

## Outlineoffungi.org - Note 1323 *Valtocarpus*

**Web-links:** [Index Fungorum](#), [Facesoffungi](#), [Mycobank](#), [GenBank](#)

*Valtocarpus* Gmshinskiy, Prikhodko, Bortnikov, Shchepin & Novozh.

*Valtocarpus* was erected by Gmshinskiy et al. (2023) under *Stemonitidaceae* (*Stemonitidales*, *Columellidia*, *Myxogastria*, *Eumycetozoa*, and *Amoebozoa*) to accommodate two species based on morphology and phylogenetic analyses using concatenated SSU, *tefl* $\alpha$ , and SSU sequences. The new genus was typified by *V. trechisporus* (Berk. ex Torrend) Gmshinskiy, Prikhodko, Bortnikov, Shchepin & Novozh and *V. megaloplegmus* Gmshinskiy, Prikhodko, Bortnikov, Shchepin & Novozh is the other accepted species. In this new genus, the sporophores form pseudoaethalia composed of densely packed sporangia. The sporangial stalks are hollow and tough, while the columella is irregular and branched. Capillitium extends from the columella, forming a loosely structured network with spindle-shaped swellings and multiple free ends. The spores are dark brown, and reticulate, with a network of continuous vertical ridges on their surface. Fruiting occurs in forests near sphagnum bogs or waterlogged forests on mosses like *Sphagnum* and *Polytrichum*, as well as small twigs and leaf litter. Phylogenetically, *Stemonitis flavogentia* and *Stemonitopsis aequalis* formed a sister clade to *Valtocarpus* (Gmshinskiy et al. 2023). *Symphytocarpus trechisporus* (Berk.) Nann. -Brem. is more commonly found in Europe and North America. Initially, this taxon was identified as a variety named *Stemonitis fusca* var. *trechispora* by Berk. ex Torrend (Torrend 1908). However, Macbride (1992) observed consistent differences in various specimens regarding their appearance, color, network structure, and spores, leading to the proposal of elevating the taxon to a species level: *Stemonitis trechispora* (Berk.) T. Macbr. (Macbride 1922). On the other hand, Lister (1925) considered that it is a poorly defined variety of *Stemonitis fusca* Roth. Subsequently, this taxon was included in their newly described genus as *Symphytocarpus trechisporus* (Ing & Nannenga-Bremekamp 1967). Finally, it was proposed to reassign *S. trechisporus* and *Amaurochaete trechispora* to a new genus named *Valtocarpus* (Gmshinskiy et al. 2023).

### References

- Gmshinskiy VI, Prikhodko IS, Bortnikov FM, Shchepin ON et al. 2023 – New genus *Valtocarpus* (*Myxomycetes*=*Eumycetozoa*): molecular phylogeny and morphological analysis of aethalioid species in the order *Stemonitidales*. *Protistology* 17(4), 216–232.
- Lister A. 1925 – A monograph of the Mycetozoa being a descriptive catalogue of the species in the Herbarium of the British Museum. [Revised by G. Lister]. British Museum (Natural History), London.
- Macbride TH. 1922 – The North American slime-moulds. A descriptive list of all species of *Myxomycetes* hitherto reported from the continent of North America, with notes on some extra-limital species. MacMillan, New York.
- Torrend C. 1908 – Les Myxomycètes. Étude des Espèces connues jusqu'ici. *Brotéria, Sér. Bot.* 7, 81.

### Entry by

**Maryam Tavakol Noorabadi**, Innovative Institute for Plant Health, Zhongkai University of Agriculture and Engineering, Guangzhou 510225, People's Republic of China

(Edited by **Kevin D. Hyde & Subodini N. Wijesinghe**)

Published online 31 May 2024