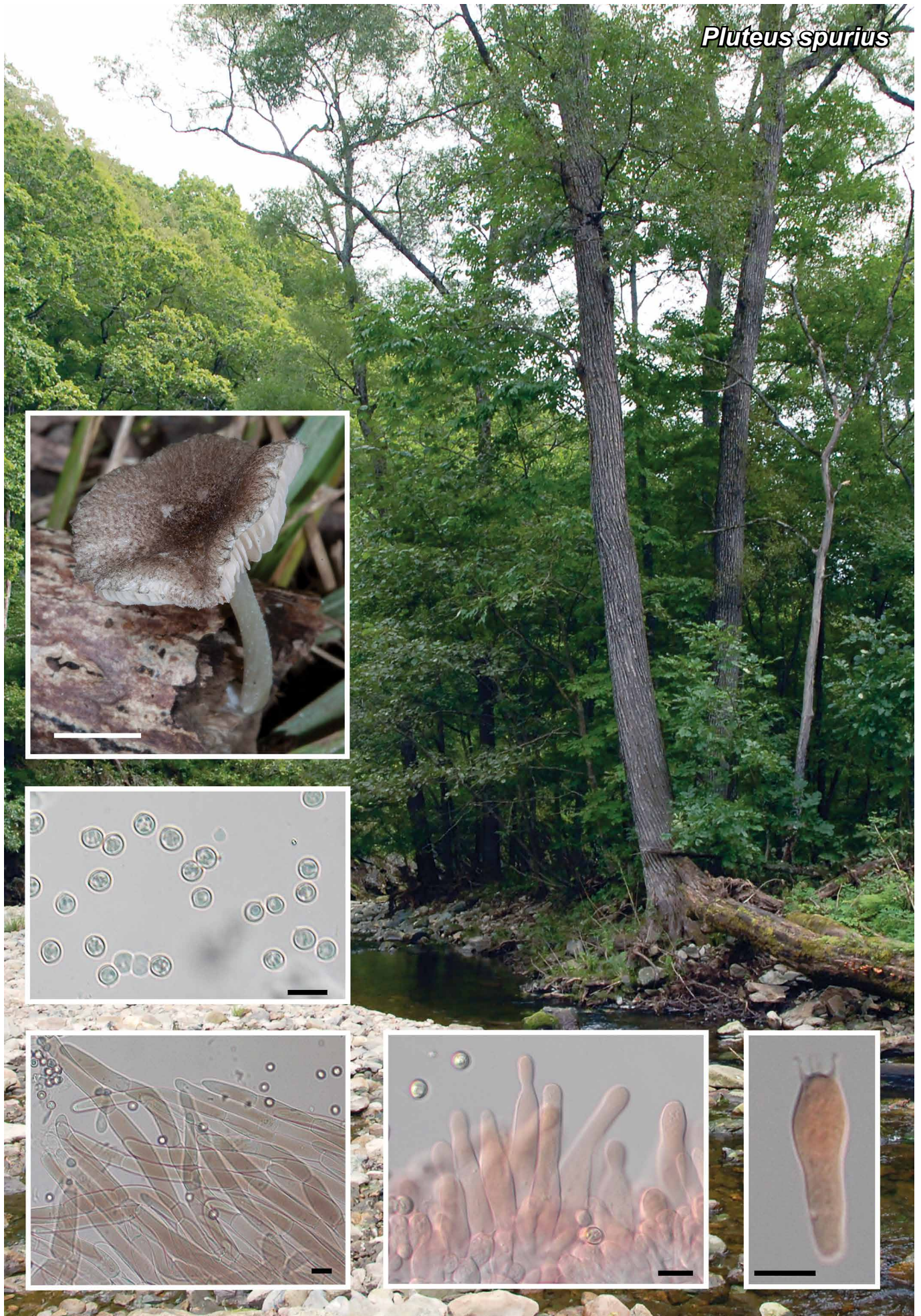


Pluteus spurius



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***Pluteus spurius* E.F. Malysheva & Malysheva, sp. nov.**

Etymology. Name reflects the similarity of the newly described species with a group of closely related taxa and the possibility of confusion when definition is based only on macroscopic features.

Classification — *Pluteaceae*, *Agaricales*, *Agaricomycetes*.

Basidiocarp small. **Pileus** 10–18 mm diam, at first hemispherical, later applanate and becoming concave, without umbo; margin even, not striated, slightly undulating; not hygrophorous; surface fibrillose-squamulose, covered with small greyish brown or ash brown squamules, densely located at centre, and adpressed fibrils becoming sparse towards margin with white context exhibited between them. **Lamellae** free, fairly distant, ventricose, white becoming pink, with serrulated, concolorous edges. **Stipe** 15–25 × 1–2.5 mm, cylindrical, somewhat broadening towards base, but without basal bulb, whitish or with light ochraceous shades, slightly pruinose and longitudinally fibrillose. **Context** in pileus and stipe white. **Smell** and **taste** not distinctive. **Basidiospores** (5.2–)5.5–6.5(–7) × (4.8–)5–5.6(–6.4) μm ($L_{av} = 5.9$, $W_{av} = 5.3$), $Q = 1.00–1.22$, $Q^* = 1.10$, globose to subglobose; thick-walled; hyaline in KOH, with one large or numerous small guttules. **Basidia** 20–35 × 7–8.5 μm, 4-spored, broadly clavate with a medial constriction at maturity. **Cheilocystidia** rather numerous to abundant, forming sterile layer at the lamella edge, 30–54 × 9.5–15(–17) μm, mainly lageniform, inflated-lageniform or fusiform, rarely utriform or clavate, with short pedicels and often with subglobose apex; thin-walled; hyaline. **Pleurocystidia** absent. **Pileipellis** a cutis, made up of slightly thick-walled hyphae, 10–12 μm wide, with intracellular brown pigment; transforming into a trichoderm at centre of pileus, with bundles of fusiform, usually septate, terminal elements more than 100 μm long and 12–22 μm wide. **Stipitipellis** a cutis, made up of long, cylindrical, hyaline hyphae, 4–8 μm wide. **Caulocystidia** present in all parts of stipe, scarce, in bundles, cylindrical or fusiform, 50–120 × 8–10(–14) μm; thin- or slightly thick-walled; hyaline. **Clamp connections** absent in all parts examined.

Habitat & Distribution — Solitary, on decaying deciduous wood or soil, in floodplain broadleaf or mixed coniferous-broadleaf forests. Known from two localities in the Russian Far East.

Colour illustrations. Russia, Kedrovaya Pad' Biosphere Nature Reserve. Basidiocarp; basidiospores; pileipellis; cheilocystidia; basidia (all from holotype). Scale bars = 5 mm (basidiocarp), 10 μm (microscopic structures).

Typus. RUSSIA, Primorye Territory, Kedrovaya Pad' Biosphere Nature Reserve, floodplain of Kedrovaya River, broadleaf forest, on decaying wood of deciduous tree, 4 Sept. 2011, V. Malysheva (holotype LE 312866; ITS and LSU sequences GenBank MK982290 and MK982303, MycoBank MB831299).

Additional material examined. RUSSIA, Primorye Territory, vicinities of Vladivostok, Ocean Ridge, mixed coniferous-broadleaf forest (*Abies holophylla*, *Pinus koraiensis*, *Juglans mandshurica*, *Acer* spp.), on soil, 9 Sept. 2013, E. Malysheva (LE 312869, ITS and LSU sequences GenBank MK982289 and MK982302).

Notes — *Pluteus spurius* is characterised by small-sized basidiocarps, with greyish brown coloured and fibrillose-squamulose pileus, serrulated edges of lamellae, pileipellis as a cutis with long fusiform terminal elements, absence of pleurocystidia, numerous caulocystidia, and globose or subglobose basidiospores. Based on its pileipellis structure *P. spurius* is placed in sect. *Celluloderma*.

Pluteus spurius is morphologically close to *P. hispidulus* var. *hispidulus*, *P. hispidulus* var. *cephalocystis*, *P. exiguus*, *P. karstedtia* and *P. hispidulopsis* in terms of basidiocarp size, squamulose pileus of similar colouration, and pileipellis structure, but can be distinguished from them due to other microscopic features (for detailed discussion: see Additional data below).

The molecular data (generated nrITS sequences) confirmed the morphological differences between all species discussed and supported the recognition of *Pluteus spurius* as a separate taxon (see phylogenetic tree on the page with *Pluteus liliputianus* description = FP1023).

Additional data

Pluteus spurius can be distinguished from *P. hispidulus* var. *hispidulus* by the cheilocystidia shape, slightly smaller (vs (5.2–)6–8(–8.5) × (4–)5–6 μm), globose or subglobose basidiospores and the presence of caulocystidia (Vellinga 1990).

Pluteus hispidulus var. *cephalocystis* differs by ellipsoid basidiospores (Vellinga 1990) and the absence of caulocystidia (Malysheva et al. 2016).

Pluteus exiguus differs in the shape of cheilocystidia, ellipsoid or slightly amygdaliform basidiospores, and pileipellis organized as a trichoderm (Vellinga 1990).

Pluteus karstedtia is distinguished by sulcate-striate margin of pileus, rare cheilocystidia of slightly different shape, and the absence of caulocystidia (Menolli et al. 2015). In the phylogenetic analyses, the sequences of *P. karstedtia*, including one from the holotype, form a sister clade to *Pluteus spurius*.

Pluteus hispidulopsis differs in the fringed margin of pileus, smaller basidiospores (5–5.5 × 4.5–5.5 μm), the presence of pleurocystidia, differently shaped cheilocystidia and the absence of caulocystidia (Menolli et al. 2015).