

Taxonomic notes on *Dematioscypha* and *Amicodisca*

AIN RAITVIIR

Institute of Zoology and Botany, Estonian Agricultural University,
Riia Street 181, 51014 Tartu, Estonia

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The history and taxonomy of the genera *Dematioscypha* Svrček and *Amicodisca* Svrček is discussed. Two new species, *Dematioscypha galanii* Raitv. and *Amicodisca svrcekii* Raitv. et Huhtinen, are described. The new combination, *Dematioscypha dematiicola* (Berk. et Broome) Svrček var. *fuscostipitata* (Graddon) Raitv., is proposed.

Key words: Hyaloscyphaceae, *Dematioscypha*, *Amicodisca*, new species, taxonomy.

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Je diskutována historie a taxonomie rodů *Dematioscypha* Svrček a *Amicodisca* Svrček. Jsou popisovány dva nové druhy *Dematioscypha galanii* Raitv. a *Amicodisca svrcekii* Raitv. et Huhtinen a je navržena nová kombinace *Dematioscypha dematiicola* (Berk. et Broome) Svrček var. *fuscostipitata* (Graddon) Raitv.

INTRODUCTION

Among the numerous taxa described by Dr. Mirko Svrček there are two small genera within the Hyaloscyphaceae proposed originally as monotypic ones, *Dematioscypha* (Svrček, 1977) and *Amicodisca* (Svrček, 1987). In the present paper the author discusses the taxonomy of these genera and adds a new species and a new variety to *Dematioscypha* and a new species to *Amicodisca*.

MATERIALS AND METHODS

The air-dried specimens from the herbarium of Institute of Zoology and Botany, Tartu (TAA) were mounted in a 3% aqueous solution of KOH and studied under a Nikon Labophot-2 microscope equipped with a drawing tube at magnification 1250×. Melzer's reagent (MLZ) was used to study cyto- and histochemical reactions.

RESULTS AND DISCUSSION

Dematioscypha Svrček

The genus *Dematioscypha* was erected by Svrček (1977) for a single species, *Peziza dematiicola* Berk. et Broome, which since Nannfeldt (1936) had usually

been placed into the genus *Hyaloscypha* Boud. (Dennis, 1949, Hughes, 1953), with the exception of Raitviir (1970), who excluded it from *Hyaloscypha*, but made no proposals concerning its taxonomic position.

Huhtinen (1987) has widened the concept of the genus and transferred *Urceolella richonis* Boud. and *Hyaloscypha olivacea* Velen. to it, reducing the latter to a variety of *Dematioscypha richonis* (Boud.) Huhtinen. Recently the current author has studied two interesting collections which provide additions to the taxonomy of the genus.

Revising the isotype specimens of species described by W. D. Graddon deposited in TAA I discovered that *Betulina fuscostipitata* Graddon represents in fact a *Dematioscypha*. The Graddon's species is very close to the typical *D. dematiicola* differing in MLZ+ ascus pore, in being more or less distinctly stipitate and in its foliicolous habit. No *Haplographium* anamorph is present, but the value of this character is questionable as the typical *D. dematiicola* is on some occasions found without its *Haplographium* anamorph which may develop not simultaneously with, but earlier than the teleomorph (Raitviir, 1991). The length of the stipe is variable within the same population as the apothecia from the isotype specimen examined by the author appeared to be considerably shorter than the one by Graddon (l.c.). The author's conclusion is that *Betulina fuscostipitata* represents a variety of *Dematioscypha dematiicola* and the following new combination is proposed.

Dematioscypha dematiicola var. *fuscostipitata* (Graddon) Raitv., comb. nov.

Basionymum: *Betulina fuscostipitata* Graddon, Trans. Brit. Mycol. Soc. 63: 477, 1974.

Apothecia superficial, scattered or gregarious, shortly stipitate. Disc 0.1–0.2 mm in diameter, greyish-white. Receptacle cup-shaped to saucer-shaped, dark greyish to almost black with black stipe when dry, covered, particularly at the margin, with short whitish hairs. Ectal excipulum composed of a textura prismatica, cells with olivaceous brown irregularly thickened walls, 7–14 × 4–6 μm. Hairs narrowly conical, straight, aseptate to 3-septate, with thin hyaline walls, smooth, sometimes with solid apices, 30–50 × 3–4 μm, apically less than 1 μm. Asci arising from croziers, cylindric-clavate, 8-spored, apical pore MLZ+, 30–40 × 4–6 μm. Spores ellipsoid, hyaline, 0–1-septate, sometimes with two small polar guttules, 5–7 × 1–1.5 μm. Paraphyses cylindrical, not exceeding the asci, 0.8–1.5 μm wide.

Ill.: Trans. Brit. Mycol. Soc. 63: 478.

Specimen studied: On fallen leaves of *Betula* sp., Coleshill, Warwks., England, Oct. 1972, coll. M. C. Clark, W. D. G. 2245 (isotype in TAA).

On one of the collecting trips during my stay at University of Alcalá de Henares (Spain) I collected a small dark-coloured hyaloscyphaceous fungus on a fallen

decorticated pine stick which represents a new species of *Dematioscypha*. It is described now and named in honour of the Spanish discomycetologist Dr. Ricardo Galán.

Dematioscypha galanii Raitv., species nova

Apothecia superficialia, subsessilia vel breviter stipitata, 0.1–0.2 mm in diametro, pallide grisea, sicca brunnea, extus longe pilosa. Pili difformes. Pili typi primi cylindraco-conici, multiseptati, tenuiter tunicati, $60\text{--}90 \times 3\text{--}4 \mu\text{m}$, apicibus $1.6 \mu\text{m}$, granulis brunneis incrustati. Pili typi secundi cylindraco non angustati, multiseptati, tenuiter tunicati, $35\text{--}60 \times 4\text{--}5 \mu\text{m}$, granulis brunneis incrustati. Asci uncinati, cylindraco-clavati, octospori, $50\text{--}60 \times 5\text{--}7 \mu\text{m}$, poro iodo coerulescente. Sporae ellipsoideae vel cylindraco-ellipsoideae ad usque suballantoideae, 2–4-guttulatae, $10\text{--}15 \times 2\text{--}3 \mu\text{m}$. Paraphyses cylindracoae, ascos non superantes, $0.8\text{--}1.5 \mu\text{m}$. latae.

Dematioscyphae richonis (Boud.) Huhtinen var. *olivaceae* (Velen.) Huhtinen similis, ascis et sporis magnis differt.

Holotypus: In ramo decorticato Pini sp., Hayedo de Tejera Negra, Cantalojas, Guadalajara, Hispania, 07. 03. 1994, A. Raitviir legit (TAA-137743).

Apothecia superficial, scattered, subsessile to very shortly stipitate. Disc 0.1–0.2 mm in diameter, pale greyish when fresh. Receptacle cup-shaped, medium brown with a whitish margin when fresh, almost globosely closed, dark brown with a whitish marginal fringe when dry, covered with long brownish to yellowish-brown hairs. Ectal excipulum composed of a textura prismatica, brownish due to irregularly placed granules of a dark brown substance in intercellular spaces, cells with hyaline irregularly thickened walls, $8\text{--}12 \times 3.5\text{--}5 \mu\text{m}$. Hairs of two types. Hairs of the first type narrowly tapering-cylindrical, straight, multiseptate, usually with 4–6 septa, with thin hyaline walls, smooth, bearing numerous massive dark brown to blackish brown resinous exudates, $60\text{--}90 \times 3\text{--}4 \mu\text{m}$, tapering apically to $1.6 \mu\text{m}$. Hairs of the second type cylindrical, not tapering, with 3–5 septa, with thin hyaline walls encrusted in the same way as tapering hairs, $35\text{--}60 \times 4\text{--}5 \mu\text{m}$. Asci arising from croziers, cylindraco-clavate, 8-spored, apical pore MLZ+, $50\text{--}60 \times 5\text{--}7 \mu\text{m}$. Spores ellipsoid to cylindraco-ellipsoid, often inequilateral to suballantoid, hyaline, aseptate, containing 2 to 4 small to medium-sized (up to $0.8 \mu\text{m}$ in diam.) lipid guttules, $10\text{--}15 \times 2\text{--}3 \mu\text{m}$. Paraphyses cylindrical, not exceeding the asci, $0.8\text{--}1.5 \mu\text{m}$ wide (Fig. 1).

Specimen examined: On a fallen decorticated stick of *Pinus* sp., Hayedo de Tejera Negra, Cantalojas, Guadalajara, Spain, 07.03.1994., A. Raitviir (Holotype in TAA-137743).

The species bears a general resemblance to *Dematioscypha richonis* (Boud.) Huhtinen var. *olivacea* (Velen.) Huhtinen, but differs from it in several important

features. The ectal excipulum is similar in both species, but in *D. galanii* the pigment is located in intercellular substance, not in cell wall thickenings as in *D. richonis* var. *olivacea*. The presence of two types of hairs is a unique feature of this species. The tapering hairs are very similar to those of *D. richonis* var. *olivacea* but the shorter wide cylindrical hairs cannot be found in the other species of *Dematioscypha*. Further it differs from *D. richonis* var. *olivacea* in having larger asci arising from croziers and showing amyloid pores, and larger, distinctly guttulate spores, in growing on coniferous wood and not being accompanied by the dematiaceous mould *Haplographium* sp.

A key to the known species and varieties of *Dematioscypha* is given below. For detailed descriptions and illustrations of species not treated here the excellent paper of Huhtinen (1987) is recommended.

Key to the species and varieties of *Dematioscypha*

1. Hairs conical with acute tips, without conspicuous encrustation
 2. Ascus pore MLZ-, on decaying wood *D. dematiicola* var. *dematiicola*
 - 2'. Ascus pore MLZ+, on fallen leaves *D. dematiicola* var. *fuscostipitata*
- 1'. Hairs narrowly cylindrical-tapering with rounded tips, bearing conspicuous dark-coloured encrusting granules
 3. Asci arising from croziers
 4. Spores 5-8(-10) × 1.5-2(-3) μm *D. richonis* var. *richonis*
 - 4'. Spores 10-15 × 2-3 μm. *D. galanii*
 - 3'. Asci arising from simple septa *D. richonis* var. *olivacea*

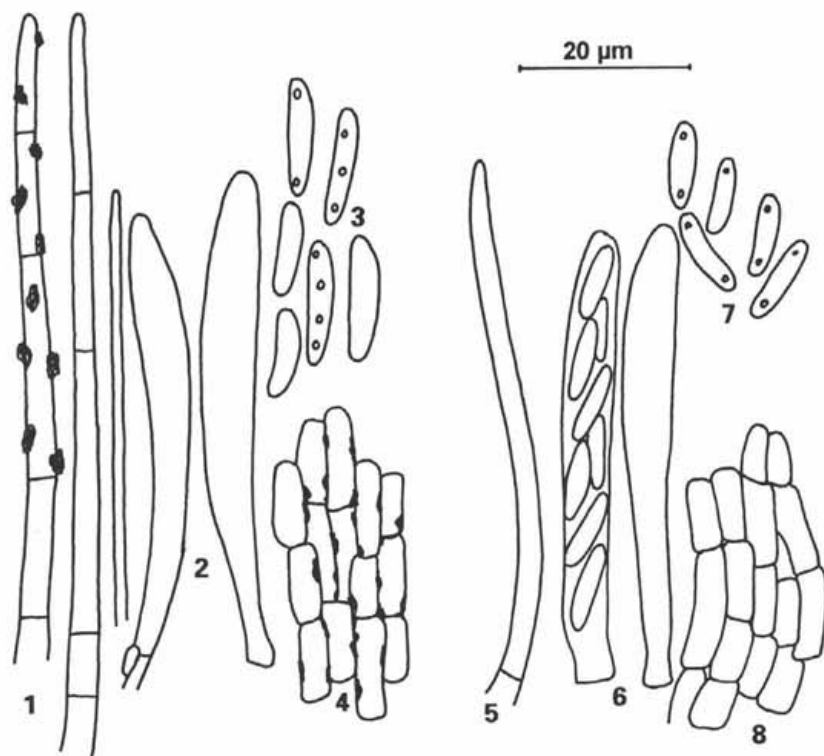
Amicodisca Svrček

Svrček (1987) has erected another originally monotypic genus, *Amicodisca*, for *Dasyscypha brdensis* Velen. Later Haines (1989) added the North American species *A. viridicoma* (Peck) Haines and Huhtinen (1994) has shown that the correct name for the type species is *A. virella* (P. Karst.) Huhtinen.

On excursions of the XIII Nordic Mycological Congress held in Mekrijärvi, Ilomantsi, North Karelia, Finland at the end of August, 1996 two very abundant collections of *Amicodisca* were made. One of them was typical *A. virella*, but another, macroscopically identical, had, for a surprise, totally different and considerably smaller spores. This fungus is described now as a new species of *Amicodisca* and named in honour of Dr. Mirko Svrček.

Amicodisca svrcekii Raitv. et Huhtinen, species nova

Apothecia superficialia, late sessilia, 0.3-1 mm diametro, hymenio grisco, extus olivaceo-viridia, dense viridipilosa. Pili cylindraco-conici, aseptati, tenuiter



Figs. 1–8. *Dematioscypha galanii* (holotype). 1. Two hairs. 2. Two asci and a paraphyse. 3. Ascospores. 4. A fragment of ectal excipulum. *Amicodisca svrcekii* (holotype). 5. A hair. 6. Two asci. 7. Ascospores. 8. A fragment of ectal excipulum. Bar = 20 μm

tunicati, subhyalini, obscure pallide citrini vel pallide olivacei, $40\text{--}80 \times 2.5\text{--}4 \mu\text{m}$, apicibus $1\text{--}1.6 \mu\text{m}$ diametro. Asci non uncinati, cylindraco-clavati, octospori, $50\text{--}60 \times 5\text{--}6 \mu\text{m}$, poro iodo coerulescente. Sporae ellipsoideae vel suballantoideae, aseptatae, biguttulatae, $8\text{--}11 \times 1.8\text{--}2.5 \mu\text{m}$. Paraphyses cylindracoae, ascos non superantes, $0.8 \mu\text{m}$ latae.

In ligno putrido humido crescit.

Amicodiscae virellae (P. Karst.) Huhtinen similis, sporis minoribus differt.

Holotypus: In ligno putrido humido, Palokangas, Ilomantsi, Karjala borealis., Finland, 28.08.1996, T. Lassøe legit, TL-4250 in TAA conservatur.

Apothecia superficial, scattered to gregarious, broadly sessile. Disc $0.3\text{--}1 \text{ mm}$, greyish when fresh and dry. Receptacle cup-shaped to saucer-shaped, externally olivaceous-green when fresh, blackish-brown when dry, densely covered with

yellowish-green hairs. Ectal excipulum of a *textura prismatica* to *textura angularis*, cells thin-walled, hyaline to olivaceous, $6-14 \times 3-6 \mu\text{m}$. Hairs cylindrical-conical, aseptate, straight, hyaline, dull lemon yellow to pale olivaceous, thin-walled, smooth, bearing numerous loosely attached small, olivaceous-greenish granules dissolving in KOH and yielding a lemon-yellow hue, $40-80 \times 2.5-4 \mu\text{m}$, tapering to $1-1.5 \mu\text{m}$. Asci arising from simple septa, cylindrical-clavate, 8-spored, $50-60 \times 5-6 \mu\text{m}$, wide apical pore faintly MLZ +. Spores ellipsoid to subballantoid, aseptate, containing 2 polar lipid guttules, $8-11 \times 1.8-2.5 \mu\text{m}$. Paraphyses cylindrical, not exceeding the asci, $0.8 \mu\text{m}$ wide.

On very wet decaying hardwood.

Specimen examined: on the underside of wet, riverside driftwood, Palokangas, Ilomantsi, Karjala borealis., Finland, 28. 08.1996, coll. T. Lassøe (Holotype TL-4250 in TAA, isotypes C, TUR).

This species is externally undistinguishable from *Amicodisca virella* (P. Karst.) Huhtinen but microscopically clearly different in the narrow asci and small spores.

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