

## Outlineoffungi.org – Note 1553 *Vararia*

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### *Vararia* P. Karst.

The genus *Vararia* is a corticioid wood-inhabiting fungal genus with a wide distribution, typified by *V. investiens* (Schwein.) P. Karst. It was first described by Karsten as a subgenus of *Xerocarpus* P. Karst. for *Xerocarpus alutarius* (Berk. & M. A. Curtis) P. Karst., which was later found to be a synonym of *Radulum investiens* Schwein. Karsten raised *Xerocarpus* subgen. *Vararia* to the generic rank (Karasinski 2010). The genus is characterized by the resupinate basidiomata, a dimitic hyphal structure with simple-septate or clamped generative hyphae and often dextrinoid dichohyphae in Melzer's reagent, the presence of gloeocystidia, and variously-shaped smooth basidiospores with or without an amyloid reaction (Karnste 1898, Boidin and Lanquetin 1975, Boidin 1980, Bernicchia and Gorjón 2010, Deng et al. 2024). The species of *Vararia* are found on fallen angiosperm branches, dead woody or herbaceous stems or occasionally on gymnosperm wood (Yurchenko et al. 2017). Based on MycoBank and Index Fungorum, *Vararia* has registered 106 specific and infraspecific names, and the actual number of the species has reached up to 84, currently known, and they occur mainly in the tropical and subtropical areas of the world (Cunningham 1955, Gilbertson 1965, Boidin 1967, Pouzar 1982, Boidin and Lanquetin 1987, Stalpers 1996, Boidin and Gilles 1999, Larsson and Larsson 2003, Bernicchia and Gorjón 2010, Duhem and Buyck 2012, Sanyal et al. 2012, Nakasone 2015, Liu and He 2016, Dai et al. 2021, Zou et al. 2022, Deng and Zhao 2023, Deng et al. 2024).

Classification of the kingdom of fungi has been updated continuously, based on the frequent inclusion of data from DNA sequences in many phylogenetic studies (Yurchenko et al. 2020). These pioneering research studies into the family *Peniophoraceae* were just the prelude to the molecular systematics period (Zou et al. 2022). The phylogenetic diversity displayed by corticioid fungal species, based on ITS, and nrLSU, revealed that the taxa of *Peniophoraceae* were nested in the russuloid clade, which holds a considerable share of the phylogenetic framework, and included the genera of *Asterostroma* Masee, *Baltazaria* Leal-Dutra, Dentinger & G.W. Griff., *Dichostereum* Pilát, *Gloiothele* Bres., *Lachnocladium* Lév., *Michenera* Berk. & M.A. Curtis, *Peniophora* Cooke, *Scytinostroma* Donk, *Vesiculomyces* E. Hagstr. and *Vararia* (Larsson and Larsson 2003, Larsson et al. 2004, Larsson 2007, Leal-Dutra et al. 2018, Zou et al. 2022, Li et al. 2023). *Scytinostroma* is similar to *Vararia*, which usually differed in having the typical dichohyphae (Bernicchia and Gorjón 2010). The taxonomic distinction between *Scytinostroma* and *Vararia* has been questioned (Hallenberg 1985, Boidin and Lanquetin 1987, Stalpers 1996, Boidin et al. 1998). However, there has been general agreement that the two genera were closely related and that they together made up a natural group. Larsson and Larsson (2003) strongly suggested that neither skeletal hyphae nor their branching patterns have any predictive power in a phylogenetic context.

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