

NOTES ON SPOROTRICHUM

1. On the segregate genus *Alytosporium*

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Link (1816) published the subgenus *Alytosporium* of *Sporotrichum* Link ex Fr. with 13 species. Ehrenberg (1818) raised it to the rank of genus and Link (1824) validated it as such. At that time it contained five species, viz. *A. fuscum* (Link) ex Link, *A. fulvum* (Link) ex Link, *A. croceum* (G. Kunze ex Pers.) Link, *A. psittacinum* (Link ex Pers.) Link and *A. murinum* (Link ex Pers.) Link. Later (1833) Link himself abandoned the genus and until 1949 the name can only be found (with one unimportant exception) in some lists of synonyms.

The species first mentioned in 1816 and the only one figured is *Sporotrichum badium* Link. In the validating publication, however, this species is (incorrectly) reduced to the synonymy with *A. fuscum*, which is the first species mentioned there. Therefore *A. fuscum* should obviously be selected as type species. Rogers (1949) warned against this choice (as *A. fuscum* Pers.) «on the ground that that species has already been removed from *Alytosporium* and that its employment as the type of Link's genus would create an unnecessary and inconvenient synonymy with *Toментella*». Donk (1957) questioned this suggestion for two reasons: «First he (Rogers) failed to show that it (*A. fuscum*) was excluded by an author who maintained the genus *Alytosporium* itself. What he stated about the removal from *Alytosporium* of this species applies perhaps to all the species of 1824. Secondly he did not prove that the original *A. fuscum* of Link is indeed a species of *Toментella*».

Hughes (1958) was the first to propose a type for *Alytosporium*: *Sporotrichum bombacinum* Link, to avoid the synonymy with *Toментella*. The name is a nomen dubium and would make *Alytosporium* a nomen dubium too. This species is, however, not mentioned in the validating publication and consequently does not have to be taken into account.

Before further discussion it is useful to consider the status and identity of the species concerned.

1. *A. fuscum* (Link) ex Link.

The type specimen (B) is identical with *Toментella rubiginosa* (Bres.) R. Maire, a species which is very close to *T. ferruginea* (Pers. ex Pers.) Pat. The only difference lies in the presence of so-called skeletal hyphae. A new combination with the epithet *fusca* is impossible because it would be antedated by *Toментella fusca* (Pers. ex Fr.) Schroet. This species is *Corticium fuscum* Pers., often confused with *A. fuscum* (Rogers, 1949). Specimen 910.2631285 (L) is labeled «*Racodium fuscum* - *Thelephora vinosa* - *Sporotrichum fuscum*» in Persoon's handwriting. According to Donk (note on the

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sheet), this is presumably the type of *Corticium fuscum* Pers. Wakefield (note on the sheet) compared with *Tomentella ferruginea* Pers. ssp. *obscura* Bourd. & Galzin, which according to Larsen (1968) is a mixture of *T. pallidofulva* (Peck) Litsch. and another unidentifiable species. *Corticium fuscum* seems to be best referable to *T. pallidofulva*, but the colour of the hymenial surface and the rare encrustations of the subicular hyphae are characters of the closely related *T. ramosissima* (Berk. & Curt.) Wakefield. In the species, however, the spores are smaller and parts of the subicular hyphae, basidia and spores become greenish in KOH.

2. *A. fulvum* (Link) ex Link = *Nodulisporium fulvum* (Link ex Link) Hughes (Hughes, 1958).
3. *A. croceum* (G. Kunze ex Pers.) Link.
According to Jülich (1972) this is a nomen dubium : «Der im Herbar Persoon befindliche Typus ist unbestimmbar. Er besteht nur aus winzigen Hyphenfragmenten.»
4. *A. psittacinum* (Link ex Pers.) Link.
5. *A. murinum* (Link ex Pers.) Link.
The type specimen of both species have been destroyed in World War II (Dr. Hein, conservator herbarium Berlin, pers. comm.).

For the typification the following possibilities exist :

- To follow Hughes and select a nomen dubium. This procedure gives the choice between *A. croceum*, *A. psittacinum* and *A. murinum*. Of these, *A. croceum* is the least attractive because it is not included in Link's original concept (1816). The remaining two names are *nomina dubia* because of the absence of a type specimen; their status is thus not quite definite. It would not be the first time that a specimen turned up after many years of concealment, especially when Link is concerned.
- To select *A. fuscum* with the consequence of creating an earlier synonym of *Tomentella*. Special reasons for this choice have been mentioned above.
- To select *A. fulvum*. *Alytosporium* would then become the correct name for *Nodulisporium*. There are no special reasons for this choice.

The situation will alter completely when it can eventually be ascertained that Steudel's «Nomenclator Botanicus», dated September 1824, was published earlier than Link's 1824-publication. Steudel maintained Link's original concept with only a few alterations. *A. roseum* Ehrenb. is added, *A. azureum* Link is retained in *Sporotrichum* and *A. bombacinum* Link is placed in *Athelia*. This last fact prohibits the typification of Hughes from becoming effective. The most obvious choice as type species then is *A. badium* (Link) ex Steudel. It is the first species mentioned in the original as well as the validating publication and the only one figured by Link (1816). The type specimen is present in the herbarium of Persoon (L), sent by Link (L. 910.262-544). It is identical with *Tomentella atrovioleacea* Litsch. 1933 = *Tomentella macrospora* auctt. non Höhn. & Listch. *A. badium* thus should be referred to as : *Tomentella badia* (Link ex Steudel) Stalpers comb. nov. Basionym : *Alytosporium badium* (Link) ex Steudel

in Nomenclator Botanicus, p. 54. 1824. *Alytosporium* then becomes an earlier synonym of *Tomentella*, as it would be also, when, in the other case, *A. fuscum*, is selected.

For the reasons discussed above, I select *A. fuscum* (Link) ex Link as the type of the genus *Alytosporium* and propose to conserve *Tomentella* Pat. against *Alytosporium* in order to avoid numerous disadvantageous changes in nomenclature (Art. 14). Otherwise, about 80 new combinations would be necessary. *Tomentella* is already conserved against *Caldesiella* Sacc.

DESCRIPTION OF THE EXAMINED TYPE SPECIMENS

Alytosporium badium (fig. 1, a).

Basidiocarp effused, tomentose, separable, dark blue in KOH. (reaction almost confined to subhymenium) Hymenial surface even, Chestnut Brown. Subiculum and margin concolourous. Cordons absent. Subicular hyphae brown, with thickened walls, 3-6(-7) μm wide, without clamps. Subhymenial hyphae subhyaline to brownish, thin-walled, 3-5 μm wide, without clamps, partly blue in KOH. Basidia clavate, hyaline, thin-walled, approx. $55 \times 11 \mu\text{m}$, no reaction with KOH. Spores brown, globose to subglobose or irregularly globose, echinulate to aculeate, 8-10,5(-13) μm across, spines up to 2,5 μm long, but on some large spores not exceeding 1,3 μm .

Alytosporium fuscum (fig. 1, b).

Basidiocarp effused, separable, tomentose, darkening in KOH. Hymenial surface even, Olive to Olive Brown. Subiculum and margin arachnoid, concolourous or slightly paler, Cordons (hyphal strings) present, individual hyphae 2,5-3,5 μm wide. Subicular hyphae subhyaline to pale brown, thin- to slightly thick-walled, smooth, 2,5-4 μm wide, with rather small but prominent clamps. Subhymenial hyphae mostly hyaline, thin-walled, 3-4 μm wide, with clamps. Basidia hyaline, cylindrical to subclavate, $40-60 \times 6,5-8 \mu\text{m}$, often containing droplets, with four sterigmata, clamped at the base. Spores yellowish brown, irregularly globose to lobed, echinulate, 6,5-9 μm across, no reaction with KOH.

Corticium fuscum (fig. 1, c)

Basidiocarp effused, separable in small parts, tomentose to felty or submembranaceous, darkening in KOH. Hymenial surface even, Mars Brown to Mummy brown. Subiculum similar, margin indistinct. Cordons absent. Subicular hyphae brown, with thickened walls, 5-8,5(-10) μm wide, smooth or rarely encrusted and slightly spinulose, septa usually with clamps. Subhymenial hyphae hyaline or pale yellowish, thin-walled, 4-6 μm wide. Basidia not seen. Spores yellowish brown, globose to irregularly globose, aculeate, spines up to 2,5 μm long, 7,5-10 μm across, no reaction with KOH.

REFERENCES

- DONK M.A., 1957 — The generic names proposed for Hymenomycetes VIII. «Thelephoraceae». *Taxon* 6 : 17-28.
- EHRENBERG C.G., 1818 — *Sylvae mycologicae berlinenses*, Berlin, 32 p.
- HUGHES S.J., 1958 — Revisiones hyphomycetum aliquot cum appendice de nominibus rejiciendis. *Can. J. Bot.* 36 : 727-836.
- JULICH W., 1972 — Monographie der *Athelieae* (Corticiaceae, Basidiomycetes). *Willdenowia* 7 : 283 p.
- LARSEN M.J., 1968 — Tomentelloid Fungi of North America, *Techn. Publ. State Univ. Coll. For. Syracuse* 93 : 157 p.
- LINK H.F., 1816 — Observationes in Ordines plantarum naturales, Dissertatio II. *Mag. Ges. naturf. Fr.*, Berlin 7 : 25-45.
- LINK H.F., 1824 — *Species Hyphomycetum et Gymnomycetum I. Linnaei Species Plantarum*. Éd. 4, cura Willdenow VI, Berlin, 162 p.
- LINK H.F., 1833 — *Handbuch zur Erkennung der nutzbarsten und am häufigsten vorkommende Gewächse* Vol. 3, Berlin.
- ROGERS D.P., 1949 — Nomina conservanda proposita and nomina confusa. Fungi I, nomina conservanda. *Farlowia* 3 : 425-493.

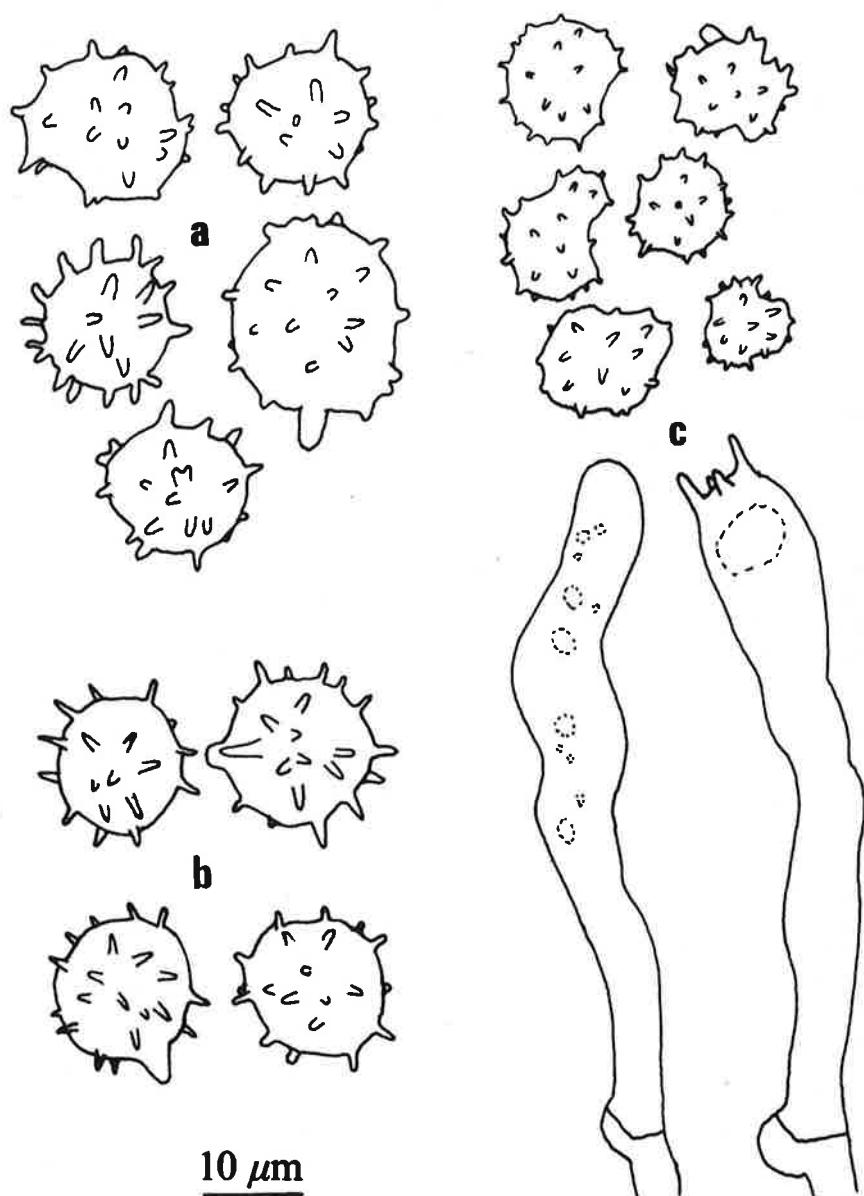


Fig.1 — a. *Alytosporium badium*, spores; b. *Alytosporium fuscum*, spores; c. *Corticium fuscum*, basidia and spores.