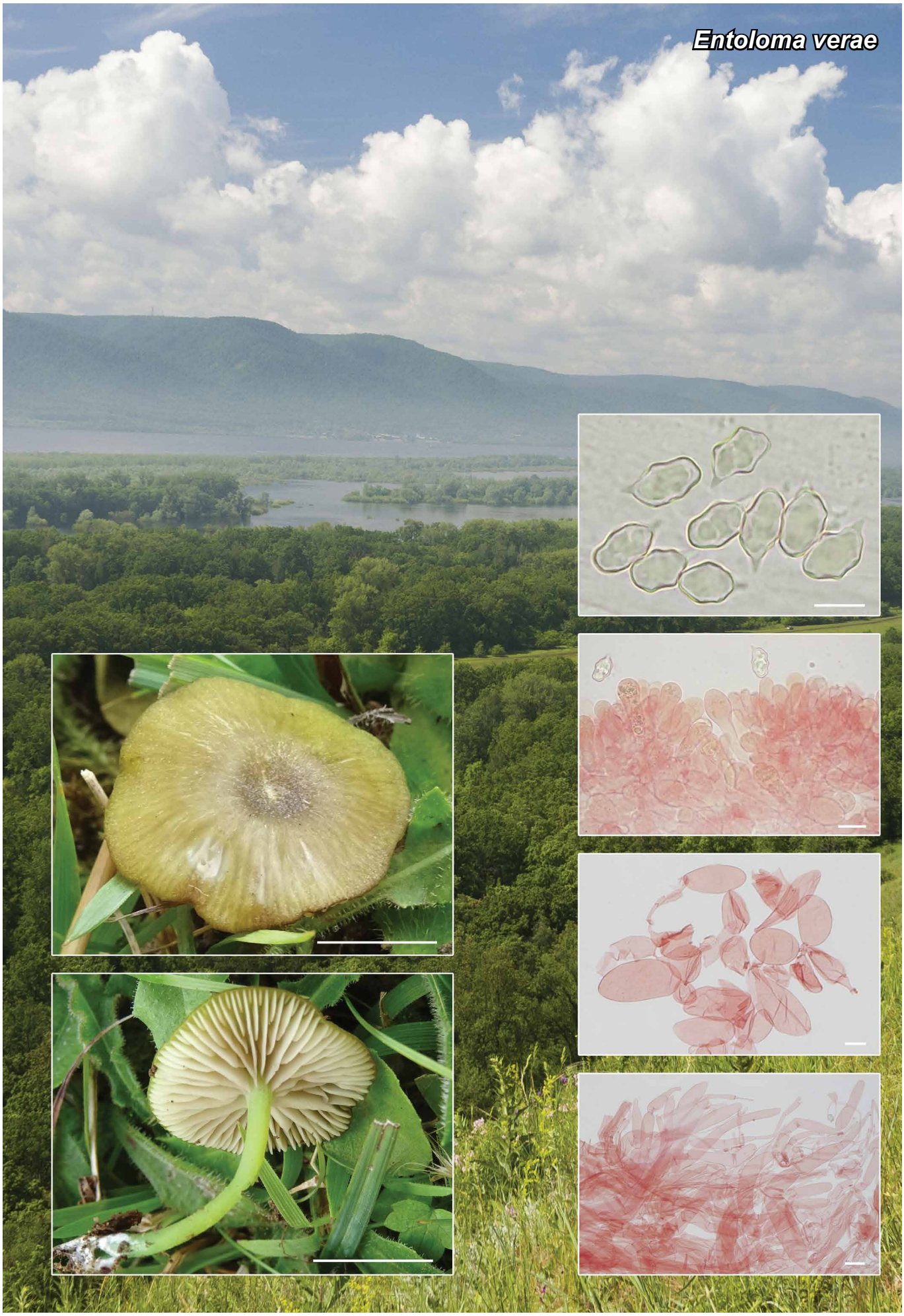
Entoloma verae

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Entoloma verae O.V. Morozova, Noordel., Reschke, F. Salzmann & Dima, *sp. nov.*

Etymology. Named in honour of the Russian mycologist Vera Malysheva, as one of the collectors of the type specimen of the new species and one of the first investigators of fungi of Zhiguli Mts, the type locality.

Classification — *Entolomataceae*, *Agaricales*, *Agaricomycetes*.

Basidiomata medium-sized, collybioid. *Pileus* 15–40 mm diam, hemispherical with slightly depressed centre, then expanding to convex and plano-convex with slightly umbilicate centre, with deflexed then straight margin, slightly hygrophanous, translucently striate usually up to 1/2–2/3 of radius, olive, olive yellow, greyish yellow, yellow-green, with darker striae and centre (2B5–8, 2C4–8, 2D4–6; Kornerup & Wanscher 1978), covered with brownish scales, especially in the centre, becoming smooth towards the margin. *Lamellae* moderately distant, adnate-emarginate, with 3–5 lamellulae, adnate, decurrent with short tooth, slightly emarginate to arcuate, whitish, becoming pinkish, with entire or irregular, concolourous edge. *Stipe* 20–70 × 1–3 mm, cylindrical or slightly broadened towards the base, smooth, polished, yellowish green (29A6–8), staining bright greenish blue when bruised, white tomentose at the base. *Context* greenish, discolouring to bright greenish blue when bruised. *Smell* indistinct or not reported, *taste* not reported. *Basidiospores* 10–15.5 × 7–9 µm, av. 12.5 × 8 µm, Q = 1.3–2.0, Qav = 1.6, heterodiametrical with 6–8 angles in side-view. *Basidia* 33.5–39 × 9–11.5 µm, 2–4-spored, clavate, clampless. *Lamella edge* fertile or heterogeneous, composed of basidiola-like clavate cells intermixed with rare basidia. *Cheilocystidia* not differentiated. *Hymenophoral trama* regular, made up of 5–10 µm wide, cylindrical hyphae. *Pileipellis* a trichoderm to hymenoderm in the central part with elongated to spherical terminal elements, 40–150 × 20–35 µm, a cutis with transition to a trichoderm towards the margin composed of ascending cylindrical to fusiform hyphae, 10–20 µm broad. *Caulocystidia* absent. *Clamp connections* absent.

Habit, Habitat & Distribution — Solitary or in small groups on soil on calcareous grasslands. Known from Russia (European part and Caucasus), Germany, the Netherlands and China (GenBank JQ281488).

Typus. Russia, Samara Region, Stavropolsky District, Zhiguli Nature Reserve, vicinities of Bakhilova Polyana Village, way to Gudronny Village, N53.414444° E49.73425°, 16 Sept. 2003, *E. Malysheva & V. Malysheva* (holotype LE 227613; ITS and LSU sequences GenBank OK161251 and OK161277, MycoBank MB 841839).

Additional materials examined. Germany, Heimberg, near Schloss Böckelheim, oligotrophic meadow, 27 Oct. 2017, *K. Reschke* (KaiR990, ITS sequence GenBank MZ611683). – The Netherlands, prov. Limburg, Nijswiller-Noord, N50.81533° E5.95455°, 21 Aug. 2019, leg. *F. & R. Salzmann* (L-0607931, ITS sequence GenBank OK161252) – Russia, Karachaevo-Cherkesia Republic, Teberda Nature Reserve, Jamagat gorge, N43.45374° E41.82818°, a.s.l. 1880 m, 13 Aug. 2009, leg. *O. Morozova* (LE 312551, ITS sequence GenBank OL744072)..

Notes — During the phylogenetic study of the subgenus *Cyanula*, two genotypes fitting the current morphological concept of *Entoloma incanum* were revealed with 14 substitution and indel differences between them. For the one that is widespread in Europe (including the country of the type locality in Sweden), Siberia and the Far East of Russia, i.e., *Entoloma incanum* s.str., we have chosen a neotype corresponding to the protologue (Fries 1821) and the current understanding of the species (Noordeloos 1992):

Agaricus incanus Fr., Syst. mycol. (Lundae) 1: 209 (1821) MycoBank: MB 372149. Neotype (designated here, MBT 10003730): Sweden, Östersund, Torvalla, Ängsmon västra, Tysjöarna NR, 2 Sept. 2016, *O. Morozova* (LE 312503, ITS and LSU sequences GenBank OK161247 and OK161275).

The second species is described here as new to science. *Entoloma verae* differs morphologically from typical *E. incanum* by the generally larger spores measuring 12.5 × 8 µm, on average, vs 10.5 × 7.5 µm on average in the neotype. But the size of spores can vary significantly, sometimes related to the presence of the 2-spored basidia.

See the phylogenetic tree provided in Fungal Planet 1349 elsewhere in this paper.

Colour illustrations. Russia, Samara region, the bank of the Volga River, Zhigulevsky Nature Reserve (type locality, photo credit V. Malysheva). Basidioma *in situ* from L-0607931 (photo credit F. & R. Salzmann); spores; cheilocystidia; pileipellis in central part and near the margin of pileus (all from holotype). Scale bars = 1 cm (basidiomata), 10 µm (spores and microstructures).

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