

LICHENOLOGICAL PROBLEMS IN ROMANIA

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In order to understand the lichenological problems in Romania today, I should like to present briefly some aspects of its history. In Romania, as in most European countries, no works exclusively concerning lichens were published before 1900; they were treated together with the higher plants, bryophytes, pteridophytes, as components of the vegetal cover.

In Transylvania, which belonged to Austro-Hungary before 1918, the first works also containing data about lower plants, are those published by Heufler (1853), Schur (1859), Cserni (1877-78) and Simonkai (1893). Between the years 1862-1878 Fuss M. published over 150 lichen species in the journal *Verh. u. Mitt. Siebenbürg. Ver. Naturwiss.*, where the works of another well-known Transylvanian botanist Barth (1877-1905) appeared; following his excursions in different mountains, he collected and determined over 100 lichen species, besides higher plants.

Hazslinszky's book (1884) "A Magyar Birodalom zuzmóflórája" in the first one dealing with the lichen distribution in the territory of Hungary of that time; it also comprises the results of Transylvanian collectings, first of all the great material of H. Lojka (1873-1885) and M. Fuss which also comprised such new species as: *Opegrapha farinosa* Hepp. from Baile Hercules, *Opegrapha diaphora* var. *calcicola*, from Portile de Fier.

Before 1900, there were two known specialists collecting lichens in Romania: A. Kanitz (1879-1881) after a trip to the mountains of Bucegi and Ceahlau, published a paper where he also mentions 22 lichen species; and Loitlesberger (1897) collected a great number of lichens in the Bucegi mountains; they were published by Zahlbruckner in Vienna, where *Catillaria verrucaroides* A. Zahlbr. and *Toninia loitlesbergi* are described.

In the 20th century the number of the researches on lichens increased. In Moldavia, M. Stamatini (1904-1907) was the first to study lichens; he collected materials in Iasi, Vaslui and Suceava departments and enumerated over 100 lichen species. Of these, 74 species have been checked up and revised by the best expert of the time, Zahlbruckner.

Between the years 1910-1913 H. Zschacke studied the lichens of Transylvania. He published a great number of new taxa: *Microglæna butschetschensis* Zsch., *Thelidium (Amphoroblastia) rodensis* Zsch., *Involucrothete transilvanicum* (Zsch.) Servit, etc.

After the World War I F. Foriss (1928-1937) and V. Gyejnik (1930-1935) contributed to the knowledge of the lichen flora of Romania. Ö. Szatala's work "Lichenes Hungariae" (1927-1937) is fundamental even today, being used in mapping.

The most important and fertile Romanian lichenologist was P. Cretzoiu, who, during a short period (1929-1945), published 35 studies on lichens and many others on higher plants. Among these last, the following are particularly important: "The flora of fruticose and foliose lichens" (1941), "Checklist of Pyrenocarp lichens from Romania" (1942), and "Checklist of Gymnocarp lichens from Romania". He travelled through the whole country and collected a rich lichen material, subsequently published; he revised the lichen material of the most important herbaria of Romania; he described as new a great number of species, varieties and

forms, as: *Buellia paulorum* Cretz., *Blastenia borzae* Cretz., *Lecanora nigrimaris* Cretz., etc. During this period, a number of foreign lichenologists visited Romania, collected material and published their works either in journals in this country or elsewhere, many of them in collaboration with Cretzoiu. Among these we should mention: C.F.E. Erichsen (1934-1936), O. Klement (1941), V. Räsänen (1953), T. Sulma (1938), as well as two experts from Czechoslovakia:

M. Servit, the author of "Lichenes familiae *Vernucariaceae*" (1934); between the years 1930-1937 he described a great number of new species from Romania, especially of the above mentioned family: *Amphoroblastia erumpens* Serv., *Amphoridium bucegiensis* Serv., *Amphoroblastia cibinica* Serv., *Amphoroblastia herculana* Serv., etc.

J. Nádvorník (1937) travelled with Paul Cretzoiu and published two studies on the *Caliciaceae* family, describing some new species: *Calicium cretzoii* Nádv., *C. lignicolum* Nádv., *C. viridireagens* Nádv. and *Chaenotheca xyloxena* Nádv.

After the World War II the number of experts studying the lichens in our country are more numerous, and thus the area studied from a lichenological point of view increases. In all the three university centres research began.

In Bucharest, under Constanta Moruzi's guidance, E.Petria, E.Mantu and N.Toma study lichens. They published a series of papers on lichen flora of different mountain areas of Wallachia, and in 1967 "The catalogue of Romanian lichens", the first far-reaching work in Romanian (390 pages) which, based on bibliography, collates the distribution of all lichen taxa of the country. In 1971, C.Moruzi in collaboration with N.Toma, published the book "Lichenes", containing identifying keys for the most common folioid and fruticoid lichens. After C.Moruzi retired, and her co-workers changed their concerns, lichenological activity ceased in Bucharest, at the end of the 70s. Even today there are no experts in this field either in the university or in the Institute of Biology.

In the university centre of Iasi, Lucia Burlacu-Rotarescu (1961-1969) and Gh. Sava (1970-1980) published 14 works each on the lichens of Moldavia. As in Bucharest, research on lichens came to end, for the same reasons.

In Cluj, another centre, V.Codoreanu (1950-1980) and Maria Ciurchea (1965-1977) particularly studied the crustose lichens on limestone substratum. Codoreanu published 26 works in this field, most of the studies being carried out in the Apuseni Mountains with M.Ciurchea. Codoreanu's sudden death prevented him from completing his book - lichen identifying key - which still remains unfinished. As for M.Ciurchea, she abandoned lichens, having other activities at the university.

The years 1970-1980 did not favour floristic research, unprofitable from an economic point of view; and lichenology was considered a field without prospects. Thus I remained the only scientist in Romania studying lichens. My sphere of interest is large, comprehensive studies of flora and vegetation but also the relationship between air pollution (by heavy metals and radioactive substances) and the existence of lichens; all these in close connection with my duties and projects in the Institute of Biological Research.

Romania, like the other socialist countries, was isolated by the "iron curtain" after the World War II, so that during that period only two foreign lichenologists worked in our country: Klara Verseghy who in 1958 published a paper on the endemic lichens of Carpathian Mountains, and Antonín Vězda, who worked in the country in the 70s and published results of his research; but unfortunately these studies did not reach us.