

***Retocybe* VELEN. (Basidiomycotina, Tricholomataceae):
type revisions of species described by J. Velenovský
with notes on status of the genus**

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ANTONÍN V. 2002: *Retocybe* VELEN. (Basidiomycotina, Tricholomataceae): type revisions of species described by J. Velenovský with notes on status of the genus. *Acta Musei Moraviae, Scientiae biologicae* (Brno) 87: 201–207. – Type studies of six species described in the genus *Retocybe* VELEN. 1947 are given. Four preserved type specimens are revised. *Retocybe milliaris* VELEN. and *R. vitrea* VELEN. are considered identical with *Delicatula integrella* (PERS.: FR.) FAYOD, *R. fallax* VELEN. and *R. minuta* VELEN. should be classified within the genus *Mycena* (PERS.) GRAY. The results of this study confirm an opinion that the genus *Retocybe* represents a later synonym of the genus *Delicatula* FAYOD.

Key words. Basidiomycetes, Tricholomataceae, type revisions, *Retocybe*, *Delicatula*

Josef Velenovský mentioned the generic name *Retocybe* for the first time in *Novitates Mycologicae* (dated 1939, published 1940), in which he described two new species (*R. milliaris* and *R. minuta*) (VELENOVSKÝ 1940). However, he did not publish a generic description. He published, quite validly, the generic name *Retocybe* VELEN. in *Novitates Mycologicae Novissimae* (VELENOVSKÝ 1947), when he included six species in this genus.

All type specimens studied here are preserved in the herbarium of the Dept. of Mycology of the National Museum in Prague (PRM) as exsiccata.

Microscopic features are described from examined material mounted in Melzer's reagent and Congo Red. Authors of fungal names are cited according to KIRK & ANSELL (1992).

Type revisions of the *Retocybe* species

***Retocybe fallax* VELEN., Novit. Mycol. Novissimae: 34. 1947.** (Figs 1–3)

Original description. *Solitaria, gracilis, nivea, tremens. Pil. 5–6 mm, conicus, glaber, subtiliter rugosus, obtuse umbonatus. St. praelongus, vitreus, 0.5 mm cr. Discus basalis non lineatus, sed molliter puberulus (unacum stipite basali). Lam. conf., latae, postice liberae, crebre anastomosantes. Sporae parcissimae, oblongae-ellipticae, 6–8. Cyst. copiosa, filiformia (25), saepe flexuosa, nonnulla divisa.*

In formatione Poae nemoralis augusto 1940 prope Myšlín legi. Revocat revera Pseudomycenas, sed lamellae anastomosantes. Ad lamellas reperimus copiam conidiorum globosorum, minorum (0.3).

Material studied. Mnichovice, Myšlín, in silva mixta, Aug. 1940 leg. J. Velenovský, PRM 154723 (holotype). The holotype specimen contains one broken carpophore, partly covered with a parasitic fungus.

Results. Basidiospores $7.0\text{--}10.0 \times 3.7\text{--}5.0$ μm , ellipsoid to subovoid, thin-walled, smooth, slightly amyloid. Basidia not found. Basidioles up to $20 \times 6.0\text{--}11$ μm , clavate. Cheilocystidia $30\text{--}55 \times 8.0\text{--}15$ μm , clavate, (sub)fusoid, irregular to mostly coralloid, thin-walled. Tramal hyphae of cylindrical to ellipsoid, thin-walled, dextrinoid cells up to 25 μm wide. Pileipellis made up of sphaeropedunculate to broadly clavate, diverticulate, thin to slightly thick-walled cells, $15\text{--}37 \times 12\text{--}17$ μm large, and diverticulate hyphae up to 10 μm wide. Stipitipellis a cutis, of parallel, cylindrical, slightly thick-walled, slightly dextrinoid, smooth hyphae up to 8 μm wide. Caulocystidia absent. Clamp-connections present in all tissues.

Notes. *Retocybe fallax* should be classified within the genus *Mycena* (PERS.) GRAY s.str.

***Retocybe milliaris* VELEN., Novit. Mycol. Novissimae: 34. 1947.** (Figs 4–5)

Original description (VELENOVSKÝ 1940: 91). *Semper copiose lata spatia obtegens, in fasciculis confertissimis polycephalis, gracilis, fragilis, vitreo-pellucida, nivea, glabra. Pil. 5–10 mm diam., primum obtuse conicus, dein explanatus, non umbonatus, membranaceus, margine dentatus, pellucidus, centro depresso. St. 2–3 plo longior, 1–1,5 mm cr., pruinosis, basi incrassatus, plerumque cum vicinis connatus. Lam. angustae, valde distantes, stipitem non attingentes, furcate et crebre anastomosantes. Sp. ovato-ellipticae, semper obliquae, 4 sterigm., 4–6. Cyst. nulla.*

In trunco alneo et in ejus vicinitate in piceto umbroso ad rivulum in millenis speciminibus, e longinque sicut nives omnia obtegens. Etiam ad ligna et ramulos in dumetis udis. Praecedenti arcte affinis, sed minor. Tuber basale tantum in juventute manifestum, posteaque, cum stipes decessisset, ad substratum relictum, In truncis putridis Salicis auritae in lacu Božkov 1939, IX.

Material studied. Five specimens labelled as *R. milliaris* are preserved in the PRM herbarium. Three of them, all from the type locality [nos. 154727 (holotype specimen), 154730, 154731] contain no carpophores. Specimen no. 154728 (Mnichovice, Potočiny, in trunco alneo, 26 July 1939 leg. J. Velenovský) was marked as “type” by M. Svrček on the label. The results of its revision are published below. The last specimen (Mnichovice, on the dam of the Krásná lake near Hubačov, in trunco alneo, Aug. 1939 leg. J. Velenovský, PRM 154729) was also studied; it represents the same species as specimen no. 154728.

Results. Basidiospores $(7.0\text{--})8.0\text{--}10.0 \times 4.5\text{--}5.5$ μm , subfusoid to subamygdaliform, thin-walled, amyloid, smooth. Basidia $26\text{--}30 \times 8.0\text{--}8.5$ μm , 4-spored, clavate. Basidioles $15\text{--}34 \times 3.5\text{--}9.0$ μm , cylindrical to clavate. Hymenial cystidia not found. Tramal hyphae \pm cylindrical, non-dextrinoid. Pileipellis a cutis of cylindrical, thin- to slightly thick-walled, non-dextrinoid hyphae up to 10 μm wide, with adpressed to erect, \pm fusoid terminal cells; pileipellis covered by numerous cylindrical to fusoid, rostrate, thick-walled, congophobe velar remnants up to $160 \times 3.5\text{--}12$ μm large. Stipitipellis a cutis, of parallel, cylindrical, slightly thick-walled, non-dextrinoid hyphae up to 6 μm wide, covered by the same velar remnants as pileipellis. Clamp-connections present in all tissues.

Notes. This fungus is undoubtedly synonymous with *Delicatula integrella* (PERS.: FR.) FAYOD. The first publication of this fungus by VELENOVSKÝ (1940) was not valid, because of the absence of a generic diagnosis of *Retocybe* (ICBN, Art. 43.1.). Therefore, *Retocybe milliaris* was not validly published up to the point of VELENOVSKÝ (1947).

***Retocybe minuta* VELEN., Novit. Mycol. Novissimae: 34. 1947.** (Figs 6–9)

Original description (VELENOVSKÝ 1940: 91). *Gracilis, fragilis, nivea, fasciata. Pil. 1–2 mm diam., pellucidus, membranaceus, laevis. St. 2–3plo longior; 0,5 mm cr., teres, basi parum tuberosus, totus subtiliter pilosus, saepe in ramos 2–3 divisus. Lam. 10–16, venaeformes, breviter decurrentes, plures divisae et anastomosantes. Sp. 8–12, late ellipt., 2–3sterigm.*

Ad terram humidam inter Ceratodon in horto Mnichovice septemb. 1939. Species quasi diminuta R. milliaris.

Material studied. Mnichovice, in ollis, 1 Sept. 1939 leg. J. Velenovský, PRM 154725 (holotype? – Velenovský mentioned “garden” in an original description as a biotope, however, “flower-pot” is written on the label of this specimen). The type specimen contains three minute carpophores.

Results. Basidiospores of two sizes, probably from 4- and 2-spored basidia, 9.0–10.5×3.7–5.0 µm, pip-shaped to ellipsoid and 11–13×5.0–6.0 µm, ellipsoid, both smooth, thin-walled, slightly amyloid. Basidia 23–32×7.5–10.0 µm, 2- and 4-spored, clavate. Basidioles 16–30×4.0–9.0 µm, clavate, cylindrical. Cheilocystidia 25–35×6.0–10.0 µm, clavate, subfusoid, irregular to subcoralloid or lobate, thin-walled. Tramal hyphae cylindrical, thin-walled, non-dextrinoid, up to 15 µm wide. Pileipellis a cutis of cylindrical, thin-walled, smooth, non-dextrinoid hyphae up to 8 µm wide; terminal cells adpressed to erect, 15–30×7.0–14 µm, clavate, fusoid, thin-walled. Stipitipellis a cutis, of cylindrical, parallel, slightly thick-walled, non-dextrinoid, smooth hyphae, up to 4 µm wide. Caulocystidia numerous, 25–45×6.0–8.0 µm, clavate, sublageniform, subfusoid, often subcapitate, thin-walled. Clamp-connections present in all tissues.

Notes. This fungus should be classified within the genus *Mycena* (PERS.) GRAY s.str.

The first publication of *R. minuta* by VELENOVSKÝ (1940; together with *R. milliaris*) was not valid because of the absence of a generic description (ICBN, Art. 43.1.). Therefore, *Retocybe minuta* was validly published in VELENOVSKÝ (1947).

***Retocybe nudipes* VELEN., Novit. Mycol. Novissimae: 34. 1947.**

Original description. *Sparsa, gracillima, zephirea, nives. Pil. 1 mm, convexus, non sulcatus, vertice solide umbonatus. St. praelongus, capillaris, basi nuda, non incrassata insidens. Lam. 6–10, venaeformis, divisae et anastomosantes. Sp. tenuiter cylindricae, 3–5×1. Cyst. nulla.*

In verrimentis in querceto prope Mnichovice (Hubačov) leg. junio 1940 dom. Ludmila. Transit ad Leiopodam.

Material studied. No material preserved.

Notes. According to the original description by Velenovský, this fungus may represent some of a number of mycenoid species. The anastomosed lamellae may well lead to a *Hemimycena* SINGER species or to *Delicatula integrella* (PERS.: FR.) FAYOD.

I consider the name *Retocybe nudipes* VELEN. a *nomen dubium*.

***Retocybe vitrea* VELEN., Novit. Mycol. Novissimae: 34. 1947.** (Figs 10–11)

Original description. *Tota nuda, vitreo-pellucida, nivea, gracilis, non tremens. Pil. 3–4 mm diam., cito explanatus et fere cupularis. St. pileo aequilongus, 1 mm cr., basi nuda insidens, fragilis. Lam. 8–10, venaeformes, parum anastomosantes, subdecurrentes. Sp. 5–7, ovato-ellipticae. Cyst. nulla.*

Ad truncum alneum putridum ad rivum prope Mnichovice (Koloděje) septemb. 1944. Fungulus summopere gracilis, niveus, pellucidus. Affinis R. minutae Vel. Novit. I. 91.

Material studied. Mnichovice, Koloděje, in trunco alneo, Sept. 1944 leg. J. Velenovský, PRM 154726 (holotype). The holotype specimen consists of one minute broken carpophore.

Results. Basidiospores 8.0–9.5×4.5–6.0 µm, broadly fusoid, subamygdaliform, ellipsoid-fusoid, thin-walled, amyloid, smooth. Basidia 25–34×9.0–10.0 µm, 4-spored, clavate to subutriform. Basidioles 15–32×3.0–10.0 µm, cylindrical to clavate. Hymenial cystidia not found. Tramal hyphae of cylindrical to ellipsoid, ± thin-walled, non-dextrinoid cells up to 15 µm wide. Pileipellis a cutis, of cylindrical, thin- to slightly thick-walled, non-dextrinoid hyphae up to 8.0(–10.0) µm wide, with adpressed to erect, cylindrical to fusoid terminal cells; pileipellis covered with cylindrical to fusoid, often rostrate, thick-walled velar remnants up to 14×4.0–11 µm in size. Stipitipellis a cutis, of parallel, cylindrical, slightly thick-walled, non-dextrinoid hyphae up to 6 µm wide, covered with the same velar remnants as pileipellis. Clamp-connections present in all tissues.

Notes. According to the type revision, this species is perfectly identical with *Delicatula integrella* (PERS.: FR.) FAYOD.

***Retocybe vitreola* VELEN., Novit. Mycol. Novissimae: 33. 1947.**

Original description. *Sparsa, nivea, fragilis, vitrea, pil. 5–12 mm diam., conico-explanato, vertice depresso, membranaceo, nervis pellucidis. St. pileo duplo longior, 1–2 mm cr., laevis, molliter fragilis, basi disco puberulo insidens. Lam. 5–8, distantes, venaeformes, crassae, stipitem non attingentes, furcatae et anastomosantes, retinam formantes. Sp. 6–8, obovato-ellipt., basi attenuatae, hyalinae. Bas. 25–30. Cyst. non vidi.*

In cavitate trunci putridi betulini pr. Mnichovice (Jidášky) augusto 1938 ipse legi. Inter Pseudomycenas nulla comparanda, species relativiter sat magna.

Material studied. No material preserved.

Notes. The original description may lead to many marasmoid and mycenoid species. Because of the rather robust carpophores, (most of) the *Hemimycena* species and

Delicatula integrella (PERS.: FR.) FAYOD may be excluded. This species should be a member of the genus *Mycena* (PERS.) GRAY s.str.

I consider the name *Retocybe vitreola* VELEN. a *nomen dubium*.

A status of the genus *Retocybe* VELEN. 1947

Retocybe VELEN., Novit. Mycol. Novissimae: 33. 1947.

Original description. *Genus hoc continet Pseudomycenas lamellis angustis vel venaeformibus, plerumque stipitem non attingentibus, anastomosantibus et retinam formantibus. Discus basalis nunc evolutus nunc deest.*

Type species: *Retocybe milliaria* VELEN.

[This species was selected by DONK (1962) as the first species of two mentioned by VELENOVSKÝ (1940).]

Notes. If we accept the selection of *R. milliaria* as the type species (which is in accordance with the ICBN), this genus represents a later synonym of the genus *Delicatula* FAYOD.

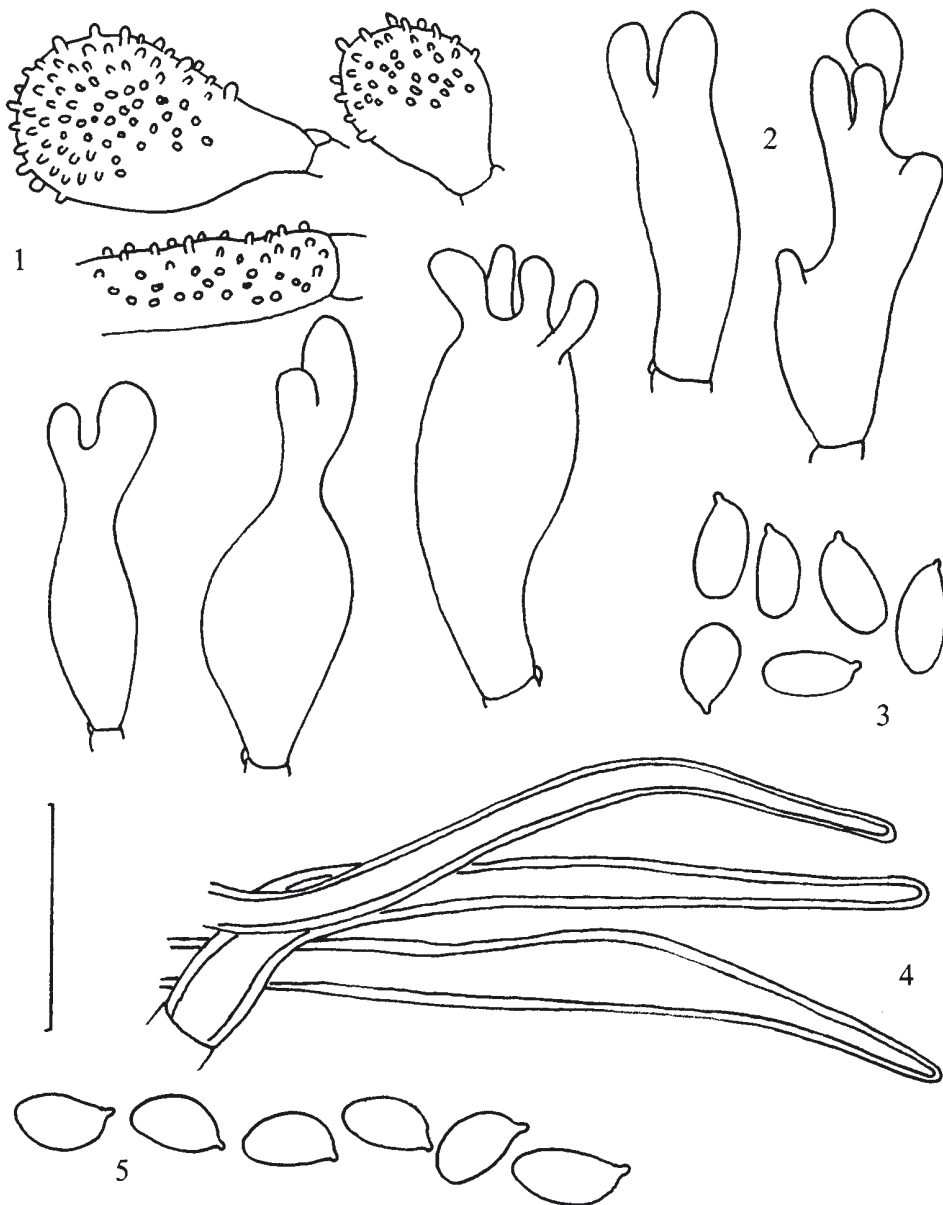
My results agree with HORAK (1968) and SVRČEK (1966) who studied some of Velenovský's original type species and identified it as *Delicatula integrella* (PERS.: FR.) FAYOD. Therefore, both of them, as well as DONK (1962), consider it synonymous with the genus *Delicatula* FAYOD. Also, the original generic description by VELENOVSKÝ (1947) agrees with the genus latter mentioned.

Acknowledgements

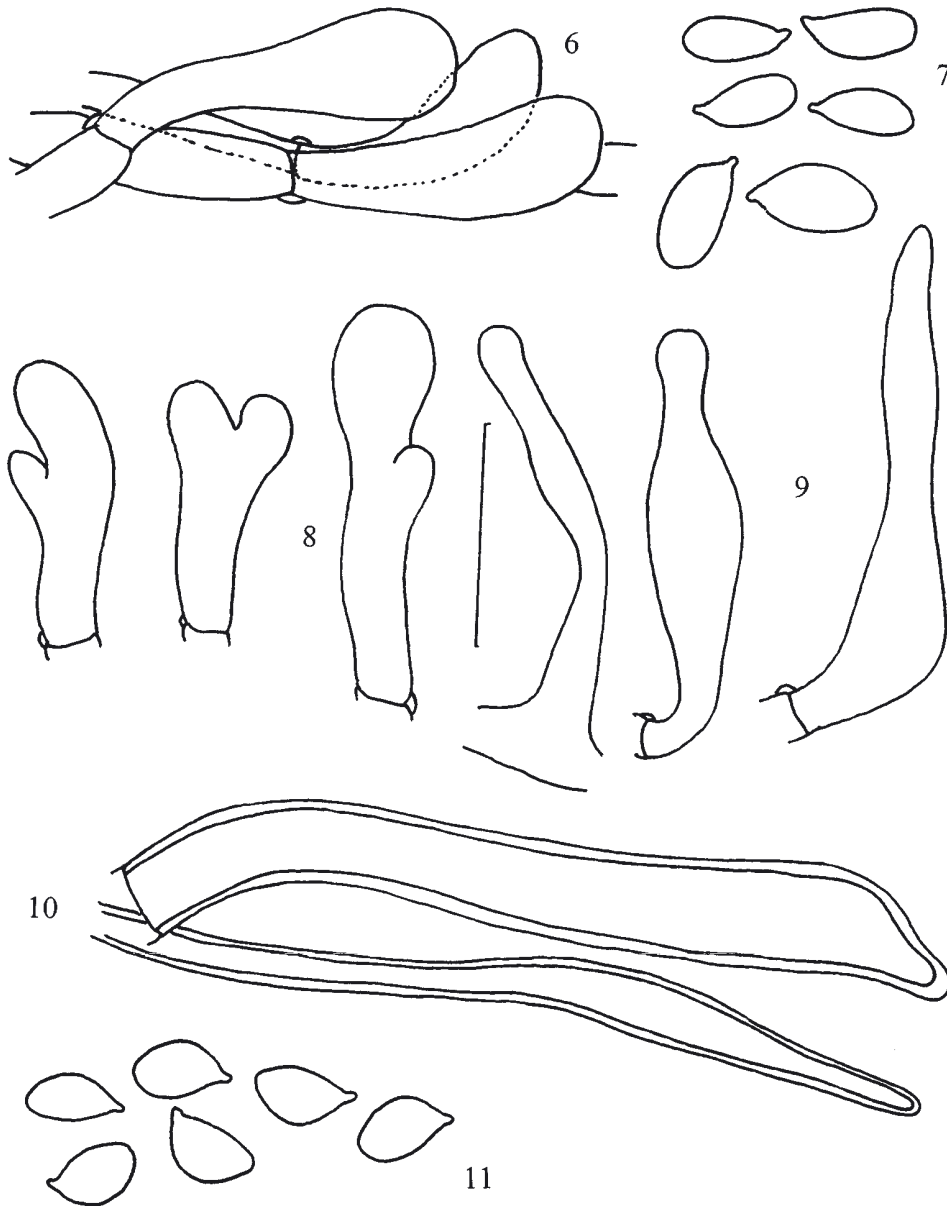
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Figs 1–5. *Retocybe fallax*: 1 – pileipellis elements, 2 – cheilocystidia, 3 – basidiospores. *Retocybe miliaris*: 4 – pileipellis velar remnants, 5 – basidiospores. Scale bar = 20 μ m.



Figs 6–11. *Retocybe minuta*: 6 – pileipellis, 7 – basidiospores, 8 – cheilocystidia, 9 – caulocystidia. *Retocybe vitrea*: 10 – pileipellis velar remnants, 11 – basidiospores. Scale bar = 20 μ m.