Neue Publikationen die Flechtenflora Mitteleuropas betreffend Achte Folge

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Die nachstehende Liste enthält überwiegend Publikationen aus dem Jahr 2021, aber auch solche aus dem Jahr 2020. Darüber hinaus wurden auch einige Artikel in die Liste aufgenommen, die kurz nach dem Jahreswechsel 2021/2022 erschienen sind und ansonsten erst in die Liste des nächsten Jahres Eingang gefunden hätten. Die Liste neuer Publikationen ist das Ergebnis einer subjektiven Auswahl und erhebt angesichts der Fülle an aktuellen Publikationen keinen Anspruch auf Vollständigkeit. Der geographische Bezugsraum der Auswahl wurde vereinzelt über Mitteleuropa hinaus erweitert, wenn die betreffende Publikation von generellem Interesse erschien.

ABAS, A. 2021. A systematic review on biomonitoring using lichen as the biological indicator: A decade of practices, progress and challenges. – Ecological Indicators **121**: 107197 [11 p.].

APTROOT, A., STAPPER, N. J., KOŠUTHOVÁ, A. & VAN HERK, K. (C.M.) 2021. Lichens as an indicator of climate and global change. – In: LETCHER T. M. (ed.): Climate Change. Observed Impacts on Planet Earth. Third Edition, p. 483–497, Elsevier.

ARUP, U., BLOM, H. H. & LINDBLOM, L. 2021. The Gaupne area in Sogn og Fjordane – a hot-spot for lichens in Norway. – Graphis Scripta **33**(3): 31–49.

BERGER, A. & SCHWARZ, M. 2021. Die Flechtenflora der Dellbrücker Heide. – Decheniana **174**: 90–109.

BERGER, F. & BRACKEL, W. VON 2021. *Lichenohendersonia physciicola* sp. nov., a new coelomycete on *Physcia*. – Herzogia **34**: 138–141.

BERGER, F. & ZIMMERMANN, E. 2021. Beitrag zur Kenntnis der lichenicolen Mycobiota der Alpen I. – Weitere Funde aus Tirol und der Schweiz. – Herzogia **34**: 428–460.

BERGER, F. 2021. Flechten und lichenicole Pilze im Waldhochmoor „Bayerische Au“ im Böhmerwald (Oberösterreich, Österreich). – Stapfia **112**: 207–215.

BERGER, F., MALÍČEK, J., PALICE, Z. & TÜRK, R. 2021. Neue und bemerkenswerte Flechtennachweise in Oberösterreich – 3. update. – Stapfia **112**: 263–273.

BERTRAND, M. 2021. Lichens observés dans les montagnes du Queyras (Hautes-Alpes, France). – Bulletin de Association Française de Lichénologie **46**(1): 137–156.

BLÁZQUEZ, M., HERNÁNDEZ-MORENO, L.S., GASULLA, F., PÉREZ-VARGAS, I. & PÉREZ-ORTEGA, S. 2022. The role of photobionts as drivers of diversification in an island radiation of lichen-forming fungi. – Frontiers in Microbiology **12**: 784182 [15 p.].

BOCH, S., SAIZ, H., ALLAN, E., SCHALL, P., PRATI, D., SCHULZE, E.-D., HESSENMÖLLER, D., SPARRIUS, L. & FISCHER, M. 2021. Direct and indirect effects of management intensity and environmental factors on the functional diversity of lichens in Central European forests. – Microorganisms **9**: 463 [18 p.].

BOERS, J. 2021. Vier nieuwe korstmosparasieten voor Nederland. – Buxbaumiella **120:** 54–58.

BOLUDA, C. G., RICO, V. J., NACIRI, Y., HAWKSWORTH, D. L. & SCHEIDEGGER, C. 2021. Phylogeographic reconstructions can be biased by ancestral shared alleles: The case of the polymorphic lichen *Bryoria fuscescens* in Europe and North Africa. – Molecular Ecology **30**(19): 4845–4865.

BOUDA, F. 2021. Lišejníky PR Prales Jizera [Lichens of Prales Jizera Nature Reserve (North Bohemia)]. – Bryonora **68**: 23–34.

BRACKEL W. V. & WIRTH V. 2021. *Sclerococcum toensbergii* Diederich new to France and Europe. – Bulletin de la Société Linnéenne de Provence **72**: 27–29.
BRACKEL, W. VON 2021. Flechte und Moos des Jahres 2021. – Herzogiella **8**: 86–88.
BRACKEL, W. VON 2021. Lichenicolous fungi from Campania (Italy). – Borziana **2**: 31–68.
BRACKEL, W. VON 2021. Weitere Funde von flechtenbewohnenden Pilzen in Bayern – Beitrag zu einer Checkliste VII. Berichte der Bayerischen Botanischen Gesellschaft **91**: 95–115.
BRAUN, U. & BENSCH, K. 2021. Annotated list of taxonomic novelties published in "Fungi Rhenani Exsiccati" Supplementi Fasc. 6 to 12, issued by K. W. G. L. Fuckel between 1867 and 1874. – Schlechtendalia **38**: 118–159.
BRESINSKY, A. 2021. Entwicklung, Morphologie und Systematik der Pilze im Überblick. 111 S. Springer Verlag.
BREUSS, O. 2021. Neue Funde pyrenocarper Flechten (lichenisierte Ascomycota, Verrucariaceae). – Österr. Z. f. Pilzkunde **29**: 117–121.
BRUDERER, T. 2021. Subalpine und alpine Zwergstrauchheiden unter besonderer Berücksichtigung der Flechten. Bachelorarbeit an der Zürcher Hochschule für angewandte Wissenschaften, n.p. 28 S.
BRUNIALTI, G., GIORDANI, P., RAVERA, S. & FRATI, L. 2021. The reproductive strategy as an important trait for the distribution of lower-trunk epiphytic lichens in old-growth vs. non-old growth forests. – Forests **12**: 27 [12 p.].
BÜLTMANN, H., FISCHER, P., THIEL, H. & WAESCH, G.: *Stereocaulon taeniarum* und *Cladonia stygia* in den Carrenziener Dünen (Amt Neuhaus, niedersächsisches Tiefland) mit Anmerkungen zum Vorkommen in Deutschland und zur Abgrenzung von *Stereocaulon saxatile*. – Herzogiella **8**: 74–84.
CANNON, P. & ORANGE, A. 2021. Ostropales: Protothelenellaceae, including the genus *Protothelenella*. – Revisions of British and Irish Lichens **7**: 1–4.
CANNON, P., APTROOT, A., COPPINS, B., ERTZ, D., SANDERSON, N., SIMKIN, J. & WOLSELEY, P. 2021. Arthoniales: Roccellaceae, including the genera *Cresponea*, *Dendrographa*, *Dirina*, *Enterographa*, *Gyrographa*, *Lecanactis*, *Pseudoschismatomma*, *Psoronactis*, *Roccella*, *Schismatomma* and *Syncesia*. – Revisions of British and Irish Lichens **16**: 1–22.
CANNON, P., APTROOT, A., COPPINS, B., SANDERSON, N. & SIMKIN, J. 2021. Peltigerales: Pannariaceae, including the genera *Fuscopannaria*, *Leptogidium*, *Nevesia*, *Pannaria*, *Parmeliella*, *Pectenia*, *Protopannaria* and *Psoroma*. – Revisions of British and Irish Lichens **9**: 1–16.
CANNON, P., CHAMBERS, S., COPPINS, B., SANDERSON, N. & SIMKIN, J. 2021. Pertusariales: Pertusariaceae, including the genus *Pertusaria*. – Revisions of British and Irish Lichens 6: 1–13.
CANNON, P., COPPINS, B., ERTZ, D., FLETCHER, A., PENTECOST, A. & SIMKIN, J. 2021. Arthoniales: Opegraphaceae, including the genera *Llimonaea*, *Opegrapha*, *Paralecanographa* and *Sparria*. – Revisions of British and Irish Lichens **13**: 1–19.
CANNON, P., COPPINS, B., ERTZ, D., PENTECOST, A., SANDERSON, N., SIMKIN, J. & WOLSELEY, P. 2021. Arthoniales: Lecanographaceae, including the genera *Alyxoria*, *Lecanographa*, *Phacographa*, *Plectocarpon* and *Zwackhia*. – Revisions of British and Irish Lichens **14**: 1–15.
CANNON, P., COPPINS, B., ORANGE, A., SANDERSON, N. & SIMKIN, J. 2021. Candelariales: Candelariaceae, including the genera *Candelaria* and *Candelariella*. – Revisions of British and Irish Lichens **21**: 1–8.
CANNON, P., EKMAN, S., KISTENICH, S., LAGRECA, S., PRINTZEN, C., TIMDAL, E., APTROOT, A., COPPINS, B., FLETCHER, A., SANDERSON, N. & SIMKIN, J. 2021. Lecanorales: Ramalinaceae, including the genera *Bacidia*, *Bacidina*, *Bellicidia*, *Biatora*, *Bibbya*, *Bilimbia*, *Cliostomum*, *Kiliasia*, *Lecania*, *Megalaria*, *Mycobilimbia*, *Phyllopsora*, *Ramalina*, *Scutula*, *Thalloidima*, *Toninia*, *Toniniopsis* and *Tylothallia*. – Revisions of British and Irish Lichens **11**: 1–82.
CANNON, P., FRYDAY, A., SPRIBILLE, T., COPPINS, B., VONDRÁK, J., SANDERSON, N. & SIMKIN, J. 2021. Baeomycetales: Xylographaceae, including the genera *Lambiella*, *Lithographa*, *Ptychographa* and *Xylographa*. – Revisions of British and Irish Lichens **17**: 1–11.

CANNON, P., KUKWA, M., COPPINS, B., FLETCHER, A., SANDERSON, N. & SIMKIN, J. 2021. Pertusariales: Ochrolechiaceae, including the genera *Lepra*, *Ochrolechia* and *Varicellaria*. – Revisions of British and Irish Lichens **5**: 1–17.

CANNON, P., MAGAIN, N., SÉRUSIAUX, E., YAHR, R., COPPINS, B., SANDERSON, N. & SIMKIN, J. 2021. Peltigerales: Peltigeraceae, including the genera *Crocodia*, *Lobaria*, *Lobarina*, *Nephroma*, *Peltigera*, *Pseudocyphellaria*, *Ricasolia*, *Solorina* and *Sticta*. – Revisions of British and Irish Lichens **20**: 1–34.

CANNON, P., MALÍČEK, J., SANDERSON, N., BENFIELD, B., COPPINS, B. & SIMKIN, J. 2021. Ostropales: Coenogoniaceae, including the genus *Coenogonium*. – Revisions of British and Irish Lichens **3**: 1–4.

CANNON, P., PRIETO, M., COPPINS, B., SANDERSON, N., SCHEIDEGGER, C. & SIMKIN, J. 2021. Caliciales: Caliciaceae, including the genera *Acolium*, *Amandinea*, *Buellia*, *Calicium*, *Diploicia*, *Diplotomma*, *Endohyalina*, *Monerolechia*, *Orcularia*, *Pseudothelomma*, *Rinodina* and *Tetramelas*. – Revisions of British and Irish Lichens **15**: 1–35.

CASTELLANI, M. B., BIANCHI, E., COPPI, A., NASCIMBENE, J. & BENESPERI, R. 2021. Revision of the *Parmelia saxatilis* group in Italy based on morphological, chemical, and molecular data. – Phytotaxa **512**(1): 28–40.

CHAMBERS, S., CANNON, P., COPPINS, B. & SIMKIN, J. 2021. Vezdaeales: Vezdaeaceae, including the genus *Vezdaea*. – Revisions of British and Irish Lichens **10**: 1–5.

CLERC, P. & NACIRI, Y. 2021. *Usnea dasopoga* (Ach.) Nyl. and *U. barbata* (L.) F. H. Wigg. (Ascomycetes, Parmeliaceae) are two different species: A plea for reliable identifications in molecular studies. - Lichenologist, **53**(3): 221–230.

Coppins, B., Kondratyuk, S., Etayo, J. & Cannon, P. 2021. Notes on lichenicolous species of *Opegrapha* s. lat. (Arthoniales) on Arthoniaceae and Verrucariaceae, with a key to British and Irish lichenicolous Opegraphaceae. – Lichenologist **53**(2): 159–169.

CZEREPKO, J., GAWRYŚ, R., SZYMCZYK, R., PISAREK, W., JANEK, M., HAIDT, A., KOWALEWSKA, A., PIEGDOŃ, A., STEBEL, A., KUKWA, M. & CACCIATORI, C. 2021. How sensitive are epiphytic and epixylic cryptogams as indicators of forest naturalness? Testing bryophyte and lichen predictive power in stands under different management regimes in the Białowieża forest. – Ecological Indicators **125**: 107532 [19 p.].

DARMOSTUK, V. V. 2021. Lichenicolous fungi on *Verrucaria* s. lat. in Ukraine with the description of *Zwackhiomyces khodosovtsevii* sp. nov. and a key to the lichenicolous fungi on Verrucaria s. lat. – Botanica Serbica **45**(2): 293–301.

DARMOSTUK, V. V. 2021. *Pronectria gromakovae*, a new lichenicolous fungus on *Lecanora populicola* and notes on other records from Kharkiv region (Ukraine). – Lindbergia **44**: linbg.01141 [7 p.].

DIEDERICH P. 2021. Notes on lichenicolous taxa of the asexual fungal genera *Intralichen* and *Trimmatostroma*, with a revised key and descriptions of four new species. – Herzogia **34**: 101–126.

DIEDERICH, P. & SCHULTZ, M. 2021. The identity of *Verrucaster lichenicola* Tobler. – Herzogia **34**: 203–207.

DITTRICH, S., THIEM, E., ALBRECHT, B. M. & VON OHEIMB, G. 2021. Cryptogamic epiphytes and microhabitat diversity on non-native green ash (*Fraxinus pennsylvanica* Marsh., Oleaceae) in urban habitats. – iForest **14**: 393–399.

DOŁĘGOWSKA, S., GAŁUSZKA, A. & MIGASZEWSKI, Z. M. 2021. Significance of the long-term biomonitoring studies for understanding the impact of pollutants on the environment based on a synthesis of 25-year biomonitoring in the Holy Cross Mountains, Poland. – Environmental Science and Pollution Research **28**: 10413–10435.

DOLNIK, C. & NEUMANN, P. 2021. Flechtenkartierung Sylt (Nord) vom 17.–20.09.2020. – Herzogiella **8**: 60–79.

DORT, K. VAN & HORVERS, B. 2021. Coniocarps, rain shadow specialists – Coniocarpen, regenschaduw specialisten. Tilburg, 192 S.

ECKSTEIN, J. & GRÜNBERG, H. 2021. Rote Liste der Flechten (Lichenes) Thüringens, 4. Fassung, Stand 11/2020. – Naturschutzreport Heft **30**: 401–424.

ECKSTEIN, J., BRACKEL, W. VON, RETTIG, J., CEZANNE, R. & EICHLER, M. 2021. Erste Checkliste der flechtenbewohnenden Pilze Thüringens mit neuen Funden für das Bundesland. – Haussknechtia, **15**: 117–139.

ELLIS, C.J., ASPLUND, J., BENESPERI, R., BRANQUINHO, C., DI NUZZO, L., HURTADO, P., MARTÍNEZ, I., MATOS, P., NASCIMBENE, J., PINHO, P., PRIETO, M., ROCHA, R., RODRÍGUEZ-ARRIBAS, C., THÜS, H. & GIORDANI, P. 2021. Functional traits in lichen ecology: A review of challenge and opportunity. – Microorganisms **9**(4): 766 [27 p.].

ERTZ, D. & TØNSBERG, T. 2021. A new species of *Sagiolechia* (Sagiolechiaceae) from Norway, with lirelliform ascomata and 1-septate ascospores. – Graphis Scripta **33**(1): 1–11.

ERTZ, D., SANDERSON N. & LEBOUVIER M. 2021. *Thelopsis* challenges the generic circumscription in the Gyalectaceae and brings new insights to the taxonomy of *Ramonia*. – Lichenologist **53**(1): 45–61.

FÁVARO, A., DO NASCIMENTO, A. G. & COELHO, F. F. 2021. Urban environmental influences on heterocyst investment in *Leptogium cyanescens* (Collemataceae). – Nova Hedwigia **113**: 259–277.

FREIBERGER, L., SCHINKEL, F., VOGT, S. & WINDISCH, U. 2021. Kalibrierung von Bioindikationsverahren zum Nachweis von Immisionen atmosphärischer reaktiver Stickstoffverbindungen. – Gefahrstoffe **81** (05-06): 175–183.

GAARDER, G., JORDAL, J. B. & FRISCH, A. 2021. *Phaeographis inusta* new to Norway, with comments on *Arthothelium macounii*. – Graphis Scripta **33**(4): 59–66.

GERASIMOVA, J., URBANAVICHENE, I., URBANAVICHUS, G. & BECK, A. 2021. Morphological and phylogenetic analyses of *Toniniopsis subincompta* s. lat. (Ramalinaceae, Lecanorales) in Eurasia. – Lichenologist **53**(2): 171–183.

GHEZA, G., DI NUZZO, L., VALLESE, C., BARCELLA, M., BENESPERI, R., GIORDANI, P., NASCIMBENE, J. & ASSINI, S. 2021. Morphological and chemical traits of *Cladonia* respond to multiple environmental factors in acidic dry grasslands. – Microorganisms **9**: 453 [12 p.].

GHEZA, G., DI NUZZO, L., VALLESE, C., BENESPERI, R., BIANCHI, E., DI CECCO, V., DI MARTINO, L., GIORDANI, P., HAFELLNER, J., MAYRHOFER, H., NIMIS, P. L., TRETIACH, M. & NASCIMBENE, J. 2021. The lichens of the Majella National Park (Central Italy): an annotated checklist. – MycoKeys **78**: 119–168.

GHEZA, G., NASCIMBENE, J., BARCELLA, M., BRACCO, F., ASSINI, S., 2022. Epiphytic lichens of woodland habitats in the lower Ticino river valley and in the "Bosco Siro Negri" Integral Nature State Reserve (NW Italy). Natural History Sciences, Milano doi: 10.4081/nhs.2022.566

GRIMM, M., GRUBE, M., SCHIEFELBEIN, U., ZÜHLKE, D., BERNHARDT, J. & RIEDEL, K. 2021. The lichens' microbiota, still a mystery? – Frontiers in Microbiology **12**: 623839 [25 p.].

GRÜNBERG, H. 2021. Neufund von *Microcalicium ahlneri* in Thüringen (Ascomycota, Microcaliciaceae). – Haussknechtia **15**: 162–164.

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HAFELLNER, J. 2021. *Carbonea tephromelae* in the European Alps and selected distributional data for other *Carbonea* species. – Fritschiana **97**: 19–34.

HAMÄLÄINEN, A., RANIUS, T. & STRENGBOM, J. 2021. Increasing the amount of dead wood by creation of high stumps has limited value for lichen diversity. – Journal of Environmental Management **280**: 111646 [14 p.].

HAWKSWORTH, D. L. & GRUBE, M. (2020): Lichens redefined as complex ecosystems. – New Phytologist **227**: 1281–1283.

HELLEMANS, K. 2021. Reactie op 'Update Nederlandse namen korstmossen'. – Buxbaumiella **121**:22–24.

HOFMEISTER, J, VONDRÁK, J., ELLIS, C., COPPINS, B., SANDERSON, N., MALÍČEK, J., PALICE, Z., ACTON, A., SVOBODA, S. & GLOOR, R. 2022. High and balanced contribution of regional biodiversity hotspots to epiphytic and epixylic lichen species diversity in Great Britain. – Biological Conservation **266**: 109443 https://doi.org/10.1016/j.biocon.2021.109443.

IVANOVICH, C., DOLNIK, C., OTTE, V., PALICE, Z., SOHRABI, M. & PRINTZEN, C. 2021. A preliminary phylogeny of the *Lecanora saligna*-group, with notes on species delimitation. – Lichenologist **53**(1): 63–79.

JOHN, V. 2021. Flechten-Exkursionen 2020 und 2021 im Rahmen der Saarländischen Akademie für Artenkenntnis. – www.delattinia.de/node/110, 06.12.2021.

JOHN, V. 2021. Zur Dynamik der Flechtenbiota im Kronenbereich von Waldbäumen als Indikator für Eutrophierung und Klimawandel in Rheinland-Pfalz. – Fauna Flora Rheinland-Pfalz **14** (3): 793–814.

JUNG, P., BRUST, K., SCHULTZ, M., BÜDEL, B., DONNER, A. & LAKATOS, M. 2021. Opening the gap: Rare lichens with rare cyanobionts – Unexpected cyanobiont diversity in cyanobacterial lichens of the order Lichinales. – Frontiers in Microbiology **12**: 728378 [24 p.].

KANTELINEN, A., WESTBERG, M., OWE-LARSSON, B. & SVENSSON, M. 2021. New *Micarea* records from Norway and Sweden and an identification key to the M. prasina group in Europe. – Graphis Scripta: **33**(2): 17–28.

KAUFMANN, S., FUNCK, S.-K., PAINTNER, F., ASBECK, T. & HAUCK, M. 2021. The efficiency of retention measures in continuous-cover forestry for conserving epiphytic cryptogams: A case study on *Abies alba*. – Forest Ecology and Management **502**: 119698 [11 p.].

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KIEBEL, A. & JOHN, V. 2021. Die Flechtenart Grüngelber Felsenfleck (*Pleopsidium chlorophanum*) in Rheinland-Pfalz. – Fauna Flora Rheinland-Pfalz **14** (2): 383–394.

KLASBERG, M. 2021. De opmars van rood dooiermos (*Rusavskia elegans*) in Maastricht onder de loep genomen. Lichenometrisch en ecologisch onderzoek naar een zuidelijke soort. – Buxbaumiella **121**: 1–24.

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KNUDSEN, K., KOCOURKOVÁ, J., HODKOVÁ, E. & SCHIEFELBEIN, U. 2021. A new species of *Myriospora* (Acarosporaceae) and a report of *Myriospora rufescens* from Central Europe. – Herzogia **34**: 327–338.

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