

Outlineoffungi.org – Note 1541 *Exsudoporus*

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Exsudoporus Vizzini, Simonini & Gelardi

The genus *Exsudoporus* was proposed by Vizzini, Simonini & Gelardi (Vizzini 2014) to accommodate *E. permagnificus* (\equiv *Boletus permagnificus*), *E. floridanus* (\equiv *Boletus frostii* subsp. *floridanus*), and *E. frostii* (\equiv *Boletus frostii*), a stipitate-pileate boletoid species with primary red to rarely yellow pores that often form yellow exudate droplets when young, with conspicuously reticulate or deeply reticulate-alveolate stipe, and intensely blueing tissues when injured. Later its diagnosis was amended by Biketova and Gelardi (Biketova et al. 2022) and one more species (*E. ruber* \equiv *Leccinum rubrum*) has been added, based on morphology and multigene phylogeny (ITS, LSU, *tefl- α* , and *rpb2*). Main additions to the diagnosis were: scaly patches on stipe, tissue can be unchanging when injured, stipe context varies from inamyloid to amyloid or dextrinoid.

According to several multigene phylogenetic analyses (Wu et al. 2016, Biketova et al. 2022, Wang et al. 2024), *Exsudoporus* is sister to the *Boletus subsplendidus* clade, which potentially can be a member of *Exsudoporus*, but their common branch has weak or no statistical support. However, based on 5-gene phylogenetic reconstruction by Farid et al. 2021, *B. subsplendidus* clusters as a sister clade to *Butyriboletus* with moderate statistical support. Future phylogenomic analysis and deeper morphological studies can clarify generic belonging of this species.

However, there are opinions that *Exsudoporus* should be merged with *Butyriboletus* as a later synonym (Wu et al. 2016) or treated as the sect. *Exsudoporus* of the latter genus (Wang et al. 2024). The weak point of both papers is lack of studies of both the *Exsudoporus* and *Butyriboletus* type species, as well as lack of sufficient sequences and poor taxonomic representation of *Exsudoporus* spp. in phylogenetic analyses. Moreover, sequences of the same marker loci of *Exsudoporus* spp. from Biketova et al. (2022) were omitted by Wang et al. (2024) and not used in their multigene (ITS, LSU, *tefl- α* , and *rpb2*) phylogenetic analysis. Also members of *Exsudoporus* are quite different from *Butyriboletus* species by multiple characteristics: (1) an overall reddish color of the basidiomes, (2) red pores, (3) non-stuffed pores (although Smith & Thiers (1971), quoting Coker, indicated stuffed pores for *E. frostii*), (4) hymenophore exuding golden-yellow droplets in fresh, young specimens, (5) stipe surface strongly and coarsely reticulate to reticulate-alveolate or with scaly patches, (6) generally stronger bluing reaction on bruising (with the exception of *E. ruber*) and (7) hyphae of the stipe base context usually weakly to strongly amyloid, although the iodine test may also result in a negative or even “pseudoamyloid” (dextrinoid) reaction (Biketova et al. 2022).

Exudate droplets on the hymenophore are a rather rare feature among the *Boletaceae*. Such character was also noticed in *Amoenoboletus*, in particular in *A. weberi*, but needs more observations in other taxa (Biketova et al. 2022). *Amoenoboletus* differs from *Exsudoporus* by generally smaller basidiomes (pileus up to 6.5 cm diam., stipe up to 7 \times 1.7 cm) displaying a fibrillose-squamulose to areolate pileal surface, reddish granular-punctate or squamulose to scaly or floccose stipe surface, mainly non-blueing tissues or slightly blueing (which can be sometimes observed on pores and stipe of *A. brachysporus*), and shorter basidiospores (average sizes 7.5–14 \times 5–6.5 μ m, Qm = 1.26–2.39) without a distinctive suprahilar depression (Wu et al. 2021, Biketova et al. 2022, Li et al. 2024).

References

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Entry by

Alona Yu. Biketova, Mycological Society of Israel, P.O. Box 164, Pardesiya 42815, Israel;
British Mycological Society, 1 Naoroji Street, London, WC1X 0GB, United Kingdom

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