

TAXONOMICAL AND CHOROLOGICAL NOTES 1 (1–19)

Zoltán BARINA¹, Lajos BENEDEK², Lajos BOROS³, Bálint DIMA^{4,5},
 Ádám FOLCZ⁶, Gergely KIRÁLY⁷, Attila KOSZKA⁸, Ákos MALATINSZKY⁹,
 Dávid PAPP¹⁰, Dániel PIFKÓ¹¹ and Viktor PAPP¹²

¹Department of Botany, Hungarian Natural History Museum,
 H-1476 Budapest, Pf. 222, Hungary; barina@bot.nhmus.hu, ¹¹pifko@bot.nhmus.hu

²Department of Botany and Soroksár Botanical Garden, Corvinus University of Budapest,
 H-1518 Budapest, Pf. 53, Hungary; lajos.benedek@uni-corvinus.hu, ¹²viktor.papp@uni-corvinus.hu

³Pro Mikológia Alapítvány, H-1142 Budapest, Ungvár u. 43, Hungary; boroslajos476@gmail.com

⁴Plant Biology, Department of Biosciences, University of Helsinki,
 P. O. Box 65, 00014 Helsinki, Finland; dima.balint@helsinki.fi

⁵Eötvös Loránd University, Institute of Biology, Department of Plant Anatomy,
 H-1117 Budapest, Pázmány Péter sétány 1/c, Hungary; cortinarius1@gmail.com

⁶Educational Forestry Management Co.,

H-9400 Sopron, Honvéd u. 1, Hungary; folczadam@gmail.com

⁷Institute of Silviculture and Forest protection, University of West Hungary,

H-9400 Sopron, Ady E. u. 5, Hungary; kiraly.gergely@emk.nyme.hu

⁸H-8060 Mór, Árpád u. 47, Hungary; attila.koszka@hotmail.com

⁹Institute of Nature Conservation and Landscape Management, Szent István University,

H-2103 Gödöllő, Péter K. u. 1, Hungary; malatinszky.akos@mkk.szie.hu

¹⁰Department of Pomology, Corvinus University of Budapest,

H-1518 Budapest, Pf. 53, Hungary; david.papp@uni-corvinus.hu

Barina, Z., Benedek, L., Boros, L., Dima, B., Folcz, Á., Király, G., Koszka, A., Malatinszky, Á., Papp, D., Pifkó, D. & Papp, V. (2015): Taxonomical and chorological notes 1 (1–19). – *Studia bot. hung.* 46(2): 205–221.

Abstract: The first part of the newly launched series includes miscellaneous new records from fungi to vascular plants. New chorological records of 14 fungi taxa are provided here: two new (*Hypoxyton ticinense* and *Amylostereum laevigatum*) and one confirmed (*Sarcodontia crocea*) for Hungary; one new for Kiskunság and Bükk Mts (*Pholiota squarrosoides*); five new for Vértes Mts (*Arrhenia rickenii*, *Dentipellis fragilis*, *Entoloma zuccherellii* var. *pluteisimilis*, *Gomphidius roseus*, *Leucoagaricus ionidicolor*) and partly Central Hungary; four new for Sopron Mts (*Agaricus bohusii*, *Amanita vittadinii*, *Hericium erinaceus* and *Leccinum variicolor*); and two new for Neusiedl Hills (*Gomphidius roseus* and *Polyporus umbellatus*). Records of one moss (*Anacamptodon splachnoides*) new for Cserhát and Cserhát Mts are provided here. New chorological records of two vascular plants are provided: one taxon (*Crataegus rosaeformis* subsp. *curvisepala*) new for Hernád Valley and NE Hungary; one (*Epipactis leptochila* subsp. *neglecta*) new for the Börzsöny Mts. Two new combinations in genus *Chamaecytisus* are proposed here (*Chamaecytisus supinus* subsp. *aggregatus* and subsp. *pannonicus*). The present paper includes also the revision of the occurrence of *Calamagrostis villosa* in Hungary and concludes that it has been extinct in the country.

Key words: bryophyte, extinct, fungi, Hungary, new combination, red list, vascular plant

INTRODUCTION

With this paper, a new series is launched which includes chorological, nomenclatural, and taxonomic notes for all groups of algae, fungi, cryptogams and phanerogams. From general notes to minor comments about the taxonomy, nomenclature and typification of taxa is the subject of this series. Remarkable notes on the chorology of taxa and distributional records newly reported for at least regional level (cf. MOLNÁR *et al.* 2008) with significance at the same time are welcome. Chorological data of taxa new, e.g. for a settlement's surroundings, or of widely distributed species but (apparently) not reported from smaller areas are not included in this series, as well as single occurrence reports of taxa without the clear description of the significance of the new report.

Our aim is to provide valuable, clear, and interpretable amendments for flora guides, monographs, and scientific papers and to avoid the loss of scattered information on the knowledge of biodiversity.

MATERIAL AND METHODS

Records of discussed taxa are in order following main taxonomic units and arranged alphabetically within them.

Specimen records are divided into two parts separated with semicolon: 1) locality data, including the names of country, region(s), settlement and toponym(s), followed by the coordinates in degrees (up to 5 decimals); 2) voucher data, including the collector(s), date of collecting/observing, acronym of herbarium (following THIERS 2015+), voucher ID, and the name of person who identified the specimen (if differs from the collector).

Denomination of biogeographical regions for Hungary follows MOLNÁR *et al.* (2008). Nomenclature of plant communities follows BORHIDI (2003).

NEW RECORDS WITH ANNOTATIONS

Fungi

(1) *Agaricus bohusii* Bon (Agaricaceae)

Hungary, Soproni-hegység (Sopron Mts): Botanical Garden of the University of West Hungary, Sopron, on soil covered by wood-chips, 47.68022° N, 16.57478° E; leg. Z. Börsök and Á. Folcz, 05.09.2013, BP 107390. – Hungary, Soproni-hegység (Sopron Mts): Várísi-forest, *Quercetum petraeae-cerris*, soil near *Quercus* wood stock, 47.68022° N, 16.5747° E; leg. A. Hajnal, 15.07.2015, s.n. (det. Á. Folcz).

BOHUS (1971) identified this species as *Agaricus elvensis* sensu Cooke, which was a misapplied name of *A. elvensis* Berk. et Broome. However, the latter represents a later synonym of *Echinoderma asperum* (Pers.) Bon, therefore the new

name, *A. bohusii* was introduced by BON (1981, 1983) for *A. elvensis* sensu Bohus. This species is characterised by cespitose appearance, which is rather unusual in the genus *Agaricus* (BOHUS 1995). *Agaricus bohusii* is uncommon in Hungary (e.g. BABOS 1989) and it has been protected by law since 2013 (MK 2013). The species is reported for the first time from the Sopron Mts; however, it is known in the adjoining Rosalia Mts (Austria) (DÄMON *et al.* 2015).

Á. Folcz

(2) *Amanita vittadinii* (Moretti) Vittad. (Amanitaceae)

Hungary, Soproni-hegység (Sopron Mts): Harka, wooded pasture, 47.65067° N, 16.58643° E; leg. B. Varga and Á. Folcz, 04.08.2014, BP 107396. – Hungary, Vértes Mts, Csákberény, Madzag-rét, extensive pasture (sheep-walk), in fairy rings; leg. A. Koszka, 30.10.2013, BP 106911.

Amanita vittadinii can typically be found in grasslands, and it is characterised by the rough warts on the pileal surface, and the concentrically arranged scales on a solid stipe without volva (BAS 1969). In Europe and North Africa it was reported from nitrophilous grasslands, open grassy areas and parks, sandy pastures, and abandoned agricultural fields. It prefers Mediterranean or sub-Mediterranean areas (GALLI 2001), therefore it is absent in North Europe. In some regions of Hungary, *A. vittadinii* is not so rare yet, but with giving up the traditional grazing it may become endangered (SILLER *et al.* 2006). Herein, it is reported from the Sopron Mts and the Vértes Mts for the first time.

Á. Folcz and A. Koszka

(3) *Amylostereum laevigatum* (Fr.) Boidin (Amylostereaceae)

Hungary, Bakony Mts: Szentgáli Tiszafás (common yew stand of Szentgál), on the bark of living *Taxus baccata* L., 47.11109° N, 17.78674° E; leg. V. Papp, 20.07.2013, BP 106912.

The wood-inhabiting basidiomycete, *Amylostereum laevigatum* is a symbiont of wood wasps and it is growing mainly on *Juniperus* and *Taxus* trees. Among the European *Amylostereum* species, *A. laevigatum* is characterised by monomitic hyphal system and resupinate basidiome (BERNICCHIA and GORJÓN 2010). In Europe it is relatively common and widespread, however, it was not reported from Hungary. The first Hungarian record of this species is published here from the common yew stand of Szentgál.

V. Papp

(4) *Arrhenia rickenii* (Hora) Watling (Tricholomataceae)

Hungary, Vértes Mts: Pusztavám, Lépa-kút, roadside covered with *Barbula unguiculata* Hedw., on calcareous soil; leg. A. Koszka, 10.10.2015, BP 106913.

This small omphalinoid species is characterised mainly by strongly inter-venose, relatively thick, vein-like lamellae; translucently striate pileus with a crenu-

late margin; and by its typical habitat, growing always among mosses, mostly with *Barbula* spp. (ELBORNE 2012). Earlier it was classified into the genus *Omphalina* (HORA 1960), but the parasitic relationship with mosses and the reduced lamellae justified that the species belongs to the genus *Arrhenia* (WATLING 1988). Until now, only one unvouchered occurrence has been published from Hungary from the easternmost part of the country at Bátorliget (LENTI 2007); however, the potential habitat (rocky path sides in calcareous soil, covered with moss) of this species is common in the country. The small, thin, fragile fruit-bodies of *A. rickenii* are hardly noticeable, and easily overlooked. According to this, it is hypothesised to be much more frequent in Hungary than it is suggested by the two data.

A. Koszka

(5) *Dentipellis fragilis* (Pers.) Donk (Hericiaceae)

Hungary, Vértes Mts: near Csákberény, Juhdöglő-völgy Forest Reserve, on unknown hardwood log, 47.38054° N, 18.33027° E; leg. V. Papp, 09.09.2014, BP 106907.

The resupinate, hidnoid fungus, *Dentipellis fragilis* is characterised by monomitic hyphal system, presence of gloeocystidia and ornamented amyloid, globose to ovoid basidiospores (BERNICCHIA and GORJÓN 2010). It is one of the twenty-one fungal species, which have been selected as indicator of the value of natural beech forests in Europe (CHRISTENSEN *et al.* 2004). The first data of this species from Hungary were published by SILLER (2004) from Kékes (Mátra Mts, North Hungary) and Öserdő (Bükk Mts, North Hungary) montane beech forest reserves. In addition, *D. fragilis* was only known from the Őrség National Park (Western Transdanubia) in Hungary (SILLER *et al.* 2013). Herein the first record of this peculiar species is published from Central Transdanubia (Juhdöglő-völgy Forest Reserve, Vértes Mts).

V. Papp

(6) *Entoloma zuccherellii* var. *pluteisimilis* (Noordel. et C. E. Hermos.) V. Papp (Entolomataceae)

Hungary, Vértes Mts: near Csákberény, Juhdöglő-völgy Forest Reserve, on *Fagus sylvatica* L. log; leg. V. Papp, 30.11.2012, BP 106908 (det. V. Papp and B. Dima).

The lignicolous agaric, *Entoloma pluteisimilis* (Agaricales, Basidiomycota) was described from Spain and characterised by small, thin-walled, polygonal spores (NOORDELOOS 2004). Former phylogenetic study (CO-DAVID *et al.* 2009) and a recent preliminary multigene ML (maximum-likelihood) analysis (Papp and Dima, unpublished) also indicated that the earlier described *E. zuccherellii* (Noordel. and Hauskn.) Noordel. et Co-David (NOORDELOOS 2000) and *E. pluteisimilis* have low genetic difference, thus the latter was suggested to belong to the morphological variety of *E. zuccherellii* (PAPP 2015).

The only known Hungarian locality of *E. zuccherellii* var. *pluteisimilis* (as *E. pluteisimilis*) has been the Fényi-erdő forest (near Bátorliget, Northern Hungary) published by NOORDELOOS and HAUSKNECHT (2009). Herein, the second Hungarian record of this taxon is presented from the Juhdöglő-völgy Forest Reserve (Vértes Mts, Central Transdanubia).

V. Papp and B. Dima

(7) *Gomphidius roseus* (Fr.) Fr. (Gomphidiaceae)

Hungary, Fertőmelléki-dombsor (Neusiedl Hills): Dudlesz, *Pinus sylvestris* L. stand, 47.71858° N, 16.57312° E; leg. A. Hajnal and Á. Folcz, 07.10.2013, s.n.; and 47.73197° N, 16.57021° E; leg. Á. Folcz, 14.10.2013 and 18.09.2014, BP 107389. – Hungary, Vértes Mts: Pusztavám, Lépa-kút, abandoned colliery, in *Pinus sylvestris* plantation established on mining waste, between *Suillus bovinus* (L.) Roussel fruit-bodies; leg. A. Koszka, 19.10.2012, BP 106914.

Gomphidius roseus is easily recognisable by its bright red cap cuticle, whitish pileal flesh, and by the distant and decurrent lamellae, which turn from white to dark grey with age (KNUDSEN and TAYLOR 2012). There is a close association between *Pinus sylvestris*, *Suillus bovinus* and *Gomphidius roseus*. The relationship is considered to be parasitic (OLSSON *et al.* 2000). The species is widespread in Europe (especially in the Northwest), moreover, locally common in some places (KRIEGLSTEINER 2000). In Hungary it is rare, only detected along the western border of the country (Őrség region and Sopron Mts) and two montane localities (Mátra Mts and Zemplén Mts), therefore it is protected by law (SILLER *et al.* 2006). The latest occurrence in the Vértes Mts was surprising, but it has been detected continuously for three years in the same plot. In this study it is also reported for the first time from Neusiedl Hills.

Á. Folcz and A. Koszka

(8) *Hericium erinaceus* (Bull.) Pers. (Hericiaceae)

Hungary, Soproni-hegység (Sopron Mts): Várasi-forest *Cyclamen purpurascens*-*Carpinetum*; leg. B. Varga, 02.10.2014, BP 107387 (det. Á. Folcz).

The familiar medicinal mushroom, *Hericium erinaceus* can be easily identified macroscopically by the conspicuous basidiomes consisting of numerous, typically long, dangling, fleshy simple spines, which are at first white, and becoming yellowish, then brownish with age (THONGBAI *et al.* 2015). In Europe it grows predominantly in old-growth forests, on living, weakened trees or dead trunks of oak and beech trees (BODDY *et al.* 2011, KUNCA and ČILIAK 2015). *Hericium erinaceus* is red-listed in several European countries (DAHLBERG and CRONEBORG 2006), in addition it is protected in Hungary (SILLER *et al.* 2006). Herein, the first locality of this species is published from the Sopron Mts.

Á. Folcz

(9) *Hypoxylon ticinense* L. E. Petrini (Xylariaceae)

Hungary, Kiskunság: near Ócsa, Ócsai turjános Forest Reserve, on unknown hardwood log; leg. V. Papp, 19.11.2009, BP 106915 (det. A. Hausknecht and V. Papp); and 03.08.2010, BP 106916. – Hungary, Hanság: near Bósárkány, Pintér-Hany, 47.74716° N, 17.32856° E, on cf. *Fraxinus*; leg. V. Papp, 23.06.2012, BP 106917.

The peculiar ascomycete, *Hypoxylon ticinense* is characterised by distinctive stromata that are usually discoid, pulvinate, thick, and undulating, surrounded when immature by a bright yellow to orange fimbriate margin. In Europe it is known from Austria, Croatia, Germany, France, Italy, Slovakia, and Switzerland (BITZER *et al.* 2008, RIPKOVÁ and HAGARA 2003). In this study *H. ticinense* is reported from Hungary for the first time.

V. Papp

(10) *Leccinum variicolor* Watling (Boletaceae)

Hungary, Soproni-hegység (Sopron Mts): Sopron, Muck, mixed *Picea abies* (L.) H. Karst. stand, under *Betula pendula* Roth, 47.65186° N, 16.52972° E, leg. Á. Folcz, 26.09.2013, BP 107394.

The characteristic bolete, *Leccinum variicolor* can be recognised macroscopically by the variegated pileus and the distinct blue-green discoloration of the context of the stipe (NOORDELOOS 2015). It is associated with common birch, mostly in humid habitats (marshes and bogs). In Hungary several records of this species was known, especially from the Őrség region (SILLER *et al.* 2006). Herein, it is reported from the Sopron Mts for the first time.

Á. Folcz

(11) *Leucoagaricus ionidicolor* Bellù et Lanzoni (Agaricaceae)

Hungary, Vértes Mts: Csákberény, Juhdöglő-völgy Forest Reserve, near a fallen trunk of *Fagus sylvatica*, on humus-rich soil; leg. A. Koszka, 08.11.2015, BP 106918.

This small *Leucoagaricus* species is easily recognisable by its bright purple pileus with fine, appressed scales on a whitish background. The distinct erect ring on the purple stipe is also typical (BELLÙ and LANZONI 1988, CANDUSSO and LANZONI 1990). The distinction between *Leucocoprinus* and *Leucoagaricus* based on morphological characters was questioned (e.g. VELLINGA 2004). More molecular phylogenetic studies are required to set up a clear taxonomic concept about this monophyletic group. *Leucoagaricus ionidicolor* is a widely distributed, but a very rare species in Europe (LANGE 2012), where it was reported mainly from thermophilous forests, in humus-rich habitats or decomposed wood debris buried in the soil (HOLEC 2009). From Hungary, we have only two former data. It was found in a floodplain forest near Gyula (VASAS 2000) and a beech forest near Budapest (ALBERT 2008). Herein, the third occurrence data of this species is reported from the Juhdöglő-völgy Forest Reserve (Vértes Mts).

A. Koszka

(12) *Pholiota squarrosoides* (Peck) Sacc. (Strophariaceae)

Hungary, Kiskunság: near Ócsa, Ócsai turjános Forest Reserve, on unknown hardwood log, leg. V. Papp, 05.10.2011, BP 106909. – Hungary, Bükk Mts, Óserdő Forest Reserve, on *Fagus sylvatica* log, 48.06020° N, 20.44590° E; leg. L. Benedek, 09.27.2015, BP 106910 (det. L. Benedek and V. Papp).

The rare and protected, brown-spored agaric *Pholiota squarrosoides* was formerly known only from the Juhdöglő-völgy Forest Reserve in Hungary (PAPP and DIMA 2014). The morphological description and the infrageneric classification of this species were discussed by PAPP and DIMA (2014). Herein, two new localities of *P. squarrosoides* are presented. The one from the Óserdő Forest Reserve is particularly interesting from the mycological point of view, considering that Óserdő is one of the most intensively studied forest reserves in Hungary (e.g. SILLER 1986, 2004, SILLER and TURCSÁNYI 2002, TAKÁCS and SILLER 1980).

V. Papp and L. Benedek

(13) *Polyporus umbellatus* (Pers.) Fr. (Polyporaceae)

Hungary, Fertőmelléki-dombsor (Neusiedl Hills): Szárhalom, *Quercetum petraeae-cerris*, 47.70384° N, 16.62861° E; leg. A. Hajnal, 06.08.2014, s.n. (det. Á. Folcz).

Macroscopically it is a very distinct species within the genus *Polyporus* by the multiple circular pilei arising from a common stipe (RYVARDEN and MELO 2014). In Europe it is considered to be a rare species; however, in some regions of Central Europe it is reasonably widespread (e.g. DÄMON *et al.* 2015, KUNCA 2011). In Hungary, *P. umbellatus* is a protected species, despite the fact that several localities of the species are known in the country: e.g. Bükk Mts, Mátra Mts, Buda Mts, Sopron Mts, (SILLER *et al.* 2006). Herein, the first locality of *P. umbellatus* is published from the Neusiedl Hills.

Á. Folcz

(14) *Sarcodontia crocea* (Schwein.) Kotl. (Meruliaceae)

Hungary, Zemplén Mts: Károlyfalva, 48.36340° N, 21.57908° E, on branch of living old *Malus domestica* Borkh., leg. L. Boros, 16.08.2014, BP 106911 (det. V. Papp and D. Papp).

The hidnoid fungus, *Sarcodontia crocea* is characterised by sulphur yellow to ferruginous brown aculei, thick-walled subicular hyphae, and smooth thick-walled basidiospores (BERNICCHIA and GORJÓN 2010, KOTLÁBA 1953). It is a wood-inhabiting species causing white rot on mostly apple trees (*Malus* spp.), but it was also reported from several other tree species (*Pyrus*, *Prunus*, *Sorbus*, etc.) (SZCZEPKOWSKI 2010). Previously it was described as a dangerous parasite of apple orchards (KOTLÁBA 1953), but nowadays it is considered to be threatened (ING 1993), or even extinct from some regions (LÆSSØE 2004), and has no agronomic importance. The decreasing number of old apple orchards is probably in connec-

tion with the extinction of *Sarcodontia crocea* (VENTURELLA 2006). Another cause might be the global climate change, which, on the contrary, results in the unexpected occurrence of the fungus in the northern regions of Europe (KREISEL 2006).

BÁNHEGYI *et al.* (1953) mentioned this species (as *Odontia setosa*) from Hungary (without occurrence data) and stated that it is not a rare species. However, studying the subsequent Hungarian literatures no data were found of *Sarcodontia crocea*. In this study a recent locality of *S. crocea* is published, which was found in NE Hungary in 2014. Unfortunately, this year we have experienced that the host tree was felled.

L. Boros, D. Papp, and V. Papp

Bryophytes

(15) *Anacamptodon splachnoides* (Froel. ex Brid.) Brid. (Amblystegiaceae)

Hungary, Cserhát, Tornaszentjakab: Csonkás, knot-hole of Turkey oak (at the border of *Quercetum petraeae-cerris* and *Quercus-Carpinetum*), 48.52249° N, 20.93543° E, 225 m; leg. Z. Barina, 17.07.2015, Nr. 28184. – Hungary, Központi-Cserhát, Pásztó: Eastern slope of Mt Tepke, knot-hole of Turkey oak (margin of *Quercetum petraeae-cerris* stand), 47.94086° N, 19.64987° E, 286 m; leg. Z. Barina, 25.10.2015, Nr. 28480. – Hungary, Központi-Cserhát, Mátraszőlős: near the quarry of Fehérkő-bánya, in thermophilous oak woodland, knot-hole of Turkey oak, 47.977217° N, 19.668464° E, 401 m; leg. Z. Barina, 19.11.2015, Nr. 28490.

Anacamptodon splachnoides is a circumpolar species, rare and threatened all across Europe, and endangered also in Hungary (NÉMETH and ERZBERGER 2015). Its rarity is due to its specific habitat, as it occurs in knot-holes (den-drothelma) of trees. DAVIS and PURSELL (2007) found it not uncommon in Pennsylvania (United States of America) and concluded that it is usually simply overlooked because of its specific habitat. Though it can occur on various trees, all actual records in Hungary are from moist knot-holes of Turkey oak trees. Despite the wide distribution of oak forests, only 8 actual localities of *A. splachnoides* are known in Hungary (NÉMETH and ERZBERGER 2015).

Being a characteristic species, it is easily recognisable also by non-expert bryologists. During vegetation mapping in oak zones of the North Hungarian Mountains, where actual data of the species only from the Börzsöny and Bükk Mts (SZŰCS *et al.* 2015), and historical data from the Mátra and Zemplén Mts and the Heves–Borsodi-dombság are known (NÉMETH and ERZBERGER 2015), two additional populations were found in the Cserhát and Cserhát Mts. Similarly to recent experiences, all new occurrences are at the margins of *Quercetum petraeae-cerris* stands on Turkey oak. Though during our work, not *A. splachnoides* colonies were searched primarily, but based on checking a high number of knot-holes, we assume that the species is fairly rare and uncommon even in apparently suitable habitats. Since existing only one thimbleful three palm-sized colonies in the

new localities, the overall extent of its patches is less than 0.5 m² in Hungary, thus its red-list status seems to be well-founded.

Z. Barina

Vascular plants

(16) *Chamaecytisus* (Fabaceae)

LÖVE and LÖVE (1961a: 222) listed 8 new combinations in genus *Chamaecytisus* (*Chamaecytisus albus* subsp. *pallidus*, *Ch. austriacus* subsp. *virescens*, *Ch. blockianus*, *Ch. hirsutus* subsp. *leucotrichus*, *Ch. ratisbonensis* subsp. *elongatus*, *Ch. supinus* subsp. *aggregatus*, *Ch. supinus* subsp. *pannonicus* and *Ch. supinus* subsp. *pseudorocheii*). SOÓ (1966) attributed four of these combinations to Á. Löve and D. Löve (*Chamaecytisus hirsutus* subsp. *leucotrichus* (Schur) Á. Löve et D. Löve, *Ch. supinus* subsp. *pannonicus* (Simonkai) Á. Löve et D. Löve, *Ch. supinus* subsp. *aggregatus* (Schur) Á. Löve et D. Löve, and *Ch. supinus* subsp. *pseudorocheii* (Simonkai) Á. Löve et D. Löve) without any references to the relevant basionyms (years of publication of the new combinations were given only). Subsequent authors also attributed these names to Á. Löve and D. Löve: *Ch. hirsutus* subsp. *leucotrichus* (Schur) Á. Löve et D. Löve by OPREA (2005), CIOCARLAN (2000, 2009), and SIMON (2000), *Ch. supinus* subsp. *aggregatus* (Schur) Á. Löve et D. Löve by SIMON (2000) and PIFKÓ (2005a, b, 2009a, b), and *Ch. supinus* subsp. *pannonicus* (Simonkai) Á. Löve et D. Löve by PIFKÓ (2005a, 2009b). According to the introduction, LÖVE and LÖVE (1961a: 6) had no intention to create the above new combinations (“...it should be noted, that transfers indicated by the names of the original authors in parentheses but not followed by our initials are not to be attributed to us. They represent cases to which we want to draw attention, or which may need a closer study by aid of modern methods. Also, some such taxa are left uninitiated, because we suspect that the transfers have already been made, though we have been unable to find them in the literature.”) and listed the names without references for their basionym. According to the International Code of Nomenclature for algae, fungi, and plants (MCNEILL *et al.* 2012, ICN) due to the missing reference (Art. 41.5) and missing acceptance by the authors (ICN Art. 36.1a, b) all these *Chamaecytisus* combinations by LÖVE and LÖVE (1961a) are invalid (cf. PIFKÓ 2015).

These eight combinations were also neglected by LÖVE and LÖVE (1961b, c), where all new combinations were published together with those from LÖVE and LÖVE (1961a) treated as valid names by them.

Later on, the combination *Chamaecytisus hirsutus* subsp. *leucotrichus* (Schur) was validly published by PONERT (1973) (treated as *Ch. triflorus* subsp. *leucotrichus* by PIFKÓ 2005a). The combination *Chamaecytisus pseudoroche-*

lii (Simonkai) Pifkó based on *Cytisus pseudorocheii* was validly published by PIFKÓ (2005a) for the hybrid of *Ch. supinus* subsp. *aggregatus* and *Ch. austriacus* (L.) Link. The combination *Chamaecytisus blockianus* was validly published by CZEREPANOV (1973). *Chamaecytisus elongatus* (Waldst. et Kit.) Link and *Ch. virescens* (Kováts ex Neilr.) Dostál are treated on species rank (cf. PIFKÓ 2007). The taxonomic position of “*Cytisus pallidus*” is still not clear, it might belong to *Chamaecytisus virescens*, to *Ch. rocheii* or to *Ch. albus* (cf. PIFKÓ 2007).

Two of the eight above taxa are actually accepted as subspecies within genus *Chamaecytisus* (cf. PIFKÓ 2005a, 2009a); however, these combinations have not been published validly, thus, hereby two new combinations are proposed:

Chamaecytisus supinus subsp. *aggregatus* (Schur) Pifkó, comb. nov., Basionym: *Cytisus aggregatus* Schur, Enum. Pl. Transsilv.: 149. 1866.

Chamaecytisus supinus subsp. *pannonicus* (Simonkai) Pifkó, comb. nov., Basionym: *Cytisus pannonicus* Simonkai, Math. Term. Közlem. 22: 368. 1888.

D. Pifkó

(17) *Crataegus rosaeformis* Janka subsp. *curvisepala* (Lindm.) Kerényi-Nagy (Rosaceae)

Hungary, Hernád Valley: Hernádcéce, Berek, in the floodplain of the river Hernád, in white poplar alluvial forest; leg. Á. Malatinszky, 04.09.2013, BP 745232 (det. V. Kerényi-Nagy).

In his recent taxonomic review on the hawthorns of the Carpathian Basin KERÉNYI-NAGY (2015) described this infraspecific ($2n = 51$) taxon: “the fruit and the corymb are bald, the stipule leaves are nail-like on their tips. The leaves are deeply and shallowly segmented”. He indicates it as a mountain species throughout Europe that migrated to the Carpathian Basin from the north, and classified it as a long sepal taxon to the “*Curvisepala* group”. His work presents this taxon only from the Bükk Mts, Pilis Mts and Vértes Mts in Hungary. Our record largely extends the known area of this taxon in Hungary. It is significant also from the aspect of its ecological claim, as this supposedly boreal taxon occurs here in a plain river valley; moreover, the fact that it was not effected by introgressive hybridisation with *C. monogyna* aggregate species (according to KERÉNYI-NAGY 2015 the hybrids are more common than the parental species and grow to their detriment) indicates close-to-natural ecological circumstances.

Á. Malatinszky

(18) *Calamagrostis villosa* (Chaix) J. F. Gmelin (Poaceae)

Calamagrostis villosa is a widespread species of mountain and subalpine regions in Central and SE Europe; it occurs mainly in acidophilus forest associations and their derivatives often as a dominant species (MEUSEL *et al.* 1965, CONERT

1989, PYŠEK 1993). Despite its frequency in the neighbouring mountains (the Northern and Eastern Carpathians and the Alps), the occurrence of the species has been reported from Hungary only recently. In the course of herbarium revisions in BP, Lajos Felföldy identified two (originally undetermined) specimens of *C. villosa* collected by Ádám Boros at a relic fen lake near Csaroda in Bereg Plain, NE Hungary (TATÁR 1995). Furthermore, MOLNÁR (2000) described a new locality of this species from the southern part of the Nyírség region E of Debrecen, NE Hungary. The latter author also mentioned a voucher specimen collected by him and revised by L. Felföldy (deposited in BP).

During the preparation of the distribution atlas of the Hungarian flora my intention was to supervise some data of critical grasses, in this process I also reviewed the material of rare *Calamagrostis* species in BP. Beside the curiosity of the reported actual locality of *C. villosa* (occurrence in a lowland swamp community) I was rather sceptic on the account of some details of the morphological characterisation of the plants found near Debrecen by MOLNÁR (2000): "... the plant has short rhizomes or tussocks" and "... the awn of the lemma does not arise in the middle of the back of the lemma (as in the case of *C. stricta*) but near the basis of the lemma". In particular, the latter remark shows a clear confusion of the distinctive features of *C. stricta* (Timm) Koeler and *C. villosa* (probably originated in the misleading key for *Calamagrostis* of SIMON 1992).

Based on this newer revision I confirm that both historical collections of Boros ("Comit. Bereg. In ripa lacus "Nyíres-tó" prope Csaroda", BP 405783, BP 405785; leg. Á. Boros, 19.07.1953, det. L. Felföldy 13.01.1993) apparently belong to *C. villosa*. On the contrary, the voucher of Molnár ("Comit. Hajdú, in Magnocaricetis ad ripam canalis "Bodzás-ér" iuxta praed. "Málik-tanya" inter "Akácos" et "Hosszú-dűlő" pr. opp. Debrecen", BP 603825, leg. A. Molnár, 22.07.1999, det. L. Felföldy) proved to be misidentified and belongs to *C. stricta*; this fact was also strengthened by the revision label of Beata Paszko (Krakow), added on 13 December 2003. This specimen is fragmentary, consisting only two inflorescences; even so it can be identified doubtlessly on the basis of the following characters (see also the key of PENKSZA 1999):

- the lemma is as long as or slightly shorter than the glumes,
- the back of the lemma is rough at least in the upper part,
- the awn arises in the lower part of the back of the lemma (as given by MOLNÁR 2000 as well).

It is noteworthy that on this voucher the hairs of the basis of the lemma are nearly as long as the lemma which is rather not typical for *C. stricta* (this feature is also not present in other specimens of *C. stricta* deposited in BP), and can cause troubles by the identification. However, this symptom probably arose due to the

unfavourable (dried, wizened) stage of the herbarium specimen examined, and it does not change the final result of the revision.

So thus, the single actual record of *C. villosa* in Hungary is to be deleted, the occurrence of the species has not been confirmed in the last 50 years. Its recent status on the Hungarian Red List (“Critically endangered” according to KIRÁLY 2007), should be amended to the category “Extinct”.

G. Király

(19) *Epipactis leptochila* (Godfrey) Godfrey subsp. *neglecta* (Kümpel) Kümpel

Hungary, Börzsöny Mts: Diósjenő, at the foot of Mt “Málna-hegy” near the ruins of “Hárombarát vadászház”, in beech forest; leg. Á. Malatinszky, 31.07.2010, s.n. (photodocumented), (det. A. Molnár V.).

Central and W European taxon, described in 1996 from Germany as a species related to *E. leptochila*. It is distributed from France and Belgium to Italy southwards and to Slovakia and Hungary eastwards (JAKELY and KÖNIGHOFER 2009, VLČKO *et al.* 2003).

The distribution of the subspecies is less known in Hungary, being an overlooked and – as its name indicates – a neglected taxon. Both KIRÁLY (2007) and MOLNÁR (2009) discussed it under *E. leptochila* without giving its red list status or distribution in Hungary. On the contrary, it has been reported from the Bakony Mts (MÉSZÁROS and SIMON 2009), Vértes Mts (RIEZING 2013), Gödöllő Hills (DUDÁS 2011), and the Mátra Mts (SULYOK 2012), while it seems to be one of the most common cleistogamous helleborines in the Bükk Mts and likely most of the records of *E. leptochila* from that region refers to subsp. *neglecta* (SULYOK 2011).

Epipactis leptochila has been known from only one locality in the Börzsöny Mts (far from the above locality), without indicating the subspecies (NAGY 2007), thus the subspecies is newly reported from the Börzsöny Mts and this record largely extends the species’ known area in Hungary.

Á. Malatinszky

* * *

Acknowledgements – Ákos Malatinszky highly appreciate the kind help of Attila Molnár V. and Viktor Kerényi-Nagy in the determination of certain plant species. We say thanks to Viktor Virók for searching for data in the Database of the Aggtelek National Park Directorate. Work of Gergely Király was founded by “Agrárklíma.2 VKSZ-12-1-2013-0034” grant.

Összefoglaló: Jelen közleményünkben, mely egy cikksorozat első részét képezi, 19 faj (gomba, moha és edényes növény) elterjedésének és nevezéktanának ismeretéhez közlünk kiegészítéseket. 14 gombafaj új regionális adatait közöljük: kettőt újonnan közlünk Magyarország területéről (*Hypoxylon ticinense* és *Amylostereum laevigatum*), egynek (*Sarcodontia crocea*) pedig megerősítjük magyarországi előfordulását; egy faj új a Kiskunság területére és a Bükk hegységre (*Pholiota squar-*

rosoides); öt új a Vértesre (*Arrhenia rickenii*, *Dentipellis fragilis*, *Entoloma zuccherellii* var. *pluteisimilis*, *Gomphidius roseus*, *Leucoagaricus ionidicolor*) és részben Közép-Magyarország területére; négy új a Soproni-hegységre (*Agaricus bobusii*, *Amanita vittadinii*, *Hericium erinaceus* and *Leccinum variicolor*); kettő pedig új a Fertőmelléki-dombsorra (*Gomphidius roseus* és *Polyporus umbellatus*). Egy mohafajt (*Anacamptodon splachnoides*) újonnan közlünk a Cserhát és a Cserhát területéről. Két edényes növényfaj új elterjedési adatait közöljük: egy (*Crataegus rosaeformis* subsp. *curvisepala*) új a Hernád-völgyre és egyben Északkelet-Magyarország területére; egy (*Epipactis leptochila* subsp. *neglecta*) pedig új a Börzsöny területére. A *Chamaecyrtisus* nemzetségen belül két új kombinációt hozunk létre (*Chamaecyrtisus supinus* subsp. *aggregatus* and subsp. *pannonicus*). Ismertetjük a *Calamagrostis villosa* magyarországi előfordulásának revízióját, megállapítva, hogy a fajnak egyetlen hiteles adata származik az ország területéről és kipusztultnak tekintendő.

REFERENCES

- ALBERT, L. (2008): Színes oldalak – *Mikol. Közlem.*, *Clusiana* 47(1): 95–96.
- BABOS, M. (1989): Magyarország kalaposgombáinak (Agaricales s. l.) jegyzéke I. [The Agaricales s. l. taxa of Hungary I]. – *Mikol. Közlem.*, *Clusiana* 1989(1–3): 3–234.
- BÁNHEGYI, J., BOHUS, G., KALMÁR, Z. and UBRIZSY, G. (1953): *Magyarország nagyombái – a kalaposgombák kivételével*. – Akadémiai Kiadó, Budapest, 368 pp.
- BAS, C. (1969): Morphology and subdivision of *Amanita* and a monograph of its section *Lepidella*. – *Persoonia* 5: 285–579.
- BELLÙ, F. and LANZONI, G. (1988): *Leucoagaricus ionidicolor* sp. nov. – *Riv. Micol.* 31(3–4): 107–110.
- BERNICCHIA, A. and GORJÓN, S. P. (2010): *Corticiaceae s. l.* (Fungi Europaei 12). – Candusso, Alassio, 1008 pp.
- BITZER, J., LÆSSØE, T., FOURNIER, J., KUMMER, V., DECOCK, C., TICHY, H. V., PIEPENBRING, M., PERŠOH, D. and STADLER, M. (2008): Affinities of Phylacia and the daldinoid Xylariaceae, inferred from chemotypes of cultures and ribosomal DNA sequences. – *Mycol. Res.* 112: 251–270. <http://dx.doi.org/10.1016/j.mycres.2007.07.004>.
- BODDY, L., CROCKATT, M. E. and AINSWORTH, A. M. (2011): Ecology of *Hericium cirrhatum*, *H. coralloides* and *H. erinaceus* in the UK. – *Fungal Ecol.* 4: 163–173. <http://dx.doi.org/10.1016/j.funeco.2010.10.001>
- BOHUS, G. (1971): *Agaricus* studies III. – *Annl. hist.-nat. Mus. natn. hung.* 63: 77–82.
- BOHUS, G. (1995): *Agaricus* tanulmány, XIII. Európából ismertté vált *Agaricus* fajok és faj alatti egységek határozókulcsa. [Agaricus studies, XIII. Key to the subgenus *Agaricus* from Europe]. – *Mikol. Közlem.*, *Clusiana* 34(1): 5–36.
- BON, M. (1981): Clé monographique des Lépiotes d'Europe (Agaricaceae, Tribus Lepioteae et Leucocoprineae). – *Doc. Mycol.* 11(43): 1–77.
- BON, M. (1983): Novitates – Validations de taxons et combinaisons nouvelles. – *Doc. Mycol.* 13(49): 56–56.
- BORHIDI, A. (2003): *Magyarország növénytársulásai*. – Akadémiai Kiadó, Budapest, 610 pp.
- CANDUSSO, M. and LANZONI, G. (1990): *Lepiota s. l.* (Fungi Europaei 4). – Candusso, Saronno, Giovanna Biella, 744 pp.
- CHRISTENSEN, M., HEILMANN-CLAUSWEN, J., WALLEYN, R. and ADAMČIK, S. (2004): Wood-inhabiting fungi as indicators of nature value in European beech forests. In: MARCHETTI, M. (ed.): Monitoring and indicators of forest biodiversity in Europe from ideas to operationality. – *EFI Proceedings* 51: 229–237.
- CIOCĂRLAN, V. (2000): *Flora ilustrată a României. Pteridophyta et Spermatophyta*. – Ceres, București, 1138 pp.

- CIOCÂRLAN, V. (2009): *Flora ilustrată a României*. Ed. 3. – Ceres, București, 1141 pp.
- CO-DAVID, D., LANGEVELD, D. and NOORDELOOS, M. E. (2009): Molecular phylogeny and spore evolution of Entolomataceae. – *Persoonia* **23**: 147–176.
<http://dx.doi.org/10.3767/003158509X480944>
- CONERT, H. J. (1989): *Calamagrostis villosa*. – In: HEGI, G. (ed.): *Illustrierte Flora von Mitteleuropa*. 3. ed., Band I, Teil 3. Paul Parey, Hamburg, pp. 365–367.
- CZEREPANOV, S. K. (1973): *Additamenta et corrigenda ad "Floram URSS" (tomi I–XXX)*. – Nauka, Leningrad, 668 pp.
- DAHLBERG, A. and CRONEBERG, H. (2006): *The 33 threatened fungi in Europe. Convention on the conservation of European wildlife and habitats (Bern Convention). Nature and environment, No. 136*. – Council of Europe Publishing, Strasbourg, 137 pp.
- DÄMON, W., HAUSKNECHT, A. and KRISAI-GREILHUBER, L. (2015): *Database of fungi in Austria*. – Österreichischen Mykologischen Gesellschaft, <http://www.austria.mykodata.net>
- DAVIS, D. D. and PURSELL, R. A. (2007): Collecting the Knot-Hole Moss (*Anacamptodon splachnoides*). – *Evansia* **24**(1): 1–5. <http://dx.doi.org/10.1639/0747-9859-24.1.1>
- DUDÁS, J. A. (2011): *A Neogradense flórajárás új növényfaja és egyéb florisztikai adatok a Gödöllői-dombságból*. – Tudományos Diákköri Konferencia dolgozatainak összefoglalói, Szent István Egyetem, Gödöllő, p. 228.
- ELBORNE, S. A. (2012): *Arrhenia Fr.* – In: KNUDSEN, H. and VESTERHOLT, J. (eds): *Funga Nordica*. Vol. 2. Agaricoid, boletoid, clavarioid, cyphelloid and gastroid genera. Nordsvamp, Copenhagen, pp. 252–260.
- GALLI, R. (2001): *Le Amanite*. – Edinatura, Milano, 216 pp.
- HOLEC, J. (2009): Remarks on taxonomy and ecology of *Leucoagaricus ionidicolor* based on a find from Central Bohemia (Czech Republic). – *Mycotaxon* **109**: 329–336.
<http://dx.doi.org/10.5248/109.329>
- HORA, F. B. (1960): New check list of British agarics and boleti part IV. Validations, new species and critical notes. – *Trans. British Mycol. Soc.* **43**(2): 440–459.
- ING, B. (1993): *Towards a red list of endangered European macrofungi*. – In: PEGLER, D. N., BODDY, L., ING, B. and KIRK, P. M. (eds): *Fungi of Europe: investigation, recording and conservation*. Royal Botanic Gardens, Kew, pp. 231–237.
- JAKELY, D. and KÖNIGHOFER, H. (2009): Neu für die Steiermark: *Epipactis leptochila* subsp. *neglecta* Kümpel, die Übersehene Schmallippen-Ständelwurz. – *Joannea Botanik* **7**: 55–61.
- KERÉNYI-NAGY, V. (2015): *A Kárpát-Pannon és Illír régió vadon termő galagonyáinak monográfiája*. (A monograph of hawthorns of Carpat-Pannon and Illyr regions). – Szent István Egyetem, Egyetemi Kiadó, Gödöllő, 323 pp.
- KIRÁLY, G. (ed.) (2007): *Vörös Lista. A magyarországi edényes flóra veszélyeztetett fajai*. [Red list of the vascular flora of Hungary]. – Private edition, Sopron, 73 pp.
- KNUDSEN, H. and TAYLOR, A. (2012): *Gomphidius Fr.* – In: KNUDSEN, H. and VESTERHOLT, J. (eds): *Funga Nordica*. Vol. 2. Agaricoid, boletoid, clavarioid, cyphelloid and gastroid genera. Nordsvamp, Copenhagen, pp. 198–199.
- KOTLÁBA, F. (1953): Nebezpečný parazit jabloní – *Sarcodontia crocea* (Schweinitz) comb. nov. – *Ceská Mykol.* **7**(3): 117–123.
- KREISEL, H. (2006): Global warming and mycoflora in the Baltic Region. – *Acta Mycol.* **41**(1): 79–94. <http://dx.doi.org/10.5586/am.2006.012>
- KRIEGLSTEINER, G. J. (2000): *Die Grosspilze Baden-Württembergs. Band 2. Ständerpilze: Leisten-, Keulen-, Korallen- und Stoppelpilze, Bauchpilze, Röhrlins- und Täublingsartige*. – Ulmer, Stuttgart, 620 pp.

- KUNCA, V. (2011): Ecology and incidence of *Polyporus umbellatus* in Slovakia. – *Czech Mycol.* **63**(1): 39–53.
- KUNCA, V. and ČILIAK, M. (2015): Ecology, incidence and indication value of *Hericium erinaceus* in Slovakia and the Western Carpathians. – *Czech Mycol.* **67**(1): 107.
- LANGE, C. (2012): *Leucoagaricus Singer*. – In: KNUDSEN, H. and VESTERHOLT, J. (eds): *Funga Nordica*. Vol. 2. Agaricoid, boletoid, clavarioid, cyphelloid and gastroid genera. Nordsvamp, Copenhagen, pp. 637–642.
- LÆSSØE, T. (2004): *Æblepig (Sarcodontia crocea)* nu fundet i Danmark. I: Vesterholt, J. Usædvanlige danske svampefund. – *Svampe* **49**: 40–42.
- LENTI, I. (2007): A bátorligeti Fényi-erdő nagygombái. – *Szabolcs-Szatmár-Beregi Szemle* **42**(2): 203–217.
- LÖVE, A. and LÖVE, D. (1961a): Chromosome numbers of Central and Northwest European plant species. – *Opera botanica (Lund)* **5**: 1–581.
- LÖVE, A. and LÖVE, D. (1961b): Some nomenclatural changes in the European flora. I. – *Bot. Notiser* **114**: 33–47.
- LÖVE, A. and LÖVE, D. (1961c): Some nomenclatural changes in the European flora. II. – *Bot. Notiser* **114**: 48–56.
- MK (2013): A vidékfejlesztési miniszter 83/2013. (IX. 25.) VM rendelete a védett és a fokozottan védett növény- és állatfajokról, a fokozottan védett barlangok köréről, valamint az Európai Közösségben természetvédelmi szempontból jelentős növény- és állatfajok közzétételéről szóló 13/2001. (V. 9.) KÖM rendelet módosításáról. [ministerial order concerning protection of nature]. – *Magyar Közlöny* **156**: 67479–67503.
- MCNEILL, J., BARRIE, F. R., BUCK, W. R., DEMOULIN, V., GREUTER, W., HAWKSWORTH, D. L., HERENDEEN, P. S., KNAPP, S., MARHOLD, K., PRADO, J., PRUD'HOMME van REINE, W. F., SMITH, G. F., WIERSEMA, J. H. and TURLAND, N. J. (2012): *International Code of Nomenclature for algae, fungi and plants (Melbourne Code) adopted by the Eighteenth International Botanical Congress Melbourne, Australia, July 2011*. – Koeltz Scientific Books, Königstein, 240 pp.
- MÉSZÁROS, A. and SIMON, P. (2009): Adatok Veszprém megye flórájához I. – *Kitaibelia* **14**(1): 69–85.
- MEUSEL, H., JÄGER, E. J. and WEINERT, E. (1965): *Vergleichende Chorologie der zentraleuropäischen Flora Vol. I*. – Gustav Fischer, Jena, 583 + 258 pp.
- MOLNÁR, A. (2000): *Calamagrostis villosa* (Chaix) Gmel. Debrecen mellett. (*Calamagrostis villosa* (Chaix) Gmel. near Debrecen). – *Kitaibelia* **5**: 229–230.
- MOLNÁR, A. (2009): *Orchidaceae*. – In: KIRÁLY, G. (ed.): Új magyar fűvészkönyv. Magyarország hajtásos növényei. Határozókulcsok. (New Hungarian herbal. The vascular plants of Hungary. Identification key). Aggteleki Nemzeti Park Igazgatóság, Jósvafő, pp. 571–583.
- MOLNÁR, Cs., MOLNÁR, Zs., BARINA, Z., BAUER, N., BIRÓ, M., BODONCZI, L., CSATHÓ, A. I., CSIKY, J., DEÁK, J. Á., FEKETE, G., HARMOS, K., HORVÁTH, A., ISÉPY, I., JUHÁSZ, M., KÁLLAY-NÉ SZERÉNYI, J., KIRÁLY, G., MAGOS, G., MÁTÉ, A., MESTERHÁZY, A., MOLNÁR, A., NAGY, J., ÓVÁRI, M., PURGER, D., SCHMIDT, D., SRAMKÓ, G., SZÉNÁSI, V., SZMORAD, F., SZOLLÁT, Gy., TÓTH, T., VIDRA, T. and VIRÓK, V. (2008): Vegetation-based landscape-regions of Hungary. – *Acta Bot. Hung.* **50**(Suppl.): 47–58. <http://dx.doi.org/10.1556/ABot.50.2008.Suppl.4>
- NAGY, J. (2007): *A Börzsöny hegység edényes flórája*. – Duna–Ipoly Nemzeti Park Igazgatóság, Budapest, 376 pp.
- NÉMETH, Cs. and ERZBERGER, P. (2015): *Anacamptodon splachnoides* (Amblystegiaceae): Hungarian populations of a moss species with a peculiar habitat. – *Studia bot. hung.* **46**(1): 61–75. <http://dx.doi.org/10.17110/StudBot.2015.46.1.61>

- NOORDELOOS, M. E. (2000): Tre nuove Entolomataceae (Agaricales) dall'Italia. – *Boll. Gr. Micol. "G. Bresadola"* **43**(3): 23–33.
- NOORDELOOS, M. E. (2004): *Entoloma s. l. Supplemento*. (Fungi Europaei 5a). – Candusso, Alassio, pp. 761–1378.
- NOORDELOOS, M. (2015): The genus *Leccinum* in Northern and Central Europe. – http://www.entoloma.nl/html/leccinum_eng.html (accessed: 26.10.2015).
- NOORDELOOS, M. E. and HAUSKNECHT, A. (2009): New and interesting *Entoloma* species from Central Europe. – *Österr. Z. Pilzk.* **18**: 169–182.
- OLSSON, P. A., MÜNZENBERGER, B., MAHMOOD, S. and ERLAND, S. (2000): Molecular and anatomical evidence for a three-way association between *Pinus sylvestris* and the ectomycorrhizal fungi *Suillus bovinus* and *Gomphidius roseus*. – *Mycol. Res.* **104**: 1372–1378. <http://dx.doi.org/10.1017/S0953756200002823>
- OPREA, A. (2005): *Lista critică a plantelor vasculare din România*. – Editura Universității “Alexandru Ioan Cuza”, Iași, 668 pp.
- PAPP, V. (2015): Nomenclatural novelties. – *Index Fungorum* **224**: 1.
- PAPP, V. and DIMA, B. (2014): A *Pholiota squarrosoides* első magyarországi előfordulása és előzetes filogenetikai vizsgálata. – *özlem., Clusiana* **53**(1–2): 33–42.
- PENKSZA, K. (2009): *Calamagrostis Roth.* – In: KIRÁLY, G. (ed.): Új magyar fűvészkönyv. Magyarország hajtásos növényei. Határozókulcsok. (New Hungarian herbal. The vascular plants of Hungary. Identification key). Aggteleki Nemzeti Park Igazgatóság, Jósvafő, pp. 529–530.
- PIFKÓ, D. (2005a): Adatok a hazai *Chamaecytisus*-fajok ismeretéhez II. (Data to the knowledge of the Hungarian *Chamaecytisus* species II). – *Flora Pannonica* **3**(1): 163–174.
- PIFKÓ, D. (2005b): Taxonomic revision and typification of *Cytisus* (Leguminosae) in the Herbarium Carpato-Pannonicum in Budapest (BP). – *Annl. hist.-nat. Mus. natn. hung.* **97**: 23–28.
- PIFKÓ, D. (2007): *Kitaibel's Cytisus* taxa. – *Studia bot. hung.* **38**: 11–32.
- PIFKÓ, D. (2009a): *Chamaecytisus Link.* – In: KIRÁLY, G. (ed.): Új magyar fűvészkönyv. Magyarország hajtásos növényei. Határozókulcsok. (New Hungarian herbal. The vascular plants of Hungary. Identification key). Aggteleki Nemzeti Park Igazgatóság, Jósvafő, pp. 239–241.
- PIFKÓ, D. (2009b): Schur's *Cytisus* taxa – *Studia bot. hung.* **40**: 143–163.
- PIFKÓ, D. (2015): Index of scientific names of *Chamaecytisus* (Leguminosae) taxa – *Studia bot. hung.* **46**(2): 175–203. <http://dx.doi.org/10.17110/StudBot.2015.46.2.175>
- PONERT, J. (1973): Combinations novae, statim novi et taxa nova non tantum specierum turcicarum. – *Feddes Repert.* **83**(9–10): 617–644.
- PYŠEK, P. (1993): What do we know about *Calamagrostis villosa*? A review of the species behaviour in secondary habitats. – *Preslia* **65**: 1–20.
- RIEZING, N. (2013): Néhány ritkább orchidea előfordulása a Dunántúl északi részén. – *Kitaibelia* **18**(1–2): 179–180.
- RIPKOVÁ, S. and HAGARA, L. (2003): New, rare and less known macromycetes in Slovakia. I. – *Ceská Mycol.* **55**: 187–200.
- RYVARDEN, L. and MELO, I. (2014): *Poroid fungi of Europe. Synopsis Fungorum 31.* – Fungiflora, Oslo, 455 pp.
- SZCZEPKOWSKI, A. (2010): *Sarcodontia crocea* (Polyporales, Basidiomycota) in Poland – distribution and decay ability in laboratory conditions. – *Polish Bot. J.* **55**(2): 489–498.
- SILLER, I. (1986): Nagyombák ökológiai vizsgálata rezervátum és gazdasági bükkös állományokban. – *Mikol. Közlem., Clusiana* **1986**(2–3): 95–116.
- SILLER, I. (2004): *Hazai montán bükkös erdőrezervátumok (Mátra: Kékes Észak, Bükk: Óserdő) nagyombái.* – Manuscript, PhD Theses, Kertészettudományi (Multidiszciplináris Agrártudományok) Doktori Iskola, Budapest, 113 pp.

- SILLER, I. and TURCSÁNYI, G. (2002): New and rare macrofungi species of two forest reserves in Hungary. – *Fritschiana* **42**: 48–58.
- SILLER, I., DIMA, B., ALBERT, L., VASAS, G., FODOR, L., PÁL-FÁM, F., BRATEK, Z. and ZAGYVA, I. (2006): Védett nagygombafajok Magyarországon. – *Mikol. Közlem., Clusiana* **45**(1–3): 3–158.
- SILLER, I., KUTSZEGI, G., TAKÁCS, K., VARGA, T., MERÉNYI, Zs., TURCSÁNYI, G., ÓDOR, P. and DIMA, B. (2013): Sixty-one macrofungi species new to Hungary in Őrség National Park. – *Mycosphere* **4**(5): 871–924, <http://dx.doi.org/10.5943/mycosphere/4/5/3>
- SIMON, T. (1992): *A magyarországi edényes flóra határozója. Harasztok – virágos növények*. [The identification book of the vascular flora of Hungary. Ferns and flowering plants]. – Tankönyvkiadó, Budapest, 892 pp.
- SIMON, T. (2000): *A magyarországi edényes flóra határozója*. – Nemzeti Tankönyvkiadó, Budapest, 976 pp.
- SOÓ, R. (1966): *A magyar flóra és vegetáció rendszertani-növényföldrajzi kézikönyve II*. – Akadémiai Kiadó, Budapest, 655 pp.
- SULYOK, J. (2011): Nőszőfű-fajok térképezése a Bükki Nemzeti Park Igazgatóság működési területén. – *Zöld Horizont* **6**(2): 5.
- SULYOK, J. (2012): Orchideák térképezésének tapasztalatai az Északi-középhegységben. – *Kitaibelia* **17**(1): 58.
- SZÜCS, P., JÓZSEF, J., PAPP, V. G. and KUTSZEGI, G. (2015): A veszélyeztetett Anacamptodon splachnoides (Froel. ex Brid.) Brid. új adata a Bükk-hegységből. – *Kitaibelia* **20**(2): 202–205. <http://dx.doi.org/10.17542/kit.20.202>
- TAKÁCS, B. and SILLER, I. (1980): A Bükk-hegységi Ösbükkös gombái. – *Mikol. Közlem.* **3**: 121–132.
- TATÁR, D. (1995): Két új nádtippa a magyar flórában: Calamagrostis villosa (Chaix) Gmel. és C. purpurea Trin. [Two new Calamagrostis species in the Hungarian flora: Calamagrostis villosa (Chaix) Gmel. and C. purpurea Trin.]. – *Bot. Közlem.* **82**: 39–44.
- THIERS, B. (2015+): Index Herbariorum: A global directory of public herbaria and associated staff. – New York Botanical Garden's Virtual Herbarium. <http://sweetgum.nybg.org/ih/> (accessed: 03.11.2015)
- THONGBAI, B., RAPIOR, S., HYDE, K. D., WITTSTEIN, K. and STADLER, M. (2015): Hericium erinaceus, an amazing medicinal mushroom. – *Mycol. Progress* **14**: 91. <http://dx.doi.org/10.1007/s11557-015-1105-4>
- VASAS, G. (2000): Contributions to the knowledge of macrofungi of the forests along the Fekete-Körös, SE Hungary. – *Studia bot. hung.* **30–31**: 79–86.
- VELLINGA, E. C. (2004): Genera in the family Agaricaceae: evidence from nrITS and nrLSU sequences. – *Mycol. Res.* **108**: 354–377. <http://dx.doi.org/10.1017/S0953756204009700>
- VENTURELLA, G., BERNICCHIA, A. B. and SAITTA, A. (2006): Three rare lignicolous fungi from Sicily (S Italy). – *Acta Mycol.* **41**(1): 95–98. <http://dx.doi.org/10.5586/am.2006.013>
- VLČKO, J., DÍTĚ, D. and KOLNÍK, M. (2003): *Orchids of Slovakia*. – ZO SZOPK Orchidea, Zvolen, 120 pp.
- WATLING, R. (1988): Some British omphalinoid and pleurotoid agarics. – *Notes Roy. Bot. Garden Edinburgh* **45**(3): 549–557.