

Taxonomic position and world distribution of *Pachykytospora nanospora* (Polyporaceae)

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Pachykytospora nanospora A. David & Rajchenb., originally described from Gabon (West Africa), is transferred to the genus *Haploporus* as *H. nanosporus* (A. David & Rajchenb.) M. Piątek, *comb. nova*. The species is for the first time recorded for Cameroon and Papua New Guinea, and its world distribution is reviewed and presented on a map. A sectional subdivision of the genus *Haploporus* is proposed, with two sections: sect. *Haploporus* and sect. *Pachykytospora* (Kotl. & Pouzar) M. Piątek, *stat. & comb. nova*.

Key words: *Haploporus*, nomenclature, *Pachykytospora*, polypores, taxonomy

The genus *Pachykytospora* was established by Kotlaba and Pouzar (1963) to accommodate *Polyporus tuberculatus* Fr. The most important characters of the genus were resupinate basidiomes with light brown tubes, trimitic hyphal system, absence of cystidia, and thick-walled, ornamented basidiospores. Further additions and descriptions increased the species number to eight in *Pachykytospora*.

Dai and Niemelä (in Dai *et al.* 2002) have recently shown that *Pachykytospora tuberculosa* (Fr.) Kotl. & Pouzar has all essential characters of the genus *Haploporus*, typified by *H. odoratus* (Sommerf.) Bondartsev & Singer. The major differences were in macroscopic appearance of the species. *Haploporus odoratus* is a pileate fungus with small pores, whereas *Pachykytospora tuberculosa* forms resupinate basidiomes with large pores. However, under the microscope the two are almost inseparable, with a similar shape, cyano-

phily and ornamentation of the basidiospores, but with differences in cyanophily of skeleto-binding hyphae, and dextrinoidy of spore walls. Taken together, the differences between *Haploporus* and *Pachykytospora* did not warrant generic segregation, and the latter was considered synonymous with the former (Dai *et al.* 2002). Formal combinations have been made for five species: *Haploporus tuberculatus* (Fr.) Niemelä & Y.C. Dai, *H. alabamiae* (Berk. & Cooke) Y.C. Dai & Niemelä, *H. papyraceus* (Schwein.) Y.C. Dai & Niemelä, *H. subtrameteus* (Pilát) Y.C. Dai & Niemelä (Dai *et al.* 2002), and *H. nepalensis* (T. Hattori) M. Piątek (Piątek 2003). The other species, *Pachykytospora major* G.Y. Zheng & Z.S. Bi, is considered to be a member of *Megasporoporia* (Dai & Li 2002). Despite this, there are two other species still residual in *Pachykytospora*, viz. *P. nanospora* A. David & Rajchenb. and *P. thindii* Natarajan & Kolandavelu.

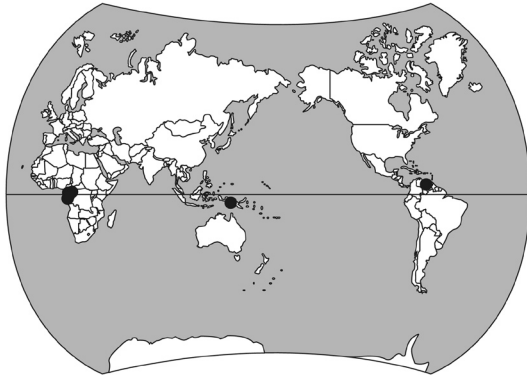


Fig. 1. Geographic distribution of *Haploporus nanospora*.

Pachykytospora nanospora was originally (David & Rajchenberg 1992) described from Gabon in West Africa. The holotype and some additional specimens should be housed in LY, but, although requested, are not available for loan (G. Guignard, pers. comm.). A probable isotype (not cited in the protologue, but matches perfectly with information given in it) is housed in O, and it was carefully studied by me, as well as three further collections from the herbarium. From the examination as well as from the description and illustration of *P. nanospora* given by David and Rajchenberg (1992) it became clear that this species should be transferred to *Haploporus*. It is noteworthy that in the original description the species was considered unique within *Pachykytospora* by having strongly dextrinoid skeletal hyphae, small pores and small basidiospores with rounded ridges. These features differ sharply from *P. tuberculosa*, which has weakly dextrinoid hyphae, rather large pores, and large basidiospores with longitudinally striate ridges (Esteve-Raventós *et al.* 1984). However, when the basidiospores of *P. nanospora* are compared with those of *Haploporus odorus* it becomes clear that the species have a similar spore size, and the spores are also covered by similar rounded ridges (Niemelä 1971, David & Rajchenberg 1992). The strong dextrinoid reaction of skeletal hyphae is unique within all species currently placed in *Haploporus*, but it is not an exceptional situation in polypores.

David and Rajchenberg (1992) pointed out a similarity of *Pachykytospora nanospora* with *Murilloporus*, described by Ryvarden (1985) for the Mexican polypore *Trametes rutilantiformis* Murrill. Indeed this genus has strongly

dextrinoid skeletal hyphae and non-dextrinoid, ornamented basidiospores and it is undoubtedly closely related to *Haploporus* in the current sense, from which it differs only by the dimittic hyphal system. At this stage, it is not clear whether or not this character is sufficient to separate the two genera.

Haploporus nanospora (A. David & Rajchenb.) M. Piątek, *comb. nova*

Pachykytospora nanospora A. David & Rajchenb., Mycotaxon 45: 137. 1992.

SPECIMENS EXAMINED: — **Cameroon.** Campo Prov., Akok lowland rain forest reserve, 2–15.XII.1991 Núñez & Ryvarden 30416 (O 18087). **Gabon.** Libreville, Forêt de la Mondah, 20.XI.1977 Gilles (O 15696 — isotype?). **Papua New Guinea.** Location and date of collection unknown, Quanten (O 11760). **Venezuela.** Estado Bolívar, Canaima National Park, Gran Sabana, Carretera Parupa-Kavanayen, 1300 m, 20.XI.1994 Ryvarden 35264 (O 18681).

Haploporus nanospora has been hitherto reported from Gabon in West Africa (David & Rajchenberg 1992) and Venezuela in South America (Ryvarden & Iturriaga 2004). Now it is reported for the first time from Cameroon in West Africa and from Papua New Guinea in Australasia. It must thus be understood as a widely distributed but scattered pantropical species (Fig. 1).

The genus *Haploporus* has now seven species, distributed in North America, Africa, Europe and Asia, with the main centre of occurrence in Asia. Due to differences in the macrostructure of basidiomes, cyanophily of skeleto-binding hyphae, and dextrinoidy of spore walls, the genus can be divided into two sections (*see below*), which correspond with the formerly recognized genera *Haploporus* and *Pachykytospora*.

Haploporus* Singer sect. *Haploporus

TYPE: *Haploporus odorus* (Sommerf.) Bondartsev & Singer (= *Polyporus odorus* Sommerf.).

Basidiomes pileatae, skeleto-binding hyphae strongly cyanophilous, spore walls strongly dextrinoid.

Haploporus* sect. *Pachykytospora* (Kotl. & Pouzar) M. Piątek, *stat. & comb. nova

Pachykytospora Kotl. & Pouzar, *Česká Mykol.* 17(1): 27. 1963.

TYPE: *Haploporus tuberculosus* (Fr.) Niemelä & Y.C. Dai (= *Polyporus tuberculosus* Fr.).

Basidiomes resupinate, skeleto-binding hyphae slightly cyanophilous, spore walls non-dextrinoid.

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References

- Dai, Y. C. & Li, T. H. 2002: *Megasporoporia major* (Basidiomycota), a new combination. — *Mycosystema* 21: 519–521.
- Dai, Y. C., Niemelä, T. & Kinnunen, J. 2002: The polypore genera *Abundisporus* and *Perenniporia* (Basidiomycota) in China, with notes on *Haploporus*. — *Ann. Bot. Fennici* 39: 169–182.
- David, A. & Rajchenberg, M. 1992: West African polypores: new species and combinations. — *Mycotaxon* 45: 131–148.
- Esteve-Raventós, F., Moreno, G. & Manjón, J. L. 1984: Estudios sobre Aphyllophorales IV. — *Anales Jard. Bot. Madrid* 41(1): 19–23.
- Kotlaba, F. & Pouzar, Z. 1963: A new genus of the polypores – *Pachykytospora* gen. nov. — *Česká Mykol.* 17: 27–34.
- Niemelä, T. 1971: On Fennoscandian polypores. I. *Haploporus odorus* (Sommerf.) Bond. & Sing. — *Ann. Bot. Fennici* 8: 237–244.
- Piątek, M. 2003: *Haploporus tuberculosus*, a new polypore genus and species in Belarus, with a new combination in *Haploporus*. — *Polish Bot. J.* 48: 81–83.
- Ryvarden, L. 1985: Type studies in the Polyporaceae 17. Species described by W. A. Murrill. — *Mycotaxon* 23: 169–198.
- Ryvarden, L. & Iturriaga, T. 2004. Studies in neotropical polypores 21. New and interesting species from Venezuela. — *Synopsis Fungorum* 18: 68–75.