

## DATA FOR THE BRYOPHYTE AND LICHEN FLORA OF THE MÁTRA MTS II

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### Abstract

The gorge Tarjánka-szurdok and its close surroundings in the southern Mátra Mts are a strictly protected area. The present work contains data for an additional 32 bryophyte and 21 lichen taxa to the first collection including data new for the Mátra Mts: *Isothecium myosuroides*, *Rhynchostegium confertum* and *Buellia griseovirens*, *Lecanora chlarotera*, *Pseudosagedia aenea*. The gorge Tarjánka-szurdok is the fourth locality in Hungary of the very rare *Cnestrum schisti*.

### Keywords

Hungary, Mátra Mts, stream Tarjánka-patak, stream Csonka-patak, bryophytes, lichens

### Introduction

KIS & MOLNÁR (2004) presented the first lichen and bryophyte data for the strictly protected gorge Tarjánka-szurdok in the Mátra Mts, NE Hungary. The present work adds further data for the gorge, the higher parts of the valley almost to the spring of the stream Tarjánka-patak, and the area of the stream Csonka-patak branch.

The features of the area have been described by KIS and MOLNÁR (2004). The lower part of the stream is a 5–10 m deep piroxen andesite gorge, at the top and surroundings are thermophilous oak forests (*Corno-Quercetum*). The upper parts of the valley Tarjánka-völgy and stream Csonka-patak branch are covered by submontane beech forest (*Melitti-Fagetum carpinetosum*).

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## Enumeration

The following works were used for identification: CORTINI PEDROTTI (2001), CRUM & ANDERSON (1981), FREY et al. (1995), ORBÁN & VAJDA (1983), PATON (1999), PURVIS et al. (1992), SCHUMACKER & VÁŇA (2000), SCHUSTER (1977), SMITH (2004), VERSEGHY (1994), WIRTH (1995a, 1995b).

Nomenclaturally we accept the following works: BIELCZYK et al. (2004), and ERZBERGER & PAPP (2004).

The bryophytes were collected by Jean Y. KÉKES and Gabriella KIS and the lichens were collected by Katalin MOLNÁR. The specimens are deposited in the Herbarium of the Eszterházy College (EGR) and in the private herbarium of Jean Y. KÉKES

In the enumeration the bryophyte or lichen names in **bold** typesetting indicate new data for the gorge Tarjánka-szurdok and surrounding area from the previous article (KIS & MOLNÁR 2004). The „!” sign before the name of the species indicates data new for the Mátra Mts.

## Bryophytes

### Localities

Jean Y. KÉKES MG[number] and G. KIS 04002/[letter(s)]

HEVES COUNTY. **Mátra Mts.** Landscape Conservation Area. The gorge **TARJÁNKA-SZURDOK** on the southern part of the mts, between MARKAZ and DOMOSZLÓ villages, at 250–300 m a. s. l. E 20° 05.032' – 20° 04.666', N 47°50.045' – 47°50.348'

G. KIS 04005

HEVES County. **Mátra Mts.** Landscape Conservation Area. On the western slope of the valley of the **CSONKA-PATAK**, and the streambed, on the southern slope of the mts, 3 air kilometres North from MARKAZ village, at 350–400 m a. s. l.

G. KIS 04006

HEVES County. **Mátra Mts.** Landscape Conservation Area. The valley of **TARJÁNKA-PATAK** on the southern slope of the mts, between MARKAZ and DOMOSZLÓ villages, at 300–350 m a. s. l. E 20° 04.069' – 20° 04.066', N 47°50.348' – 47°50.886'

## Marchantiophyta

- Chiloscyphus polyanthos* (L.) Corda var. *pallescens* (Ehr.) Hartm., 04006/N, on irrigated rock wall.
- Lejeunea cavifolia* (Ehrh.) Lindb., 04002/BA, on rock; 04002/BD, on vertical rock wall.
- Metzgeria furcata* var. *furcata* (L.) Dum., MG 422, on stone; 04005/D, on decaying wood.
- Metzgeria furcata* var. *ulvula* Nees, MG 418, on tree bark, at 1.5 m; 04005/K, on rock.
- Plagiochila porelloides* (Nees) Lindenb.**, 04006/C, 04006/I, 04002/BS, on rocky soil.

## Bryophyta

- Amblystegium serpens* (Hedw.) Schimp. var. *serpens***, MG429, on rotting wood.
- Anomodon attenuatus* (Hedw.) Huebener, 04002/Y, 04002/BP, 04006/H, on vertical rock wall.
- Atrichum undulatum* (Hedw.) P. Beauv.**, 04002/BG, on soil; 04006/B, 04006/E, on rocky soil.
- Bartramia pomiformis* Hedw.**, 04006/A, on rocky soil.
- Brachythecium velutinum* (Hedw.) Schimp.**, MG 413, on rock.
- Bryum capillare* Hedw. var. *capillare***, MG420, in damp rock crevice.
- Bryum laevifilum* Syed (Syn.: *Bryum flaccidum* Brid.), 04002/BB, on rocky soil.
- Cratoneuron filicinum* (Hedw.) Spruce**, 04002/AE, on irrigated rock.
- ! *Cnestrum schisti* (F. Weber et D. Mohr) I. Hagen**, 04002/BF, on rock.  
Circumboreal, montane element. Very rare in Hungary. It has been found only in the Zemplén and Mátra Mts (BOROS 1968, ORBÁN 1976, ORBÁN and VAJDA 1983). The gorge Tarjánka-szurdok is the fourth locality of the species in our country.
- Ctenidium molluscum* (Hedw.) Mitt.**, MG 419, 04002/U, on rock face.
- Cynodontium polycarpon* (Hedw.) Schimp.**, MG 415, on thin covering of soil on rock.
- Dicranella heteromalla* (Hedw.) Schimp.**, MG 437, on rock at tree base; 04006/R, 04006/Y, on rocky soil.
- Eurhynchium crassinervium* (Wilson) Schimp.** (Syn.: *Cirriphyllum crassinervium* (Wilson) Loeske et Fleisch.), MG 445, 04002/BR, at base of rock.

*Fissidens dubius* P. Beauv. (Syn: *Fissidens cristatus* Wils. ex Mitt.), 04002/BN, 04002/CB on rock; MG 432, on rock floor; 04006/D, 04006/K, on rocky soil.

*Fissidens pusillus* (Wilson) Milde. (Syn.: *Fisidens minutulus* Sull.), 04005/A, on vertical rock.

*Fissidens taxifolius* Hedw., 04002/BD (partly), on vertical rock wall.

***Grimmia hartmanii* Schimp.**, 04005/L, on rock.

*Hedwigia ciliata* (Hedw.) Ehrh. ex P. Beauv., MG 442, on dry rock.

***Homalothecium sericeum* (Hedw.) Schimp.**, MG 433, 04002/BX, on rock.

***Homomallium incurvatum* (Brid.) Loeske**, 04002/BO, on vertical rock wall.

*Hypnum cupressiforme* Hedw., MG 401, 04006/AA, on moist rock overhang; 04002/BU on rock.

***Isothecium alopecuroides* (Dubois) Isov.**, MG 421, on rock; 04006/S, on rockwall; 04006/T (mixed with *Plagiochila porelloides* (Torrey et Nees) Lindenb.), on rock wall.

**! *Isothecium myosuroides* Brid.**, MG 440, 04002/CC, 04002/BV (mixed with *Plagiothecium cavifolium* (Brid.) Z. Iwatsuki), 04005/N, on rock. Circumboreal element with subatlantic character. New to the Mátra Mts. Very rare in Hungary. It has been found only in the Zemplén and Börzsöny Mts.

***Leskea polycarpa* Ehrh. ex Hedw.**, MG 412 on tree trunk.

***Myurella julacea* (Schwaegr.) Schimp.**, In B.S.G. MG 422, on thin soil over rock.

***Neckera pennata* Hedw.**, MG402, on vertical rock.

***Plagiomnium undulatum* (Hedw.) T. J. Kop.**, 04002/BI, on rock covered with soil.

***Plagiothecium cavifolium* (Brid.) Z. Iwats.**, 04002/BZ, on rocky soil; 04002/BV, 04002/CA, on rock.

***Plagiothecium denticulatum* (Hedw.) Schimp.**, MG 409, on large rock.

***Plagiothecium nemorale* (Mitt.) A. Jaeger**, 04002/BM, on soil.

***Pohlia nutans* (Hedw.) Lindb.**, 04005/B, on soil.

***Pterigynandrum filiforme* Hedw.**, 04005/E, on decaying wood.

***Pylaisia polyantha* (Hedw.) Schimp.**, 04002/BC, 04002/BT, on vertical rock wall; 04005/M, on decaying wood.

***Rhizomnium punctatum* (Hedw.) T. J. Kop.**, 04002/BH, 04006/BA, 04006/L, on rocky soil.

**! *Rhynchostegium confertum* (Dicks.) Schimp.**, MG 417, on rock. New to the Mátra Mts. This Eurasian element is rare in Hungary.

***Schistidium apocarpum* (Hedw.) Bruch et Schimp.**, MG 427, 04002/BY, on dry rock.

*Thamnobryum alopecurum* (Hedw.) Gangulee, 04002/BK, on irrigated rock wall; 04002/BL, on rock wall; MG 414, on shaded, moist rock face.

*Thuidium recognitum* (Hedw.) Lindb., MG 438, on rock.

*Weissia controversa* Hedw. var. *controversa*, MG 416, on thin soil between rocks.

*Weissia longifolia* Mitt. (Syn.: *Astomum crispum* (Hedw.) Hampe), 04005/G, on vertical rock wall.

## Lichens

At the junction of the stream Csonka- and Tarjánka-patak, in thermophilous oak forest (*Corno-Quercetum*) on the edge of the valley.

*Acarospora fuscata* (Schrader) Th. Fr., EGR 4291, on rock, alt.: 379 m a. s. l., lat.: 47°51.019' N, long.: 20°04.010' E.

*Aspicilia caesiocinerea* (Nyl. ex Malbr.) Arnold, EGR 4303, on rock, alt.: 379 m a. s. l., lat.: 47°50.990' N, long.: 20°04.019' E.

! *Buellia griseovirens* (Turner & Borrer ex Sm.) Almb., EGR 4292, on *Quercus* sp. bark, alt.: 377 m a. s. l., lat.: 47°50.999' N, long.: 20°04.005' E.

It has been known since 1995 in the Hungarian lichen flora, first report in FARKAS & LÖKÖS (2000). Nowadays it is spreading on the bark of deciduous trees and shrubs at moderately polluted areas.

*Candelariella vitellina* (Hoffm.) Müll.Arg., EGR 4262, on rock, alt.: 379 m a. s. l., lat.: 47°50.990' N, long.: 20°04.019' E.

*Cladonia pyxidata* (L.) Hoffm., EGR 4263, 4264, on rock, between mosses, alt.: 378 m a. s. l., lat.: 47°51.602' N, long.: 20°04.012' E.

*Cladonia subulata* (L.) Weber ex Wigg., EGR 4265, on rock, between mosses, alt.: 379 m a. s. l., lat.: 47°51.001' N, long.: 20°04.003' E.

*Hafellia disciformis* (Fr.) Marbach & H. Mayrhofer [syn.: *Buellia disciformis* (Fr.) Mudd], EGR 4261, on *Quercus* sp. bark, alt.: 377 m a. s. l., lat.: 47°50.999' N, long.: 20°04.005' E; EGR 4260, on *Quercus petraea* bark, alt.: 379 m a. s. l., lat.: 47°51.019' N, long.: 20°04.010' E.

*Hypogymnia physodes* (L.) Nyl., EGR 4266, on *Quercus petraea* bark, alt.: 379 m a. s. l., lat.: 47°50.990' N, long.: 20°04.019' E; EGR 4245, on *Quercus* sp. bark, alt.: 377 m a. s. l., lat.: 47°50.999' N, long.: 20°04.005' E.

*Lecanora carpinea* (L.) Vainio, EGR 4293, on *Quercus petraea* bark, alt.: 379 m a. s. l., lat.: 47°51.019' N, long.: 20°04.010' E.

! *Lecanora chlarotera* Nyl., EGR 4294, on *Quercus* sp. bark, alt.: 377 m a. s. l., lat.: 47°50.999' N, long.: 20°04.005' E; EGR 4295, on *Quercus*

*petraea* bark, alt.: 379 m a. s. l., lat.: 47°51.019' N, long.: 20°04.010' E; EGR 4296, on *Quercus petraea* bark, alt.: 379 m a. s. l., lat.: 47°50.990' N, long.: 20°04.019' E.

*Lecanora chlarotera* Nyl. and *Lecanora subfusca* H. Magn. var. *allophana* Ach. are considered as synonyms of *Lecanora allophana* (Ach.) Nyl. according to VERSEGHY (1994). I revised all *L. subfusca* and *L. allophana* samples from the Mátra Mts. from EGR and BP. I haven't found *L. chlarotera* among them, therefore this species is new for the Mátra Mts.

Frequent in Hungary except in the most polluted areas.

*Lecanora conizaeoides* Nyl. ex Crombie, EGR 4267, on *Quercus petraea* bark, alt.: 379 m a. s. l., lat.: 47°50.990' N, long.: 20°04.019' E.

*Lepraria incana* (L.) Ach., EGR 4297, on *Quercus sp.* bark, alt.: 377 m a. s. l., lat.: 47°50.999' N, long.: 20°04.005' E.

*Melanelia fuliginosa* (Fr. ex Duby) Essl., EGR 4251, on *Quercus petraea* bark, alt.: 379 m a. s. l., lat.: 47°51.019' N, long.: 20°04.010' E.

*Parmelia sulcata* Taylor, EGR 4250, on *Quercus petraea* bark, alt.: 379 m a. s. l., lat.: 47°51.019' N, long.: 20°04.010' E.

*Parmelina tiliacea* (Hoffm.) Hale, EGR 4253, on *Quercus petraea* bark, alt.: 379 m a. s. l., lat.: 47°51.019' N, long.: 20°04.010' E.

*Parmeliopsis ambigua* (Wulfen) Nyl., EGR 4269, on *Quercus petraea* bark, alt.: 379 m a. s. l., lat.: 47°50.990' N, long.: 20°04.019' E.

*Physcia adscendens* (Fr.) Oliv., EGR 4255, on *Quercus petraea* bark, alt.: 379 m a. s. l., lat.: 47°51.019' N, long.: 20°04.010' E.

*Ramalina cf. farinacea* (L.) Ach., EGR 4258, on *Quercus petraea* bark, 379 altitude, lat.: 47°51.019' N, long.: 20°04.010' E.

*Scoliciosporum chlorococcum* (Graewe ex Stenh.) Vězda, EGR 4259, on *Quercus sp.* bark, alt.: 377 m a. s. l., lat.: 47°50.999' N, long.: 20°04.005' E.

*Scoliciosporum umbrinum* (Ach.) Arnold, EGR 4298, on rock, alt.: 379 m a. s. l., lat.: 47°50.990' N, long.: 20°04.019' E.

*Xanthoparmelia conspersa* (Ehrh. ex Ach.) Hale, EGR 4247, 4268, on rock, alt.: 379 m a. s. l., lat.: 47°51.019' N, long.: 20°04.010' E.

At the lower part of the stream Tarjánka-patak, in the streambed.

*Collema flaccidum* (Ach.) Ach., (coll.: G. Kis) EGR 4354, on vertical rock wall, alt.: 200 – 330 m a. s. l.

*Graphis scripta* (L.) Ach., EGR 4244, on bark, alt.: 336 m a. s. l., lat.: 47°50.729' N, long.: 20°04.314' E.

*Lecanora argentata* (Ach.) Malme, EGR 4246, on *Carpinus betulus* bark, alt.: 336 m a. s. l., lat.: 47°50.729' N, long.: 20°04.314' E.

*Melanelia fuliginosa* (Fr. ex Duby) Essl., EGR 4248, on *Salix sp.* bark, alt.: 338 m a. s. l., lat.: 47°50.738' N, long.: 20°04.260' E; EGR 4249, on *Carpinus betulus* bark, alt.: 336 m a. s. l., lat.: 47°50.729' N, long.: 20°04.314' E.

*Parmelina tiliacea* (Hoffm.) Hale, EGR 4252, on *Salix sp.* bark, alt.: 338 m a. s. l., lat.: 47°50.738' N, long.: 20°04.260' E.

*Pertusaria albescens* (Hudson) Choisy & Werner, EGR 4270, on *Salix sp.* bark, alt.: 338 m a. s. l., lat.: 47°50.738' N, long.: 20°04.260' E.

*Phaeophyscia orbicularis* (Necker) Moberg, EGR 4254, on *Salix sp.* bark, alt.: 338 m a. s. l., lat.: 47°50.738' N, long.: 20°04.260' E.

*Physconia perisidiosa* (Erichsen) Moberg [syn.: *Physcia farrea* auct.], EGR 4256, on *Salix sp.* bark, alt.: 338 m a. s. l., lat.: 47°50.738' N, long.: 20°04.260' E.

Three *Physcia farrea* (Ach.) Poelt specimens are mentioned from the Mátra Mts in KISZELYNÉ-VÁMOSI (1982-83). Although only one of them can be found in our herbarium (EGR 3052) and this specimen is revised to *Physcia stellaris* (L.) Nyl., this species is not new to lichen flora of the Mátra Mountains. There are some *Physconia perisidiosa* from Ágasvár (Mátra Mts) in the Herbarium of Mátra Museum in Gyöngyös but they are not published anywhere.

! *Pseudosagedia aenea* (Wallr.) Hafellner & Kalb [syn.: *Porina aenea* (Wallr.) Zahlbr], EGR 4257, on bark, alt.: 336 m a. s. l., lat.: 47°50.729' N, long.: 20°04.314' E.

Widespread and frequent in shady beech and hornbeam forests.

Except for *Hafellia disciformis*, *Collema flaccidum*, *Pertusaria albescens*, *Parmelia sulcata*, and *Physcia adscendens* that are mentioned from the area of the stream Csonka-patak by KISZELYNÉ-VÁMOSI (1980, 1982-83) all other lichen species are new to the investigated area.

## Summary

The gorge Tarjánka-szurdok and its close surroundings in the southern Mátra Mts are a strictly protected area. The present work contains data for an additional 32 bryophyte and 21 lichen taxa to the first collection including data new for the Mátra Mts: *Isothecium myosuroides*, *Rhynchostegium confertum* and *Buellia griseovirens*, *Lecanora chlarotera*, *Pseudosagedia aenea*. The gorge Tarjánka-szurdok is the fourth locality in Hungary of the very rare *Cnestrum schisti*.

## Acknowledgements

We would like to thank W. R. BUCK, L. LŐKÖS and S. ORBÁN for helping in identification of specimens. This project was supported by the Hungarian Scientific Research Fund (OTKA M045616 and T047160).

## References

- BIELCZYK, U.; LACKOVIČOVÁ, A.; FARKAS, E. E.; LŐKÖS, L.; LIŠKA; BREUSS, O.; KONDRATYUK, S. YA. (2004): Checklist of lichens of the Western Carpathians. W. Szafer Institute of Botany, Polish Academy of Sciences, Kraków, 181 pp.
- BOROS, Á. (1968): Bryogeographie und Bryoflora Ungarns. Akadémiai Kiadó, Budapest, 466 pp.
- CORTINI PEDROTTI C. 2001. Sphagnopsida, Andreaeopsida, Bryopsida. Flora dei muschi d'Italia, 1 Parte Ed. & publisher: A. Delfino. Rome, I-XIV., pp. 1–817.
- CROSBY, M. R., R. E. MAGILL, B. ALLEN & SI HE (1999): A checklist of the Mosses. Missouri Botanical Garden, St. Louis.  
<http://www.mobot.org/MOBOT/tropicos/most/checklist.shtml>
- CRUM, H. A. & L. E. ANDERSON (1981): Mosses of Eastern North America, Vol. 1. and Vol. 2. Columbia University Press, U. S. A., pp. 1–663. and 664–1328.
- ERZBERGER, P. & PAPP, B. (2004): Annotated checklist of Hungarian Bryophytes. *Studia Botanica Hungarica* 35: 91–149.
- FARKAS, E. & LŐKÖS, L. (2000): Contributions to the Hungarian lichen flora. Book of Abstracts, 4th IAL Symposium, Barcelona, 3–8 September, 84 pp.
- FREY, VON W., J.-P. FRAHM, E. FISCHER & W. LOBIN (1995): Die Moos- und Farnpflanzen Europas. Gustav Fischer Verlag, Stuttgart, Jena, New York, 426 pp.
- KIS, G. & MOLNÁR, K. (2004): Adatok a Mátra hegység moha- és zuzmóflórájához. *Acta Academiae Paedagogicae Agriensis, Sectio Biologiae* 25: 25–38.
- KISZELYNÉ - VÁMOSI, A. (1980): A Mátra-hegység zuzmóflórája I. *Folia Hist-nat. Mus. Matr.* 6: 51–70.
- KISZELYNÉ - VÁMOSI, A. (1982-83): A Mátra-hegység zuzmóflórája II. *Folia Hist-nat. Mus. Matr.* 8: 63–75.
- ORBÁN, S. (1976): Moss-arealgeographische Studien aus dem Gebiet der Karpaten und im Karpatenbecken. IV. *Studia Botanica Hungarica* 11: 49–81.
- ORBÁN, S. & L. VAJDA (1983): Magyarország mohaflórájának kézikönyve. Akadémiai Kiadó, Budapest, 518 pp.
- PATON, J. A. (1999): The liverwort flora of the British Isles. Colchester, Harley Books, 626 pp., 314. figs.
- PURVIS, O. W.; COPPINS, B. J.; HAWKSWORTH, D. L.; JAMES, P. W. & MOORE, D. M. (1992): The Lichen Flora of Great Britain and Ireland. The British Lichen Society, London, 710 pp.



- SCHUMACKER, R. & J. VAÑA (2000): Identification keys to the liverworts and hornworts of Europe and Macaronesia (Distribution & status). Documents de la scientifique des Hautes-Fagnes no 31, 160 pp.
- SCHUSTER, R. M. (1977): Boreal Hepaticae. Vaduz: Germany; reprint of „Boreal Hepaticae,” *The American Midland Naturalist*, 49(1953): 257-684; (1957, No. 1-2: 203-256 and 257-299.
- SMITH, A. J. E. (2004): The moss flora of Britain and Ireland. Cambridge University Press, Cambridge, London, New York, Melbourne, 706 pp. (Second edition)
- VERSEGHY, K. (1994): Magyarország zuzmóflórájának kézikönyve. Magyar Természettudományi Múzeum, Budapest, 415 pp.
- WIRTH, V. (1995a): Die Flechten Baden-Württembergs. Teil 1-2., Eugen Ulmer GmbH & Co., Stuttgart, 1006 pp.
- WIRTH, V. (1995b): Flechtenflora 2. Auflage , Eugen Ulmer GmbH & Co., Stuttgart, 661 pp.