

AN OUTLINE OF HISTORY OF LICHENOLOGICAL RESEARCH IN SLOVAKIA

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Abstract

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The history of lichenological research in the territory of Slovakia since the second half of 18th century is shortly commented. A lot of botanists (e. g. LUMNITZER, WAHLENBERG, HAZSLINSZKY, LOJKA, ZAHLBRUCKNER, SUZA, SZATALA, VÉZDA) participated in it.

Key words: lichenological research, lichenology

Lichenology in Slovakia has already got to the point in which it is able in more detailed way pay attention to its own history. It is therefore that especially in the last years either in our country or abroad many white places in its more that two hundred years long history were succesfully fulfilled. As resources in this action served especially publications, herbarium specimens but also preserved manuscripts, correspondence and other written memorabilia.

Lichenological research used to stay in certain degree behind neighbouring countries or other botanical sciences. But after careful study of material sources, evaluation of political and economical facts there are not many reasons for superfluous complexes.

In the first mycofloristical publication from our country *Fungi quidam rariores in Hungaria nunc detecti* (1770) G. A. SCOPOLI (1723-1788) mentioned also the species *Valsa coralloides* and *Tremella saxatilis*. According to their descriptions and illustrations they could represent lichens, but specimens which should make identification feasible are not preserved. Up till now the oldest lichen specimen of Slovak collections is *Cetraria*

islandica from herbarium of friar Cyprian (1724-1775) dating back to the sixties in 18th century (LIZOŇ & PŘÍŠŤ, 1980).

Undoubtedly the beginning of scientific lichenological research in territory of Slovakia is the year 1791. At that time the physician Š. Lumnitzer published his book *Flora posoniensis exhibens plantas circa Posonium sponte crescentes*. From Bratislava (Posonium in latin) and its vicinity apart from other plants he gave information also on 55 species of lichens (with generic name *Lichen*), some registered also on concrete localities, e.g. Prievoz-Oberufer, Kalvária, Kobyla, Modra. Lumnitzer seemed to abandon his botanical activities in the nineties already (TOWNSON, 1797), but his herbarium specimens preserved in the collection of Hungarian National Museum at Budapest (BP) prove, that he collected plants also in the years 1795-1803 (Bunke in litt.). After Lumnitzers death his collection gained Count Lambert who gave it to this museum in 1825 (BUNKE, 1988).

Later, in 1797 a few lichen findings from the Tatry Mts were published by the forgotten English naturalist and traveller R. TOWNSON (1763-1827). The evangelic pastor L. BARTHOLOMEIDES (1754-1825) reported about the occurrence of *Cetraria islandica* in the Gemer county in his book *Memorabilia provinciae CSETNEK* (1799). In his further publication *Inclytus superioris Ungariae comitatus Gomoriensis notitia historico-geographico- statistica* (1806-1808) he mentioned also three lichens (*Lobaria pulmonaria*, *Cetraria islandica*, *Xanthoria candelaria*). In the first decade of 19th century the interest in lichens was larger as it seemed from publications. In the herbarium of Hungarian National Museum at Budapest (BP) a large number of species from Slovak territory collected by botanists P. KITABEL (1757-1817), T. MAUSCH (1749-1832) and A. ROCHEL (1770-1847) there is in Kitabels collection (Fascicles 62 and 63). Rochel was rather known as the founder of floristical and taxonomic research of higher plants in NW Slovakia. Whilst e. g. Kitabel described localities of collected lichens usually very vaguely (e. g. „*ex alpis Zoliensibus*“, „*e Carpatis*“, „*in alpestribus specialis locus non mansit in memoria*“), Rochel labeled his schedae from the surroundings of Lednické Rovne village (Biele Karpaty Mts) and from Strážovské vrchy Mts (both in NW Slovakia) not only with information on localities and kind of substratum, but he also gave a date - using year, month and not rarely also days as well. The degree of his precision was at the beginning of 19th century rather unusual in Central Europe (PŘÍŠŤ, 1989).

The manuscript of J. N. SCHWARZMANN *Index Plantarum Comitatu Zoliensi sponte crescentium*, belonging probably this period has not been studied in detail and evaluated consequently. Schwarzmann was around 1804 an employee in the chamber of mining at Banská Bystrica. He presented lichens in the genus *Lichen* (HRABOVEC, 1990).¹

¹ The list comprises 19 species: *Lichen sanguinarius*, *L. candelarius*, *L. omphalodes*, *L. pulmonarius*, *L. caninus*, *L. pyxidatus*, *L. plicatus*, *L. uncialis*, *L. barbatus*, *L. stellaris*, *L. saxatilis*, *L. stygius*, *L. prunastri*, *L. pinastri*, *L. venosus*, only generally characterised and four nearer localised: *L. tartareus* (In saxis ad Veteres Montes = Staré Hory), *L. rangiferinus* (In alpe Krizzna = Krížna), *L. islandicus* (In saxis jugis alpis Prassiva = Prašivá), *L. cornutus* (in sylvis supra Hjadel = Hjadel).

The oldest scientifically exploitable lichen specimens preserved in Slovak herbaria (at Slovak National Museum- BRA) were collected by up till now an unknown collector at Vyhne (Štiavnické vrchy Mts) in 1805 (PIŠŤ, 1981, 1989). The first period of lichen research in Slovakia worthy enough to close the book of prominent Swedish botanist G. WAHLENBERG (1780-1851) *Flora Carpatorum principalium exhibens plantas carpaticis...* (1814). He informed there on 114 lichens (arranged in 12 genera) from the Tatry Mts.

Three further decades compared with the first period were rather inert. Information on 2 terrestrial and epipetric lichens from the vicinity of Bratislava was given by carpologist P. BALLUS (1783-1848) in the book „*Presssburg und seine Umgebung*“ in the year 1823 and famous botanist Š. ENDLICHER (1804-1848) in the year 1830 in the publication „*Flora posoniensis, exhibens plantas circa Posonium sponte crescentes aut frequentius cultas...*“ The last author had enumerated 43 species, mostly without precisely delimited localities.

A distinct, more than a half century long period of revived interest in lichens can be registered since the end of the fifties in 19th. century till the desintegration of the Austro-Hungarian empire. Its beginning is characterised by first exclusively lichenological publications devoted to lichens of the Tatry Mts and vicinity of Prešov (E Slovakia) in 1859 by F. HAZSLINSZKY (1818-1896), native from Kežmarok and its end lichenofloristical and taxonomic activities of A. ZAHLBRUCKNER (1860-1938), native from Svätý Jur near Bratislava, culminating by elaboration of a new system of lichens in the year 1907. To both personalities (it is usefull specially remark Hazslinszky's Lichen flora of historical Hungaria – *Magyar birodalom zuzmóflórajja* from the year 1884) it is necessary to mention also H. LOJKA (1844-1887), an excellent specialist and collector of lichens, though his publication activity lasted only hardly twenty years long period.

Since the end of the fifties in 19th century societies of naturalists stimulating to a certain degree also lichenological research appeared. They concentrated botanists and naturalists, who obviously marginally published articles on lichens. They are K. KALCHBRENNER (1807-1886), A. v. BENTZEL-STERNAU (1806-1878), J. BOLLA (1806-1881), the author of the first popular article on lichens in Slovak language J. B. KLEMENS (1817-1883), A. MARKUS (1831-1867), the author of the first lichenofloristical article written in Slovak – J. L. HOLUBY (1836-1923), K. CHYZER (1836-1909), A. KMEŤ (1841-1908), K. BRANČÍK (1842-1915), A. CSEREI (1851-1928), J. A. BÄUMLER (1847-1926), V. VRANÝ (1851-1929), A. MÁGOCZY-DIETZ (1855-1945), D. BOTHÁR (1856-1929), G. JERMY, A. VARGA.

Also other collectors of lichens contributed to better knowledge although they did not publish. Here belong L. MEDZIHRADSKÝ (1807-1879), Z. FÁBRY (1830-1907), A. TRÚCHLY (1841-1916), Š. TRÚCHLY (1850-1922), V. GRESCHIK (1862-1946), K. MERGL (1876-1953), M. FUCSKÓ (1885-1914). It is necessary to mention also contributions of Polish and German botanists (W. BOBERSKI, B. STEIN, G. W. KÖRBER).

None of these societies was Slovak and only amateurs were involved. They certainly did a lot of work, but they were not able to substitute professional institutes and a purposeful research programme. In consequence of relocation of University from Trnava to Budapest in 1777 the possibility of institutional development of botany and thus also lichenology in Slovakia. was lost for more then 150 years.

The situation of Slovak intellectuals was extraordinary bad (lack of scientific centre, secondary schools, libraries and collections of comparative material). After violent closing of single Slovak institution „Matica slovenská“ shortly after its foundation (1863) by Hungarian authorities in 1875 it took almost twenty years until A. Kmeť succeeded to found the society „Muzeálna slovenská spoločnosť“ in 1893. Despite enormous troubles he built up foundations of Slovak botanical collections and initiated interest in regional (also lichenological) studies.

The last period of lichenological research can be viewed since the foundation of Czecho-Slovakia in 1918. It was briefly characterized by J. LIŠKA (1992):

„In the twentieth century there was a rapid increase in the twenties and in the thirties owing to Hungarian (Ö. SZATALA, V. GYELNIK) and Czech lichenologists (namely J. SUZA). Another distinct peak occurs in the sixties (A. VÉZDA, I. PIŠÚT). Later the intensity of lichenological research remains high owing to a new generation of Slovak lichenologists (students of I. PIŠÚT: E. LISICKÁ and A. LACKOVIČOVÁ)“.

Liška's characteristic need yet some specifications and appendices.

In the second decade of 20th century Ö. SZATALA (1889-1958), native from the Uličské Krivé village (E Slovakia) began to study lichens from the Vihorlat Mts and the Moravian teacher J. Suza (1890-1951) studied lichens of Záhorská nížina lowland, in the western part of the country. The changed political situation after desintegration of the Austro-Hungarian empire in 1918 caused that Ö. Szatala in fact stopped his field work and concentrated on work of his and others herbarium materials. He published his results in numerous articles since 1915 till 1954. The most important among them was a series of monographies *Lichenes Hungariae I-III*. On the contrary J. Suza especially in the twenties and thirties developed very active research activity in the most geographic units. The results were published continuously, but also long after he had finished his field work, till the beginning of the fifties in decades of articles.² Both J. Suza as Ö. Szatala planned to publish a comprehensive work about Slovak lichens. Unfortunately they did not succeed. It is necessary to mention that J. Suza published also an exsiccate *Lichenes Bohemoslovakiae*, posthumously was edited also an exsiccate-collection *Reliquiae Suzaianae*.

Among Hungarian authors has an important place also V. GYELNIK (1906-1945), although centre of his activities belongs to taxonomy. From others it is necessary to induct G. TIMKO (1876-1945), A. MARGITAI (1880-1939), L. SÁNTHA (1886-1954), I. GYÖRFFY (1890-1959), L. GALLÉ (1908-1980), among the younger Ö. Szatala jr.³

² Complete bibliography of both authors like all other mentioned see PIŠÚT et al., 1996.

³ Some Hungarian lichenologists ignored the new border of their country after 1918 and continually placed finding places from Slovak territory into Hungaria. In this way even recently arise errors in localisation and orthography of many herbarium specimens especially by Non-Central European lichenologists (e.g. situation of High and Low Tatra or Vihorlat Mts into Hungary). Therefore it is recommended to revise the old local names of specimens collected by Hungarian botanist using the book G. LELKES (1998): Magyar helységnevé – azonsító szótár. Talma könyvkiadó, 6500 Baja, Parti u. 12 ISBN 963 85683 13.

Among Czech lichenologists in the thirties of 20th century to the knowledge of lichens of Eastern Slovakia had merit J. NÁDVORNÍK (1906-1977), of Veľká and Malá Fatra and Chočské vrchy Mts Zd. ČERNOHORSKÝ (1910-2001). The first one devoted his interest to taxonomy and study of lichens in the High Tatra, the second one to taxonomy and geography of the genus *Rhizocarpon* in some Slovak mountain ranges. Both had published together with M. SERVÍT (1886-1958), the monographer of family *Verrucariaceae*. A few articles on lichens published also J. ŠMARDA (1904-1968).

One can find information on Slovak lichens even in a series, mostly taxonomic publications of Austrian, Polish, German and Swedish authors: H. Zschacke, G. Lettau, J. Nowak, J. Motyka, H. Mayrhofer, J. Poelt, Ch. Leuckert, J. G.Knoph, H. Hertel and others.

After certain inertia, especially at the end of the forties and at the beginning of the fifties, distinct baton of knowledge of Slovak lichens was gained by further generation of lichenologists. Since 1955 the Czech botanist A. VĚZDA (1920) has began intensively study especially the mountain and alpine species. Though he turned his interest in the seventies and eighties in an other orientation, decades of his publications, together with 3 series of his exsiccata (*Lichenes Bohemoslovakiae exsiccati*, *Lichenes selecti exsiccati* and *Lichenes rariores exsiccati*) had distinctly increased our knowledge about this plant group. Since 1955 had begun to publish his sporadical findings from Tatry Mts the Polish lichenologist Z. TOBOLEWSKI (1927-1988). In 1958 published their first articles the Hungarian lichenologist K. VERSEGHY (1930) and Slovak I. PIŠŮT (1935). K. Verseghy had used especially herbarian material from Slovakia preserved in Budapest, I. Pišút in a series of publications studied the distribution of several species and the lichen flora of some regions. He issued also exsiccata *Lichenes Slovakiae exsiccati*. In the sixties he initiated the collecting activities of L. Opold (1937-1995) and J. K. LÁNYI (1911-1989). In the seventies began to publish also E. Lisická (1947), who is constantly dedicated to lichenological studies of some mountain-ranges, V. GRÜNVALDOVÁ (1947) and A. LACKOVIČOVÁ (1949), who was intensively interested above all in the problematics of the influence of pollutants on lichens. In the eighties began to contribute to the knowledge of Slovak lichens Z. KYSELOVÁ (1951) and the Czech scientist J. LIŠKA (1952), in the nineties O. BAČKOR (1970), A. GUTTOVÁ (1972), V. ORTHOVÁ (1973), in the end of the nineties also the youngest generation of Czech lichenologists: J. HALDA (1969), R. DĚTINSKÝ (1970), Z. PALICE (1972) and Š. BAYEROVÁ (1976) as well.

In the last four decades a solide basis of herbarium materials was build. In 1961 in the Slovak National Museum at Bratislava were 3.400 lichen specimens deposited, in 1989 already more than 70.000. In 1990 lichens in the Institute of Botany of Slovak Academy of Sciences were absent, ten years later the collection consists already about 13. 000 items). Slovak lichenology became reality.

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