

NOTULAE AD FLORAM AGARICINAM NEERLANDICAM XXIV–XXVIII  
Some taxonomic and nomenclatural changes in the  
Tricholomataceae, tribus Clitocybeae

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Three new taxa and three new combinations are introduced in Tricholomataceae, tribus Clitocybeae. Taxonomic and nomenclatural comments on some other taxa are added.

XXIV. A NOMENCLATORIAL NOTE ON *ARMILLARIA TABESCENS*

The name of this species is cited as *Armillaria tabescens* (Scop.: Fr.) Dennis et al. (Ter-morshuizen, 1995). However, this is double incorrect. First, the name *Agaricus tabescens* has never been sanctioned by Fries. Second, the combination in *Armillaria* has to be attributed to Emel (1921), as already noted by Dennis et al. (1960: 18) who were unable to confirm this combination.

Emel (1921: 50) in a dissertation that was probably not very widely distributed, introduced the combination *Armillaria tabescens*. The title of his dissertation (Le genre *Armillaria*, Fr. sa suppression de la systématique botanique), and remarks in the text (p. 75) that the genus *Armillaria* does not possess enough constant characters to be maintained, suggest that Emel did not accept the genus. Under Art. 34.1. (Greuter et al., 1994) the name would therefore be invalid. However, Emel's remarks are better interpreted that he just considered the Friesian taxon *Armillaria* as unnatural (a view universally accepted nowadays) and that he proposed the species of that genus to be placed in other genera. However, as Art. 34.1. only refers to anticipation of future acceptance of a taxon, and not to anticipation of future rejection of a taxon, and as Emel explicitly listed the combination *A. tabescens* (Scop.) Emel, I consider the name as validly published.

XXV. TAXONOMIC AND NOMENCLATORIAL NOTES ON CLITOCYBE

**Clitocybe brumalis** (Fr.: Fr.) Kumm.

It is a curious phenomenon in mycology that some fungal names persist for a long time even though the taxon, for which the name is used, might get very different interpretations. I would consider such names as names of ghost species. The genus *Clitocybe* is probably fairly rich in such ghost species and *C. brumalis* (Fr.: Fr.) Kumm. makes a good chance for being the most famous one.

*Agaricus brumalis* (Fries, 1818: 206–208) was described with a greyish pileus and lamellae, and long, concolorous stipe. Citation of the illustration of *A. cinerascens* Batsch

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and Fries's comment that *A. brumalis* was very much related to *A. tardus* (= *Pseudoclitocybe cyathiformis* (Bull.: Fr.) Sing.) do not leave much doubt that the original *A. brumalis* belongs to the genus *Pseudoclitocybe*. The sanctioning description (Fries, 1821: 171) is essentially the same, except for the addition that it is odourless.

Fries (1838: 76) must be held responsible for the first different interpretation, by stating that the stipe is white and the lamellae pallid. The pileus colour was not mentioned in his vague description. It was said to be odourless (and by implication probably without taste). Such a vague description did form a good possibility for later confusion. Kühner & Romagnesi (1953) described *C. brumalis* as a species with a cream-coloured pileus with brown centre (although Fries described the pileus as unicolorous) and weak farinaceous smell (although odourless according to Fries). This description fits rather well for *C. marginella* Harm. (except for the weak farinaceous smell) and the large majority of collections filed under *C. brumalis* in Dutch herbaria did indeed represent *C. marginella*. Lange (1935) interpreted *C. brumalis* as a much darker species with small spores and a strigose stipe basis. It could represent *C. lohjaensis* Harm., a species unknown from the Netherlands. Bresadola (1927) noted a conspicuous smell and bitter taste for *C. brumalis* and his description very strongly suggest *C. phaeophthalma* (Pers.) Kuyp., a species otherwise lacking in Bresadola's work although it is not uncommon near Trento. Henry (1983) described *C. brumalis* as a large-spored species; his description would well fit *C. metachroa* (Fr.: Fr.) Kumm. With – at least – six different interpretations available and a protologue and sanctioning description that make it extremely likely that *C. brumalis* is not a *Clitocybe* at all, I cannot but reject this name as a nomen dubium.

### ***Clitocybe dealbata* (Sow.: Fr.) Kumm.**

Separation of *C. dealbata* and *C. rivulosa* (Pers.: Fr.) Kumm. has been considered as very difficult. The characters usually considered as sufficient for separating two taxa on species level, viz. general habit, pileus form, and colour of the pileus were found to show intergradations in Dutch collections. Herbarium collections in several Dutch herbaria filed under *C. dealbata* were found to consist of young specimens of *C. rivulosa*.

Harmaja (1969: 75) adopted only the name *C. dealbata* and nowhere discussed the name *C. rivulosa*, the latter name without arguments just being declared a nomen dubium. Harmaja did not provide a macroscopical description of *C. dealbata*, implying that he did not see fresh material of it himself, but as he included a collection from Lundell & Nannfeldt (1938) under the name *C. rivulosa*, I have no doubts about the identity of Harmaja's species. An earlier collection distributed as *C. dealbata* (Lundell & Nannfeldt, 1936), was identified as *C. candicans* (Pers.: Fr.) Kumm. by Harmaja. Lamoure (1983) concluded, on the basis of interfertility experiments that *C. dealbata* and *C. rivulosa* had to be considered conspecific. She also choose the name *C. dealbata* for it.

The application of the name *C. dealbata* is, however, beset with some difficulties. *Agaricus dealbatus*, as illustrated by Sowerby (1799), depicts a small hygrophanous white mushroom with a convex to infundibuliform pileus, growing under a canopy of firs. Although it cannot be excluded that Sowerby illustrated slender specimens of a *Clitocybe* (e.g. *C. candicans* (Pers.: Fr.) Kumm.), his figure is more strongly reminiscent of *Hemimycena lactea* (Pers.: Fr.) Sing. Fries (1821: 92) sanctioned the name *C. dealbatus*, but his listing of Sowerby's taxon as a separate variant, different from Fries's main interpre-

tation of *A. dealbatus* seems to suggest that Fries was in doubt whether his taxon was identical with Sowerby's.

Later interpretations (Kühner & Romagnesi, 1953) of the name *C. dealbata* included not only *C. rivulosa* but also a closely related species with a farinaceous smell (a character not mentioned by Sowerby; Fries explicitly stated that the species was inodorous). This latter taxon is better known as *C. augeana* (Mont.) Sacc. (syn. *C. ruderalis* Harm.).

As the name *C. rivulosa* is of unambiguous application, it has been accepted by me (Kuyper, 1995: 48). The name *C. dealbata* is best rejected as a nomen dubium, as none of the interpretations that have been in use correspond to Sowerby's taxon.

Although *C. rivulosa* is generally regarded as a grassland species, it can grow in forests as well. Records of muscarine poisoning by *C. phyllophila* (Pers.: Fr.) Kumm. or *C. candicans* refer to *C. rivulosa* as the two other species do not contain muscarine (Stijve & Kuyper, unpublished).

### ***Clitocybe frysica* Kuyp., spec. nov.**

Pileus usque 20 mm latus, infundibuliformis, haud hygrophanus, haud striatus, subtomentoso-subquamulosus, pallide roseo-bubalinus, *Lactario pallido* concolor. Lamellae furcatae, decurrentes, pileo concolor. Stipes usque 40 × 6 mm, versus apicem incrassatus, pileo concolor. Odor debilis, subaniseus. Sporae 4.5–6.0(–6.5) × 2.5–3.5 µm, laeves, haud cyanophilae. Basidia tetrasporigera. Cheilocystidia desunt. Pileipellis cutis cum pigmento intracellulari. Fibulae frequentes. Sub arboribus frondosis.

Holotype: *J. Wisman*, 12-VIII-1977, 'Vijverzathe, Jelsum, prov. Friesland, the Netherlands' (L).

I consider this taxon as *Clitocybe subalutacea* sensu J. Lange (1930, 1935). The application of the epithet subalutaceus is discussed under *C. odora* var. *fallax*.

### ***Clitocybe infundibuliformis* (Schaeff.→) Quél.**

It has been customary to treat this name as a younger synonym for *C. gibba* (Pers.: Fr.) Kumm. However, this is certainly incorrect. *Agaricus infundibuliformis*, as described and illustrated by Schaeffer (1774) has a red-brown pileus with paler and darker spots, and yellowish lamellae. It is *Lepista flaccida* (Sow.: Fr.) Pat. The epithet *infundibuliformis* is apparently quite obvious for a funnel-shaped agaric, and at least 7 different homonymous *A. infundibuliformis* have been described, viz. *A. infundibuliformis* Scop. 1772 (= *Cantharellus tubaeformis* Fr.: Fr.), *A. infundibuliformis* Schaeff. 1774 (= *Lepista flaccida*), *A. infundibuliformis* Bolt. 1788 (= *Cantharellus cinereus* (Pers.: Fr.) Fr.), *A. infundibuliformis* Hoffm. 1789 (= *Leucopaxillus giganteus* (Leys.: Fr.) Sing.), *A. infundibuliformis* Bull. 1786 (= *Clitocybe gibba* (Pers.: Fr.) Kumm.), *A. infundibuliformis* Schum. 1803 (probably *Pseudoclitocybe cyathiformis* (Bull.: Fr.) Sing.), and *A. infundibuliformis* Liljebl. 1806 (listed as a synonym of *Agaricus fimbriatus* Bolt.: Fr., a pleurotoid taxon coming close to *Ossicaulis lignatilis* (Pers.: Fr.) Redh. & Ginns).

### ***Clitocybe langei* Hora**

The application of this name has also been beset with many difficulties, already arising from the fact that Fries in his first mycological publications might not have had a clear con-

ception of *C. vibecina* (Fr.) Quél. and *C. metachroa* (Fr.: Fr.) Kumm., as nowadays understood, and therefore might have confused them (Harmaja 1969: 97). He might even have considered them as synonyms (Fries 1821: 172). *Clitocybe vibecina* nowadays is understood as a species with a farinaceous smell, but this was not mentioned by Fries (1818). Only later (Fries, 1838) did Fries remark that an (unnamed) subspecies of it possessed a weak farinaceous smell.

It is therefore not surprising that later authors used the name *C. vibecina* for what is now called *C. metachroa* (Bresadola, 1928: pl. 179; Konrad & Maublanc, 1925: pl. 295). The concept of *C. vibecina* by Lange (1930), who separated it from *C. metachroa* because of farinaceous smell, smaller spores, darker lamellae and unicolorous stipe, was therefore deviating from several of the important mycological publications at that time. It is also not very surprising that Singer (1943) proposed a new name for *C. vibecina* sensu J. Lange, viz. *C. langei* [nomen invalidum, Latin diagnosis lacking]. Unfortunately, Singer remained silent on the identity of *C. vibecina*.

The subsequent fate of the name *C. langei* has been like that of a ghost species. Favre (1948) described both *C. vibecina* and *C. langei* (still invalid) and separated the latter species on account of more brownish pileus and smaller lacrymoid spores ( $5.0-6.5 \times 2.7-3.2 \mu\text{m}$ ; *C. vibecina* was said to have ellipsoid spores, measuring  $5.5-7.0 \times 3.5-4.0 \mu\text{m}$ ). No recent collections of Favre's taxon are known. However, as Lange (1930) described elliptical spores for *C. vibecina*, we must conclude that *C. langei* Singer and *C. langei* sensu Favre refer to different species.

Hora (1960: 441) validly described *C. langei*. His description notes lacrymoid spores measuring  $5.0-6.0 \times 2.7-3.2 \mu\text{m}$ . Hora also remarked that *C. langei* in Britain is more common than *C. vibecina*. Unfortunately, Hora's type collections have been lost and the identity of the type can therefore never be established. However, his remark that *C. langei* is in Britain even more common than *C. vibecina*, leads to the conjecture that *C. langei* Hora is merely a brownish variant of *C. vibecina* without formal taxonomic status (despite differences in spore size and form), as all collections in K and E named *C. langei* did indeed belong to *C. vibecina*. *Clitocybe langei* sensu Harmaja (1969: 104-105) is enigmatic; one cannot escape the feeling that he felt unable to really separate both species and therefore even suggested hybridisation between *C. langei* and *C. vibecina* as intermediaries were also found. This also leads to the conjecture that it too is merely a variant of *C. vibecina*.

For these reasons, *C. langei* is treated as a synonym of *C. vibecina* (Kuyper 1995: 56).

### **Clitocybe maxima** (Fr.) Kumm.

In conjunction with the name *C. geotropa* (DC. & Lam.) Quél., the name *C. maxima* has repeatedly been used by mycologists to denote a closely related taxon. That taxon was said to differ from *C. geotropa* in being larger, lacking an umbo, having a shorter stipe, and in possessing more ellipsoid spores. However, two different interpretations of the name *C. maxima* have been in use, none of which corresponds to *Agaricus maximus* Gärtner, Meyer & Scherbius. One interpretation of *C. maxima* refers to a variant of *C. geotropa*, where the supposed differences (size, pileus form, ratio of pileus diameter and stipe length) between both taxa are without a genetic basis (Nüesch, 1926: 122). The other interpretation refers to an autonomous species, which is closely related to *C. geotropa*,

but differs in having ellipsoid spores  $(6.5-9.5(-11.0) \times 4.5-6.0(-7.0) \mu\text{m})$ ; *C. geotropa* has subglobose to broadly ellipsoid spores measuring  $(7.0-7.5-9.5(-10.0) \times 6.0-7.0 \mu\text{m})$ . The correct name for this taxon is *C. gigas* Harm.

Both interpretations of *C. maxima* contradict the protologue. *Agaricus maximus* Gärtner et al. was a superfluous name for *A. giganteus* Leyss. and *A. infundibuliformis* Hoffm. (itself also superfluous for *A. giganteus* Leyss.). Their description is also in agreement with *Leucopaxillus giganteus*. Fries (1821: 80) clearly recognized this fact, by listing *A. maximus* as a synonym of *A. giganteus*, keeping it clearly separate from *A. geotropus*, considered as a large form of *A. gibbus*. However, Fries (1825: 10–13) came to doubt his earlier taxonomic judgements and referred part of *A. giganteus* and *A. maximus* to infraspecific status under *A. gibbus*. The 'true' *A. giganteus* as a separate species remained unknown to Fries at that time. By excluding the obligatory type of *A. maximus* when Fries redescribed *A. gibbus* var. *maximus*, he is considered to have created a new taxon that must be attributed to Fries solely.

As the name *Agaricus maximus* has been used for at least three different species, it is best rejected as a nomen dubium.

### ***Clitocybe metachroa* (Fr.: Fr.) Kumm.**

As discussed by me (Kuyper, 1985) yellow to yellow-brown variants of this taxon should be recognized as *Clitocybe metachroa* var. *aquosoumbrina* (Raithelhuber) Kuyp., *comb. nov.* — *Clitocybe bicolor* var. *aquosoumbrina* Raithelhuber in Schweiz. Z. Pilzk. 47: 138. 1969 (basionym).

Many authors have tried to separate *C. metachroa* and a closely related taxon called *C. bicolor* (Pers.) Murrill. From a nomenclatural point of view such a separation seems unfounded, as *Agaricus metachrous* Fr.: Fr. (1821: 172) was proposed as a renaming for *A. bicolor*. This was stated explicitly by Fries (1830) as "*Agaricus bicolor* = *A. metachrous* S.M.; nomen bicolor, et radice hybridum et per se minus aptum est."

Several authors might, however, have had a broad concept of *C. metachroa* including the closely related *C. amarescens* Harm. and *C. metachroides* Harm. The latter species comes very close to *C. metachroa* but differs in having somewhat darker colours, slightly smaller spores and distinctly incrusting pigments in pileipellis and upper pileitrama. Dutch collections of this species are also somewhat more tough than *C. metachroa* and hardly translucent striate, although Finnish material is striate (Harmaja, 1969). *Clitocybe metachroides* has only recently been recognized in the Netherlands and it is probably not uncommon.

### ***Clitocybe odora* var. *fallax* Kuyp., var. nov.**

Ab varietate odora differt colore bubalino-brunneo vel brunneo. Colores virides totaliter absunt. Ad folia et acua in silvis mixtis.

Holotypus: *Th. W. Kuyper* 2659, 25-X-1984, 'Ravenswoud, Appelscha, prov. Friesland, the Netherlands' (L).

The taxon looks identical to *Clitocybe odora* (Bull.: Fr.) Kumm. var. *odora* in all macroscopical and microscopical characters, except for the complete absence of green tinges in pileus, stipe and lamellae, even in young, very well developed specimens.

There seem to have been no earlier reports of such a non blue-green variety of *C. odora*, except for some remarks that in old specimens of that species the blue-green tinges may have almost completely faded (Nüesch, 1926). Another possibility is that var. *fallax*, when found, would be referred to the enigmatic *C. subalutacea* (Batsch: Fr.) Kumm.

The identity of *Agaricus subalutaceus* has remained doubtful. The original description by Batsch (1789) refers to a whitish species for which no smell was indicated. In my opinion Batsch's illustration depicts *C. phyllophila* (Pers.: Fr.) Kumm. Fries (1818: 138) in his first description did also not mention a smell of aniseed. In the sanctioning description Fries (1821: 90) noted that some variants have a smell of aniseed. However, Fries did not compare this species to *A. odoratus*, although he in the same publication pointed out the very close relationship between *A. odoratus* and *A. suaveolens* as interpreted by him (actually *C. odora* var. *alba* J. Lange). It seems possible that Fries's sanctioning description refers to either *C. albofragrans* (Harm.) Kuyp. or to *C. phyllophila* var. *tenuis* Harm.

Later authors have provided different interpretations of the name *C. subalutacea*, thereby augmenting uncertainty about the application of the name. Ricken (1914: 370) described *C. subalutacea* as a pale species with a weak smell of aniseed and with small spores ( $3-4 \times 3 \mu\text{m}$ ). Nüesch (1926: 148–151) described *C. subalutacea* on the basis of one collection and indicated somewhat larger spores ( $3-6 \times 3-4 \mu\text{m}$ ). Both descriptions seem to refer to *C. albofragrans*. Nüesch also made clear that pale variants of *C. odora* could be confused with *C. subalutacea*, but that *C. odora* has decidedly larger spores. *Clitocybe subalutacea* sensu Bigelow (1982: 116) is also small-spored and with a weak smell of aniseed. It too might come close to *C. albofragrans*, a species unknown to Bigelow.

Lange (1930: 45–46) described a species which he called *C. subalutacea* Batsch? (thereby indicating doubts about the application of the specific epithet), which was characterized by a smell of *Marasmius oreades* (cyanidic smell). As noted by him, his taxon might well be in need of another name.

Kühner & Romagnesi (1953: 137) accepted *C. subalutacea* in Ricken's interpretation, but noted that they never saw this species themselves. They also introduced a new species, viz. *Clitocybe sericella* [nomen invalidum, as a Latin diagnosis was lacking] for which *C. subalutacea* sensu J. Lange was given as a synonym. This species was said to have a distinct cyanidic smell. In a later publication Romagnesi (in Kühner & Romagnesi, 1956: 119–120) proposed the name *C. subsericella* [nomen invalidum, because alternative names were proposed] and indicated large cylindrical spores ( $7.2-9.0 \times 3.7-4.0$ ; earlier they were given as  $6 \times 4 \mu\text{m}$ ) and the absence of clamp-connections, making it rather unlikely that his species is identical with Lange's. Interestingly, Métrod (1946) introduced the new name *C. rufuloalutacea* [nomen invalidum, as a Latin diagnosis was lacking] which was suggested to be the same as *C. subalutacea* sensu Ricken and *C. subalutacea* sensu J. Lange; but spores were indicated as  $4-5 \times 3.2-3.7 \mu\text{m}$ !

A taxon very similar to Lange's species was reported from the Netherlands by me (Kuyper, 1995: 51) as *C. subalutacea* sensu J. Lange; it is here formally described as *C. frysica*.

As the name *C. subalutacea* has been applied for at least five different taxa (viz. *C. phyllophila*, *C. albofragrans*; *C. odora* var. *fallax*; *C. subsericella*; *C. frysica*), it seems best to reject this name as a nomen dubium.

## XXVI. A NEW COMBINATION IN HYGROPHOROPSIS

The following new combination is introduced: **Hygrophoropsis macrospora** (D. Reid) Kuyp., *comb. & stat. nov.* — *Hygrophoropsis aurantiaca* var. *macrospora* D. Reid, Fung. rar. Ic. col. 6: 6. 1972 (basionym).

This large-spored taxon of the genus *Hygrophoropsis* has been known as *H. pallida* (Peck) Kreisel, although the combination has never been formally validly published. *Cantharellus aurantiacus* var. *pallidus* Peck 1896, described with a pale pileus and lamellae, is a later homonym of *C. aurantiacus* var. *pallidus* Cooke 1888–1890, illustrated with pale lamellae but with a hardly paler pileus. Peck made clear that his specimens were just pale variants of the typical variant, and did not suggest that they were larger-spored.

## XXVII. A NEW SPECIES AND A NEW COMBINATION IN OMPHALINA

**Omphalina cyathella** (J. Favre & Schweers) ex Kuyp., *nov. spec.*

Pileus usque 15 mm latus, infundibuliformis, involutus, hygrophanus, striatus, glaber, griseo-brunneus. Lamellae decurrentes, griseae. Stipes usque 50 × 1 mm, glaber, politus, griseo-brunneus. Inodorus. Sporae 5.5–6.5(–7.0) × 5.0–6.0(–6.5) µm, (sub)globosae, cum apiculo conspicuo. Basidia tetrasporigera. Cheilocystidia desunt. Pileipellis cutis cum pigmento parietali, sine incrustationibus. Fibulae frequentes. In paludosis.

Holotypus: A. C. S. Schweers, VIII-1939, 'Geldermalsen, prov. Gelderland, the Netherlands' (L 942-133.20).

In describing this 'new' species I do not wish to make any claim for original taxonomic work. I just validate *Omphalia cyathella* Favre & Schweers (1943) which was not validly published as it lacked a Latin diagnosis.

The present wording of Art. 46.4 (Greuter et al., 1994) would in my opinion not allow to cite this as *O. cyathella* J. Favre & Schweers in Kuyp., because the Latin diagnosis can not be ascribed to them. This leaves only the 'ex' citation according to Art. 46, Note 2.

The species is somewhat enigmatic in *Omphalina* because of its spore form (subglobose with very prominent apiculus instead of lacrymoid with confluent apiculus) and absence of incrusting pigment. The species is probably very rare in Europe, having been reported from Switzerland, Germany, and the Netherlands (where it is extinct now).

**Omphalina galericolor** var. **lilacinicolor** (M. Bon) Kuyp., *comb. & stat. nov.* — *Omphalina lilacinicolor* M. Bon, Doc. mycol. 10 (37–38): 91. 1979 (basionym).

As the only difference between var. *galericolor* and var. *lilacinicolor* is found in the pinkish or flesh-coloured tinges in the pileus of the former, Bon's taxon is formally reduced to the status of variety of *O. galericolor*. Ecologically, both species have very similar requirements, occurring mainly in moss-rich dune grasslands on calcareous or locally calcium-enriched sandy soil.

## XXVIII. A NOMENCLATORIAL NOTE ON PSEUDOOMPHALINA

The combination *Pseudoomphalina pachyphylla* has been formally made by Knudsen, Nord. J. Bot. 12: 76. 1992.

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