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#### NOTES ON LAETICORTICIOID FUNGI

MICHAEL J. LARSEN

*Center for Forest Mycology Research, Forest Products Laboratory,<sup>1</sup> Forest Service,  
US. Department of Agriculture. Madison, Wisconsin 53705*

My purpose here is to examine further the taxonomic criteria used to delimit *Laeticorticium* Donk and *Dendrocorticium* Lars. et Gilbn., and to review the generic disposition of several *Laeticorticium* species from Europe and North America. The affinities of some of these species are not with laeticorticoid fungi, but rather with other major fungal groups.

Jülich (1982) recently proposed a return to the use of the name *Corticium* Pers. for names of fungi now included in *Laeticorticium*, because both genera are typified by *Corticium roseum* Pers.: Fr. Conservation of *Laeticorticium* against *Corticium* would preclude a nomenclatural shuffle.

Larsen and Gilbertson (1974) separated *Dendrocorticium* from *Laeticorticium* using positional origin and ontogeny of basidia as principal taxonomic criteria (see fig. I in Larsen and Gilbertson. 1974). They described the probasidia in *Laeticorticium* as thick-walled and formed directly adjacent to, or barely in. the subiculum. They described the probasidia in *Dendrocorticium* as not noticeably thick-walled and formed within the subhymenium. They also cited some dimensional differences for basidia and basidiospores, but at the generic level such differences should not be considered as primary criteria. Furthermore. Larsen and Gilbertson (1977) pointed to the mating type exhibited by the two genera as a potential fundamental difference, being bipolar in *Laeticorticium* [with the exception of the homothallic *L. roseum* (Pers.: Fr.) Donk] and tetrapolar in *Dendrocorticium*.

Eriksson and Ryvarden (1976) reviewed Larsen's and Gilbertson's (1974) proposed distinction between the two genera and concluded that the recognition of *Dendrocorticium* was unnecessary. They observed that "probasidial bladders" occurred in *L. roseum* throughout mature basidiocarps. not only near the subiculum.

Their observations on this matter are correct. I have reexamined representative

<sup>1</sup> Maintained at Madison. Wis., in cooperation with the University of Wisconsin.

material of *Laeticorticium* spp. and found that the thicker and more mature areas of basidiocarps demonstrate probasidia that are not confined to the proximity of the subicular tissue. However, in thinner basidiocarps (e.g., of *L. mississippiense*, *L. canfieldii*, etc.) and less mature areas that does not appear to be the case. Thus, I agree with Eriksson and Ryvarde (1976) that the position of probasidia is not as well defined as originally perceived by Larsen and Gilbertson (1974, 1977).

Ontogeny, the second basis of Larsen's and Gilbertson's (1974) proposed separation has, however, assumed greater importance in light of observations reported in this study. During a review of specimens representative of species in both *Laeticorticium* and *Dendrocorticium*, I observed an additional difference between the genera: percurrent proliferation of basidia present in *Laeticorticium* and absent in *Dendrocorticium*. This added difference reinforces the distinctiveness of the two genera and subsequently prompted an assessment of the generic placement of several species in *Laeticorticium*.

*Laeticorticium lundellii* Erikss. was assigned to *Dendrocorticium* (Larsen and Gilbertson, 1974) primarily on the basis of its diminutive dimensions. However, dimensional differences alone do not warrant critical taxonomic weight at the generic level for this species. To the contrary, available evidence indicates that the affinities of this species lie with *Laeticorticium*: percurrent proliferation of basidia does occur in this species—the spore print is a rosy pink, and probasidia are thick-walled. The mating-type system is unknown. The presence of a bipolar type of mating system in *D. lundellii* would, if demonstrated, confirm its position in *Laeticorticium*.

*Laeticorticium expallens* (Bres.) Erikss. et Hjört., although recently included in the genus (Eriksson *et al.*, 1981), does not possess the most fundamental character of *Laeticorticium*—*probasidia* that undergo metabasidial elongation prior to sporulation. Other characteristics of *L. expallens* which are not typical of *Laeticorticium* are presence of cystidia, basidiocarps that are ceraceous, "wet, watery subhyaline," normally grayish when fresh, and becoming crustaceous and hard when dry. The presence of dendrohyphidia seems to be the only similarity that would relate this species to *Laeticorticium*. This species is best maintained as *Phlebia expallens* (Bres.) Parm. or perhaps referred to the genus *Hyphoderma*.

*Laeticorticium macrosporum* (Bres.) Erikss. et Ryv. is not a typical member of *Laeticorticium*. The large allantoid spores, presence of cystidia, and dendrohyphes (not dendrohyphidia) are inconsistent with characteristics of *Laeticorticium* and *Dendrocorticium*. It is best treated as *Dendrothele macrospora* (Bres.) Lemke.

*Laeticorticium quercinum* Erikss. et Ryv. does not possess characteristics fundamental to *Laeticorticium*. The shape and size of spores, two-sterigmate, long-clavate basidia that originate from irregularly shaped probasidia, and hyphoid cystidia-like structures (not dendrohyphidia) suggest an affinity with *Vuilleminia* of the Vuilleminiaceae as indicated by Eriksson and Ryvarde (1976). *Vuilleminia megalospora* Bres. (Bresadola, 1921, p. 62) is strikingly similar to *L. quercinum*. It was described from *Fagus* and *Quercus*, lacks clamp connections, and possesses basidia and ellipsoid basidiospores that are 60-90 x 10-15  $\mu\text{m}$  and 25-35 x 10-17  $\mu\text{m}$ , respectively. The relationship of *L. quercinum* with *Vuilleminia* species, therefore, is much more appropriate.

*Laeticorticium simplicibasidium* Linds. et Gilbn. (Lindsey and Gilbertson, 1977) differs substantially from typical *Laeticorticium* species. The predominantly monosporous basidia, globose spores, and germination of spores by repetition to produce secondary basidiospores do not conform to the generic concept of *Laeticorticium* s. str. The affinity of *L. simplicibasidium* appears to be with the Auriculariaceae and related to *Platygløea unispora* Olive and *Itersonilia perplexans*

Derx (see Donk, 1972). Both possess single-spored basidia and, with *L. simplicibasidium*, may form the basis for a new genus in the Auriculariaceae.

*Laeticorticium odontoides* Ryv. (Ryvarden, 1978) is not typical of *Laeticorticium* because it does not possess probasidial vesicles (this was noted in the original description) or basidia that are formed percurrently. The tropical distribution should be considered secondary to the nature of the basidium, which is the primary taxonomic criterion of the group of fungi under consideration here. Basidiospore shape and size and the presence of rudimentary probasidia (also seen in *Dendrocorticium roseocarneum* (Schw.) Lars. et Gilbn.) point to a position in *Dendrocorticium*.

**Key Words:** *Laeticorticium*, *Dendrocorticium*.

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