

## New records of *Leptorhaphis* and other ascomycete genera from the Carpathian basin (Europe)

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**Abstract:** AGUIRRE-HUDSON, B., FARKAS, E. & LÖKÖS, L. 2005. New records of *Leptorhaphis* and other ascomycete genera from the Carpathian basin (Europe). – Herzogia 18: 47–50.

New distribution data are provided for taxa previously included in the genus *Leptorhaphis* within the lichen and mycological collections of the Hungarian Natural History Museum, Budapest. The material was collected mostly by Hungarian lichenologists in countries formerly part of the Austro-Hungarian empire and other surrounding areas.

**Zusammenfassung:** AGUIRRE-HUDSON, B., FARKAS, E. & LÖKÖS, L. 2005. Neue Funde von *Leptorhaphis* und anderer Ascomyceten-Gattungen aus dem Karpatenbecken (Europa). – Herzogia 18: 47–50.

Es werden neue Verbreitungssangaben vorgestellt für Taxa, die früher in die Gattung *Leptorhaphis* gestellt worden sind, und die sich in der lichenologischen und mykologischen Sammlung des Ungarischen Naturhistorischen Museums in Budapest befinden. Die Proben wurden von ungarischen Lichenologen in Ländern gesammelt, die früher Teil des Reiches Österreich-Ungarn waren, und in anderen benachbarten Gebieten.

**Key words:** *Celothelium*, *Cresporhaphis*, reference collections, Central Europe.

### Introduction

The Lichen Herbarium of the Botanical Department of the Hungarian Natural History Museum in Budapest (BP) contains in addition of the important collections of F. Hazslinszky, V. K. Gyelnik, and Ö. Szatala, material collected by the less known Hungarian lichenologists H. Lojka, Gy. Timkó, and F. Fóriß (see Lökös 1995). These authors, but in particular Timkó (until 1928) and Gyelnik (between 1930–1945) collected regularly in the Carpathian basin, so the material became a basic reference herbarium for Central Europe.

During a study of the herbarium material referred to the genus *Leptorhaphis* Körb. in BP, AGUIRRE-HUDSON (1991) and later AGUIRRE-HUDSON et al. (2002) included mainly type specimens and Hungarian collections of the genus. The following account covers the Central European material – outside Hungary – which was also re-examined. In this contribution our aim is to provide further information on the distribution of these species. Also we have identified additional isolectotype material of *Cresporhaphis acerina* (Rehm) M.B.Aguirre (BP 92235) and *Cresporhaphis muelleri* (Duby) M.B.Aguirre (BP 65810) within BP Microfungi Collection.

### Material and Methods

The material studied is preserved in BP unless otherwise stated. The species were prepared for microscopic examination following standard techniques as mentioned in AGUIRRE-HUDSON's

monograph (1991), and the slides are now also stored within the collections in BP. The species are listed in alphabetical order arranged by genus, and for each taxon known distribution is also included. Locality names of historical Hungary are cited according to LELKES (1998) and new records for a country are indicated with an asterisk (\*).

## The Species

### *Celothelium buxi* (J.Steiner) M.B.Aguirre

\*Bulgaria: Rila planina, Levi Isker river valley, 1500–2000 m., on branches of *Daphne* sp., 19 June 1929, Ö. Szatala 301 (BP 550, BP 35021 both as *Campylacia psilotera*).

**Distribution:** Also known from single localities in Austria (BERGER & APTROOT 1998), France (VAN DEN BOOM et al. 1995) and Georgia (AGUIRRE-HUDSON 1991: fig. 31), more or less following the parallel 45°.

**Note:** This is the material that Mayrhofer et al. (2005: 32) cited in their catalogue of Bulgarian lichens as *Leptorhaphis psilotera*, based on literature records (SZATALA 1930).

### *Cresporhaphis wienkampii* (J.Lahm ex Hazsl.) M.B.Aguirre

Bulgaria: Ljulin Mountain, 800 m., on bark of *Pyrus communis*, 15 August 1932, A. P. Nivsalatt (BP 63642 as *Leptorhaphis wienkampii*, Herb. F. Fóriß 12183).

Slovakia: Prešov ('Eperjes'), near Jareza, F. Hazslinszky (BP 560 as *L. wienkampii*); loc. cit., on *Salix* sp., F. Hazslinszky (BP 78172, BP 88411 both as *L. wienkampii*; Borkul, on *Salix alba*, F. Hazslinszky (BP 78173 as *L. wienkampii*).

**Distribution:** The species has been included recently in the catalogue of lichenized and lichenicolous fungi from Bulgaria (MAYRHOFER et al. 2005). It is also known from the Czech Republic (VÉZDA & LIŠKA 1999), Germany, Italy (NIMIS & TRETIACH 1999), The Netherlands (APTROOT 1997), Norway, Poland, Sweden (AGUIRRE-HUDSON 1991: fig. 49), UK (CALATAYUD & AGUIRRE-HUDSON 2001) and Ukraine (KONDRATYUK et al. 1998), and recorded, but not examined from Romania (CIURCHEA 1998).

### *Leptorhaphis amygdali* (A.Massal.) Zwackh

\*Croatia: Senjsko Bilo Mountains, Sejska Draga valley, Nedarija, above the port of Senj ('Zengg'), in garden, 20 m., on bark of *Prunus communis*, 9 July 1924, J. B. Kümmerle (BP 549, BP 35019 both as *Leptorhaphis epidermidis*).

**Distribution:** Also known from Germany, Italy (AGUIRRE-HUDSON 1991: figs 1, 2a), and Hungary (AGUIRRE-HUDSON et al. 2002: fig. 1).

**Note:** KUŠAN (1953) erroneously reported *L. epidermidis* from Croatia on the basis of this collection.

### *Leptorhaphis atomaria* (Ach.) Szatala

\*Russia: near Voronezh, in woodland, on bark of *Populus tremula*, 1925, M. P. Tomin (BP 557, BP 63665 both in V.P. Savicz Lichenotheca Rossica, Decas VI (1953) Exs. No. 60 as *Leptorhaphis tremulae*).

Austria: Bad Tatzmannsdorf ('Tarsca'), in cote 392, on bark of *Populus tremula*, 14 June 1916, F. Fóriß 4037 (BP 69669 as *Leptorhaphis tremulae*).

**Distribution:** It is also known from Finland, France, Germany, Italy, Norway, Poland, Slovakia, Sweden Switzerland, UK (AGUIRRE-HUDSON 1991: figs 2b, 3), Bulgaria (MAYRHOFER et al. 2005), Hungary (AGUIRRE-HUDSON et al. 2002: fig. 2), The Netherlands (APTROOT 1995), Romania (CIURCHEA 1998), Spain (MARTÍNEZ 2002), Ukraine (KONDRATYUK et al. 1998) and the USA (APTROOT 2002). This is the most common poplar inhabiting species of the genus.

### *Leptorhaphis epidermidis* (Ach.) Th.Fr.

Austria: Sulz im Burgenland ('Sóskút'), Neustift Berg, 450 m., on bark of *Betula* sp., 29 June 1916, F. Fóriß 4166 (BP 63663).

Czech Republic: Šumava, Modrava, c. 1020 m., on bark of *Betula carpatica*, 7 September 1935, A. Hilitzer 19689 (BP 63646 in Kavina & Hilitzer Cryptogamae Čechoslovenicae Exs. No. 264).

Slovakia: Sobrance, Choňkovce, 80 m. 1932, J. Nádvorník 17047 (BP 63648).

**Distribution:** It is also known from Belgium, Finland, France, Germany, Ireland, Italy, Norway, Poland, Sweden, Switzerland, UK, and the USA (AGUIRRE-HUDSON 1991: figs 8, 9), Hungary (AGUIRRE-HUDSON et al. 2002: fig. 3), The Netherlands (APTROOT 1995), Portugal and Spain (LLIMONA & HLADÚN 2001), Romania (CIURCHEA 1998) Ukraine (KONDRATYUK et al. 1998). Previous records of this species from the former Yugoslavia are errors, now referred to *L. amygdali* (see above). Szatala's (1930) records of the species from Bulgaria, also included in Mayrhofer

et al. (2005), should be referred to *L. parameca* (see below). This is possibly the most widespread species in the genus, found always growing on birch, and in the past it has been occasionally confused with the non-lichenized fungus *Naetrocymbe punctiformis* (Pers.) R.C.Harris.

***Leptorhaphis laricis*** (J.Lahm) M.B.Aguirre

\*Slovakia: Prešov ('Eperjes'), on bark of *Betula* sp., F. Hazslinszky 29 (BP 78266)  
\*Spain: Huesca, growing on ash (J. Etayo, personal herbarium).

**Distribution:** Also known from Germany (type locality; AGUIRRE-HUDSON 1991: figs 10, 11a).

***Leptorhaphis lucida*** Körb.

Slovakia: Prešov ('Eperjes'), on trunk of *Populus tremula*, s.d., F. Hazslinszky 76 (BP 554, BP 78267 as *Leptorhaphis tremulae* and BP 78177).

**Distribution:** The type is from the same locality in Slovakia, and the species is also known from Austria, Germany, Russia, and the USA (AGUIRRE-HUDSON 1991: figs 12, 13), Czech Republic (VĚZDA & LIŠKA 1999), Hungary (AGUIRRE-HUDSON et al. 2002: fig. 4); Ukraine (KONDRATYUK et al. 1998), and recently from Norway: Gildeskaal, Skovrol, on *Populus* sp., J. M. Norman (K(M) 111988) and Sweden (SANTESSON et al. 2004); always on poplars.

***Leptorhaphis parameca*** (A.Massal.) Körb.

\*Bulgaria: Čepelarska Planina, Karamandza Mountain, Pasmakli, c. 1,700 m., on bark of *Prunus cerasus*, 6 June 1929, Ö. Szatala 301 (BP 548, BP 35020 both as *Campylacia epidermidis*).

**Distribution:** It is also found in Austria, Germany, Italy, Norway, Switzerland and the USA (AGUIRRE-HUDSON 1991: figs 16b, 17), Hungary (AGUIRRE-HUDSON et al. 2002: fig. 6), and the Ukraine (KONDRATYUK et al. 1990). This species is more widespread on *Prunus* bark than *L. amygdali*.

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## References

- AGUIRRE-HUDSON, B. 1991. A taxonomic study of the species referred to the ascomycete genus *Leptorhaphis*. – Bulletin of the British Museum Natural History, Botany **21**: 85–192.
- AGUIRRE-HUDSON, B., FARKAS, E. & LÖKÖS, L. 2002. Pyrenolichens of the Hungarian lichen flora I: The genus *Leptorhaphis* Körber. – Bibliotheca Lichenologica **82**: 3–18.
- APTROOT, A. 1995. Schorsbewoners, een vergeten groep. – Coolia **38**: 171–173.
- APTROOT, A. 1997. *Cresporhaphis wienkampii* en *Leptorhaphis contorta*, twee nieuwe schorsbewoners voor Nederland. – Buxbaumia **42**: 66–67.
- APTROOT, A. 2002. *Leptorhaphis*. – In: NASH III, T. H., RYAN, B. D., GRIES, C. & BUNGARTZ, F. (eds). Lichen Flora of the Greater Sonoran Desert Region I: p. 266. – Tempe, Arizona State University: Lichens Unlimited.
- BERGER, F. & APTROOT, A. 1998. Eine neue Art der Gattung *Celothelium* (lichenisierte Ascomyceten) aus Österreich. – Herzogia **13**: 151–154.
- VAN DEN BOOM, P. P. G., ETAYO, J. & BREUSS, O. 1995. Interesting records of lichens and allied fungi from the Western Pyrenees (France and Spain). – Cryptogamie, Bryologie-Lichénologie **16**: 263–283.
- CALATAYUD, V. & AGUIRRE-HUDSON, B. 2001. Observations on the genus *Cresporhaphis* (Trichosphaeriaceae), with a key to the known species, and *C. ulmi* sp. nov. – Mycological Research **105**: 122–126.
- CIURCHEA, M. 1998. Lichenii din România. Vol. I Ascomycotina: Pyrenocarpi. – Cluj-Napoca: Presa Universitară Clujană.
- KONDRATYUK, S. Ya., KHODOSOVTS'EV A. Ye. & ZELENKO, S. D. 1998. The second checklist of the lichen forming, lichenicolous and allied fungi of Ukraine. – Kiev: Phytosociocentre.
- KUŠAN, F. 1953. Prodromus flore lišaja Jugoslavije. – Zagreb: Jugoslavenska Akademija Znanosti i Umjetnosti.
- LELKES, Gy. (ed.) 1998. Magyar helységnév-azonosító szótár. 2<sup>nd</sup> ed. – Baja: Tálma Könyvkiadó.
- LLIMONA, X. & HLADÚN, N. L. 2001. Checklist of the lichens and lichenicolous fungi of the Iberian Peninsula and Balearic Islands. – Bocconeia **14**: 1–581.
- LÖKÖS, L. 1995. Collectio lichenum. – In: RAJCZY, M. & BUCZKÓ, K. (eds). 125 years of the Botanical Department of the Hungarian Natural History Museum, pp 34–35. – Budapest: Hungarian Natural History Museum.
- MARTINEZ, I. 2002 ('2001'). *Leptorhaphis atomaria* (Ach.) Szatala (Arthopyreniaceae, Dothideales) in the Iberian Peninsula. – Anales del Jardín Botánico de Madrid **59**: 338–339.

- MAYRHOFER, H., DENCHEV, C. M., STOYKOV, D. Y. & NIKOLOVA, S. O. 2005. Catalogue of the lichenized and lichenicolous fungi in Bulgaria. – *Mycologia Balcanica* **2**: 3–61.
- NIMIS, P. L. & TRETIACH, M. 1999. Itinera Adriatica – lichens from the eastern part of the Italian Peninsula. – *Studia Geobotanica* **18**: 51–106.
- SANTESSON, R., MOBERG, R., NORDIN, A., TØNSBERG, T. & VITIKAINEN, O. 2004. Lichen-forming and lichenicolous fungi of Fennoscandia. – Uppsala: Uppsala University, Museum of Evolution.
- SZATALA, Ö. 1930. Beiträge zur Flechtenflora von Bulgarien. II. – *Magyar Botanikai Lapok* **29**: 58–104.
- VÉZDA, A. & LIŠKA, J. 1999. Katalog lišejníků České Republiky. – Průhonice: Institute of Botany, Academy of Sciences of the Czech Republic.

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