

Collections of lichens at the Herbarium of the Botanical Garden in Košice (KO)

(dedicated to the 50th Anniversary of the Botanical Garden)

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ABSTRACT: Collection of lichens at the Herbarium of the Botanical Garden in Košice includes about 1000 specimens collected from the 19th century up to the twenties of 20th century by F. MALOCH, KOVÁŘ, BRITZELMAYER, HARTMANN, KUŤÁK, LORINZER, OBORNY, and WOLF. Main part of collection is composed from lichens collected in mountain areas of Slovak Republic and Czech Republic. A small parts of the historical collection of lichens originate from RABENHORST's "Lichenes Europaei" herbarium and F. KOVÁŘ's collection (possibly duplicates).

KEYWORDS: lichen collections, Botanical Garden in Košice, Slovakia, Czech Republic.

The Herbarium of Botanical Garden in Košice was established in 1950 at the same time as the Botanical Garden itself, at the High School of Agricultural and Forestry Engineering. In 1953 the administration of the Botanical Garden was transferred to the Slovak Academy of Science and in 1960 it became part of Pedagogical Institute in Košice. The botanical collections, predominately of higher plants, had mainly a regional character and were from eastern Slovakia.

The history of collections at the Botanical Garden in Košice starts from 1958 to 1960 when the herbarium acquired 9,539 specimens, collected from the 19th century up to the Second World War (ANTOŠ 1964). Unfortunately, historical collections of cryptogams were ignored due to lack of cryptogamologists as well as provisional

placement of collections elsewhere until satisfactory rooms were obtained. The lichens, for example, are still classified together with bryophytes and called, "mosses".

A small part of the historical collection of lichens originate from RABENHORST'S "Lichenes Europaei" herbarium (LE, 11 specimens). The following are original lichen names with author abbreviations as found on the original labels: *Cetraria juniperina* (L.) ACH. (LE 866), *Collema multifidum* (SCOPOL.) var. *jacobaeaefolium* (SCHRK.) SCHAER. (LE 677), *Collema tenax* (SW.) ACH. (LE 588), *Hagenia aquila* (ACH.) DE NOTARIS (LE 586), *Pannaria microphylla* (SW.) MASSAL. (LE 708), *Parmelia physodes* (L.) v. *vittata* ACH. (LE 430), *Solorina saccata* (L.) ACH. (LE 855), *Solorinella asteriscus* ANZI (LE 926), *Sticta fuliginosa* (DICKS.) ACH. (LE 956), *Sticta scrobiculata* SCOP. (LE 188), *Zeora sordida* β *Swartzii* l. *leucoma* ACH (LE 693).

Very valuable historical information on lichens of Czech Republic is available in KOVÁŘ'S small collection (33 specimens collected between 1896-1902, locality "Žďár na Moravě", Czech Republic). In the following list, lichen names as presented on the labels in this collection are recorded: *Arthonia radiata* var. *astroidea* (ACH.) ACH., *Aspicilia gibbosa* (ACH.) KÖRBER, *Bryopogon jubatum* (?), *Calicium hyperellum* (ACH.) ACH., *Cetraria glauca* (L.) ACH., *Cetraria islandica* (L.) ACH. f. *subtubulosa* FR., *Coniangium luridum* (ACH.) KÖRB., *Coniocybe nivea* f. *pallida* HOFFM., *Evernia divaricata* (L.) ACH., *Evernia prunastri* (L.) ACH., *Graphis scripta* (L.) ACH., *Gyrophora deusta* L. ACH., *Gyrophora polyphylla* (L.) FINK., *Imadophila aeruginosa* SCOP., *Lecanora symmicta* (ACH.) ACH., *Leptographis epidermis* ACH. TH. FR., *Lobaria pulmonaria* (L.) Hoffm., *Nephromium tomentosum* HOFFM., *Pannaria brunnea* var. *coronata* (HOFFM.) A. MASSAL., *Pannaria microphylla* (SW.) MASSAL., *Parmelia physodes* (L.) ACH., *Parmelia physodes* (L.) f. *obscura* ACH., *Parmelia physodes* (L.) f. *vittata* ACH., *Parmelia physodes* (L.) f. *vulgaris*, *Parmelia saxatilis* L. f. *sulcata* TAYL., *Parmelia tiliacea* (HOFFM.) ACH., *Peltigera polydactyla* (NECK.) HOFFM., *Peltigera rufescens* (WEISS) HUMB., *Pertusaria wulfenii* var. *fallax* (ACH.) TH. FR., *Ramalina pollinaria* (WESTR.) ACH., *Stereocaulon nanum* ACH., *Synechoblastus flaccidus* var. *majus* (SCHAER.), *Thelotrema lepadium* (ACH.) ACH.

In addition to KOVÁŘ'S collection, there are other older Czech collections of lichens, e. g. those of BRITZELMAYER, HARTMANN, KUŤÁK, LORINZER, MALOCH, OBORNY, and WOLF. These date from the 1830's to the 1930's. Many of the deposited species are rare today, or under differing degrees of threat: (locality in brackets): *Acarospora sinopica* (WAHLENB.) KÖRBER (Krkonosé), *Anaptychia ciliaris* (L.) KÖRBER (Domažlice), *Aspicilia calcarea* (L.) MUDD., *Aspicilia ceracea* (?) (ARN.) MUDD. (Chrudim), *Aspicilia lacustris* (WITH.) TH. FR. (Krkonosé), *Bacidia abbrevians* (NYL.) TH. FR. (Žďár), *Lecanora frustulosa* (DICKS.) ACH. (Praha), *Lecanora hagenii* (ACH.) ACH. (Chrudim), *Lecanora intumescens* (REBENT.) RABENH. (Blavice?), *Lecanora polytropa* (HOFFM.) RABENH. (Chotěboř), *Lobaria pulmonaria* (L.) HOFFM. (Stollberg - Nimoň?), *Nephromium parile* (ACH.) NYL. (Znojmo), *Parmelia conspersa* (EHRH. ex ACH.) ACH. (near Praha), *Parmelia omphalodes* (L.) ACH. (Šumava), *Parmelia prolixa* (Ach.) CARROLL (Znojmo), *Peltigera erumpens* (TAYL.) WAIN., *Peltigera spuria* (ACH.) DC. (Morava), *Peltigera venosa* (L.) HOFFM. (Karlův Týn), *Pertusaria corallina* (L.) ARNOLD (Šumava), *Ramalina farinacea* (L.) ACH. (Nepomuk), *Ramalina fraxinea* (L.) ACH. (Šumava, Domažlice), *Ramalina pollinaria* (WESTR.) ACH. (Znojmo), *Rhizocarpon obscuratum* (ACH.) A. Massal. (Krkonosé), *Stereocaulon*

denudatum FLÖRKE (Šumava), *Stereocaulon nanum* ACH. (Znojmo), *Umbilicaria pustulata* (L.) HOFFM. (Znojmo).

Most collections of lichens at Botanical Garden in Košice are those of F. MALOCH in the 1920's. Lichen names as they appear on the labels are recorded. The checklist is arranged alphabetically by genera and species. It can be seen that lichens were often determined incorrectly. Some of them were revised by M. BAČKOR (Šafárik University, SK), W. PURVIS (The Natural History Museum, UK) and M. R. D. SEAWARD (Bradford University, UK).

Species mistakenly considered new

In the historical collections are two lichen species, which F. MALOCH considered as new taxa: *Acarospora tatrense* M., from Vysoké and Nízke Tatry Mts. and *Gyrophora tatrense* M. from Malá Fatra Mts. Unfortunately, both are simply incorrect determinations. *Acarospora tatrense* is *Ophioparma ventosa* (L.) NORMAN and *G. tatrense* is probably *Umbilicaria deusta* (L.) BAUMG.

Species considered new for the lichen flora of Slovakia (PIŠÚT & al. 1993)

(locality in brackets): *Cetraria odontella* (ACH.) ACH. (Belianske Tatry), *Gyrophora polyrrhiza* (L.) KÖRBER (near Kremnica), *Lecanora subfusca* (L.) ACH. (near Turčiansky St. Martin), *Lobaria linita* (ACH.) RABENH. (Veľká Fatra), *Nephromium laevigatum* (ACH.) NYL. (Malá Fatra, near Ružomberok), *Ramalina strepsilis* (ACH.) ZAHLBR. (near Kremnica, V. Tatry, Roháče, N. Tatry), *Usnea cornuta* KÖRBER (V. Tatry). Lichens are mostly determined incorrectly, with some specimens requiring detailed study before re-identification.

Checklist of other lichens collected in Slovakia

Acarospora glaucocarpa (ACH.) KÖRBER (V. Fatra), *Acarospora squamulosa* (SCHRADER) TREVISAN (M. Fatra), *Alectoria implexa* (HOFFM.) Nyl. (V. Tatry, N. Tatry), *Alectoria nigricans* (ACH.) NYL. (Vysoké Tatry), *Alectoria ochroleuca* (HOFFM.) A. MASSAL (V. Tatry), *Alectoria sarmentosa* (ACH.) ACH. (N. Tatry), *Anaptychia ciliaris* (L.) KÖRBER (T. St. Martin), *Candelariella vitellina* (HOFFM.) MÜLL. ARG. (V. Fatra), *Cetraria aleurites* ACH., syn *Parmeliopsis aleurites* (ACH.) NYL. (M. Fatra), *Cetraria cucullata* (BELLARDI) ACH., *Cetraria fahlunensis* (L.) SCHREBER. (N. Tatry), *Cetraria glauca* (L.) ACH., *Cetraria hiascens* (Fr.) TH. FR. (V. Tatry), *Cetraria islandica* (L.) ACH., *Cetraria nivalis* (L.) ACH. (Vysoké Tatry), *Cetraria pinastri* (SCOP.) GRAY (V. Tatry), *Cetraria sepincola* (EHRH.) ACH. (M. Fatra), *Cladonia alpestris* (L.) RABENH., *Cladonia amaurocraea* (FLÖRKE) SCHAERER (N. Tatry), *Cladonia coccifera* (L.) WILLD., *Cladonia degenerans* (FLÖRKE) SPRENGEL, *Cladonia digitata* (L.) HOFFM., *Cladonia fimbriata* (L.) FR., *Cladonia gracilis* (L.) WILLD., *Cladonia macilenta* HOFFM., *Cladonia macilenta* var. *bacillaris* (GENTH.) SCHAERER, *Cladonia papillaria* (EHRH.) HOFFM. (V. Tatry), *Cladonia pyxidata* (L.) HOFFM., *Cladonia rangiferina* (L.) WIGG (N. Tatry), *Cladonia squamosa* Hoffm., *Cladonia sylvatica* (V. Tatry), *Collema pulposum* (Bernh.) ACH. (V. Fatra), *Collema (Synechoblastus) rupestris* (SW.) TREVISAN (more localities), *Cornicularia aculeata* (SCHREBER) ACH. (T. St. Martin), *Dermatocarpon miniatum* (L.) W. MANN., *Dermatocarpon rivulorum* (ARNOLD.) DALLA TORRE & SARNTH. (V. Tatry), *Diploschistes scruposus* (SCHREBER) NORMAN (T. St. Martin), *Evernia furfuracea* (L.) ACH., *Evernia prunastri* (L.) ACH., *Gyrophora arctica* ACH.

(MALOCH, 1923 from V. Tatry), incorrect determination, *Gyrophora cylindrica* (L.) ACH., *Gyrophora deusta* (L.) ACH. (Vysoké Tatry, M. Fatra), *Gyrophora hirsuta* (ACH.) TW. (more localities), *Gyrophora hyperborea* ACH. (Vysoké Tatry, N. Tatry), *Gyrophora polyphylla* (L.) FINK., *Icmadophila aeruginosa* SCOP. (Nízke Tatry, V. Tatry, V. Fatra), *Lecanora carpinea* (L.) VAINIO (Štubnianska Teplica), *Lecanora dispersa* (PERS.) SOMMERF. (Veľká Fatra), *Lecanora pallida* (SCHREBER) RABENH. (T. St. Martin, M. Fatra), *Lecidea albocaerulescens* (WULFEN) ACH. (V. Tatry), *Lecidea confluens* (WEBER) ACH., *Lecidea lithophila* (ACH.) ACH. (T. St. Martin), *Lecidea macrocarpa* (DC.) ACH., *Lobaria pulmonaria* (L.) HOFFM. (more localities: Rajecké pohorie, T. St. Martin, Vtáčnik, Kremnica, V. a M. Fatra, Podkarpatská Rus), *Nephroma arcticum* (L.) TORSS. (Malá Fatra), *Pannaria pezizoides* (WEBER) TREVISAN (Vysoké Tatry), *Parmelia aspidota* (ACH.) POETSCH. (T. St. Martin), *Parmelia caperata* (L.) ACH. (more localities), *Parmelia conspersa* (EHRH. ex ACH.) ACH. (Kremnica), *Parmelia diffusa* (WEB.) TH. FR. (Veľká Fatra), *Parmelia encausta* (SM.) NYL. (Vysoké Tatry, more localities), *Parmelia physodes* (L.) ACH., *Parmelia saxatilis* (L.) ACH., *Parmelia stygia* (L.) ACH. (V. and N. Tatry), *Parmelia tiliacea* (HOFFM.) ACH. (near T. St. Martin), *Parmelia verruculifera* NYL. (Rajecké pohorie, V. Fatra), *Parmeliopsis aleurites* (ACH.) NYL. (T. St. Martin), *Peltigera aphthosa* (L.) WILLD. (Roháče), *Peltigera canina* (L.) WILLD., *Peltigera horizontalis* (HUDSON) BAUMG., *Peltigera lepidophora* (WAIN.) BITTER (Rajecké pohorie), *Peltigera malacea* (ACH.) FUNCK (V. Fatra), *Peltigera polydactyla* (NECK.) HOFFM. (Kremnica, V. Fatra), *Peltigera rufescens* (WEISS) HUMB., *Pertusaria glomerata* (ACH.) SCHAEER. (Roháče, V. Fatra), *Pertusaria leioplaca* DC. (V. Fatra, M. Fatra), *Physcia obscura* (T. St. Martin), *Physcia stellaris* (L.) NYL. (T. St. Martin), *Physconia distorta* (WITH.) LAUND. (T. St. Martin), *Ramalina carpatica* KOERB., collected by MALOCH (N. Tatry) and TÝML (V. Tatry) in 1923, *Ramalina fraxinea* (L.) ACH. (T. St. Martin, Banská Bystrica, Zlaté Moravce), *Ramalina pollinaria* (WESTR.) ACH. (Orava, Nitrianska župa, Bratislava!), *Rhizocarpon geographicum* (L.) DC. (Vysoké Tatry, N. Tatry, M. Fatra), *Solorina crocea* (L.) ACH. (e.g. V. Tatry), *Solorina saccata* (L.) ACH., *Solorina spongiosa* (SM.) ANZI (Veľká Fatra), *Thamnolia vermicularis* (SW.) ACH. ex SCHAEERER (V. Tatry, Belianske Tatry), *Usnea barbata* (L.) F.H. WIGG. (Belianske Tatry), *Usnea dasypoga* (ACH.) SHIRLEY, *Usnea longissima* ACH. (Maloch, 1921, near Turčiansky St. Martin), incorrect determination.

Although historical collection of lichens at the Herbarium are not extensive, as it includes no more than 1000 specimens, it can be a very important data source for Slovakian, as well as other European mapping projects and lichen floras.

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