

# NICOLAE BOȘCAIU, Member of the Romanian Academy

*IN MEMORIAM*  
(1925–2008)



The present material is intended to be a modest but sincere homage, a humble act of gratitude from the part of the Romanian botanists, of the Romanian Academy, the Editorial Board of this journal towards late Nicolae Boșcaiu, Member of the Romanian Academy, who passed away on 22 October 2008. After a short biographical presentation that emphasizes the unjust oppression to which he was submitted during the old regime, the main contributions brought by Nicolae Boșcaiu to plant taxonomy, phytosociology, palynology, nature protection, history of science and, more recently, specialist training are reviewed.

By emphasizing the defining aspects of his life and activity, our intention is to present him as an *example of winner*, in spite of the storms that fell upon him starting with the unjust detention in the communist prisons from Gherla, Pitești, Căvnic and the Danube-Black Sea Channel, continuing with the period of freedom (without real freedom), until the period when he was a “jack of all trades” in the administration of Cluj branch of the Romanian Academy, and the period of recognition of his competences.

Finally, we also wanted to add to the very few presentations of the personality of this man who had an enviable culture, who left us an extremely useful botanical and sociological work, a man of rare kindness, honesty and forgiveness, unresentful, sometimes given to jesting, always ready to help, whose modesty reached humility.

## BRIEF BIOGRAPHICAL DATA

Nicolae Boșcaiu was born on 23 July 1925, in a family of school teachers from Caransebeș, where he benefited from the education of noble minds – his

parents – and from a thorough training in the well-known “Traian Doda” High School, in which his option for *scientia amabilis* developed. This is proved by the 6 articles published by the student (!) N. Boşcaiu, as well as by the predictive words of I. Simionescu (1942) referring to his first paper published in the *Natura* journal: “Student N. Boşcaiu’s article ... is extremely interesting. It is an original paper impregnated with love for nature. Even if he does not become a botanist, I am sure that student Boşcaiu will have a love for plants all his life...” (Pedrotti, 1999, p.13, Alexiu and Sanda, 2009, p.1).

After graduating from high school (1945), Nicolae Boşcaiu attended the courses of the Natural Science section of the Cluj University, where Professor Al. Borza carried out his activity and appointed 2<sup>nd</sup> year student N. Boşcaiu as an assistant instructor, marking his entire professional career.

But, close to the end of his studies and one year after the brutal removal of his master from the university, student N. Boşcaiu was arrested (in 1948), judged and sentenced to 6 years of prison, being accused of having participated in the anticommunist student movement of 1946.

At the age of 29, completely “reeducated” and strongly marked by the campaign of annihilation of the Romanian intellectuals, he was released from the terrible prisons mentioned above and came back to Cluj, where he continued his university studies, obtaining his graduation diploma in 1957.

In order to provide him with minimal financial resources, Acad. E. Pop hired Boşcaiu (in 1955) at the Cluj Sub-Commission for Nature Monuments, but as a consequence of the Hungarian counterrevolution (1956), he was fired and obliged to work as a non-qualified worker (!) for another 6 years, at the Horticultural-Viticultural Research and Production Station and at the Botanical Gardens in Cluj.

A worker during weekdays, a botanist in the evenings and on Sundays, N. Boşcaiu got at the age of 37 to fill a position of botanist at the Botanical Gardens (in 1962), at an age when most of our contemporary young people aim at the highest degree of university hierarchy, and some of them even succeed in obtaining it.

Although he was rehabilitated in 1967, his “record” did not allow him access to the higher education system (where he would have rightly belonged), but only a position of researcher at the Biological Research Center or in the administration of the Cluj branch of the Romanian Academy, where he was a librarian for almost a decade. However, this rehabilitation allowed him to become a PhD student (the approval of the communist party bodies was required at that time), and he presented his doctoral thesis in 1971 at the Cluj University. This rehabilitation also made him “eligible”, so that he could be included on the lists of those proposed to be distinguished for the results obtained in research, being awarded “E. Teodorescu” prize of the Romanian Academy (1974) and three prizes of the Ministry of Education.

The Revolution of December 1989 meant for Acad. N. Boşcaiu a “*restitutio*”, but not “*in integrum*”, because no one and nothing could give him back the years that were stolen to him by the prisons or by humiliating jobs. He was appointed Director of the Library of the Academy, the Cluj branch, he was elected a corresponding member (1990), then a full member of the Romanian Academy (1991), he became Associate Professor of the Faculty of Biology and Geology of the Cluj-Napoca University (1999), title which he renounced in order to direct PhD students at the Biological Institute of Bucharest.

The conferral ceremony of *Doctor Honoris Causa* of the University of Camerino (Italy) (28 September 1998) was emotionally overwhelming for both N. Boşcaiu and all those present. The event (described in detail in the *Braun-Blanquetia* journal, 24, 1999) was due to the well-known Professor F. Pedrotti. “*Overwhelming was the pride of being his disciple! Huge was the satisfaction when giants of international botany... surrounded him with attentive consideration!*” wrote his first PhD student, V. Alexiu (Alexiu and Sanda 2009, p. 5).

After the Revolution, the Cluj botanical school was the only one who celebrated his 75<sup>th</sup> and 80<sup>th</sup> anniversaries by plenary scientific meetings (Cristea, 1999-2000, Cristea, 2005, xxx, 2008).

Regarding his family, we mention that his first wife (a well-known speech therapist) deceased prematurely, leaving a young daughter just coming out of her teens (Monica, currently a PhD of the University of Vienna and a Professor of Botany at the University of Valencia), whom N. Boşcaiu educated with love. His second wife accompanied him throughout his last decade of life, a period when his daughter had already left Romania.

#### MAIN COORDINATES OF N. BOŞCAIU'S SCIENTIFIC ACTIVITY

To start with, we will take the liberty to quantitatively assess the scientific activity carried out by Acad. N. Boşcaiu, using the classic, not the current system, focused on highly rated journals (ISI), etc.:

– as a single author, he published the well-known extensive monograph *Flora și vegetația Munților Țarcu, Godeanu și Cernei* [The Flora and Vegetation of the Țarcu, Godeanu and Cerna Mountains] (1971a, 494 pp.). He is also a co-author of the collective monograph on the Crișul Repede Gorge (Rațiu *et al.*, 1966), with a contribution of 246 pages out of 272;

– he is a co-author of two treatises (adding up to 640 pages), of which *Biogeografie. Perspectivă genetică și istorică* [Biogeography. A Genetic and Historical Perspective] (Bănărescu and Boşcaiu, 1973) was translated into German (Gustav Fischer Publishing House, Jena), and *Introducere în studiul covorului vegetal* [Introduction to the Study of Vegetation Cover] (1965) remains a real

“bible” for all Romanian phytosociologists and a proof of his connection to the great A. Borza;

– in Romania, he published 166 scientific articles and 12 popularization articles; of the scientific articles, 115 were published in recognized journals of the Romanian Academy and of the great universities, and 51 in various volumes;

– abroad, he published 12 papers, most of which in reference journals from the Netherlands, France, Italy, Finland, Germany, Poland, Russia, etc.;

– he is a single author of 69 of the published articles, first author of 47 articles, and co-author of the rest of articles, together with significant names for Romanian biology (A. Borza, E. Pop, N. Botnariuc, E.I. Nyárady, St. Péterfi, V. Preda, E. Țopa, C. Váczy, G. Coldea, etc.).

There is no doubt that in science the activity of a person cannot be evaluated on a purely quantitative basis, which is why we will point out some of the contributions brought by N. Boșcaiu over more than 4 decades of continuous activity, which we find significant for his work:

**1. Taxonomic, floristic and vegetation studies.** His *taxonomic* analyses of the *Silene lerchenfeldiana*, *Veronica bachoffenii* species (Borza, Boșcaiu and Rațiu, 1967, Borza and Boșcaiu, 1967), of the *Bupleurum*, *Peucedanum* genera (Boșcaiu and Rațiu, 1964, 1965), etc., also concern aspects of the biology of their populations, as well as of the phytohistorical evolution of other more or less related populations; the latest studies also include the cytotaxonomic and phylogeographical criteria, like in the case of the approach of the *Cerastium alpinum* group (Boșcaiu, Boșcaiu and Ehrendorfer, 1998);

By his *floristic* studies, he brought substantial contributions to the knowledge of the flora and the chorology of species from most of the historical regions of Romania.

As a favorite student of Professor A. Borza, as a co-author of the fundamental book of the Romanian phytosociologists, it was only natural that N. Boșcaiu brought substantial contributions to the knowledge of the *vegetation* of our country. Thus:

*i)* he described as new for science 9 higher coenotaxa (one plant community's order, two alliances, 6 sub-alliances) and 33 plant associations, of which 28 are validated by the community of European phytosociologists. These higher coenotaxa are: ord. JUNIPERO-PINETALIA MUGI Boșcaiu 1971, all. **Micromerion pulegii** Boșcaiu (1971) 1979, all. **Danthonio-Brachypodion** Boșcaiu 1972, sub-alliances: **Moehringio muscosae-Acerenion** Boșcaiu *et al.* 1982, **Symphyto-Fagenion** Boșcaiu *et al.* 1982, **Calamagrosti-Fagenion** Boșcaiu *et al.* 1982, **Epipactido-Fagenion** Boșcaiu *et al.* 1982, **Lathyro hallersteinii-Carpineion** Boșcaiu *et al.* 1982, **Delphinenion elati** Boșcaiu and Mihăilescu 1997.

We only mention the following associations: - *Asplenietum lepidi* Boşcaiu 1971, - *Asplenio–Silenetum petraeae* Boşcaiu 1971, - *Sedo fabariae–Geranietum macrorrhizi* (Boşcaiu 1971) Boşcaiu and Täuber 1977, - *Saxifragetum moschatae–aizoidis* Boşcaiu 1971, - *Seslerio haynaldianae–Saxifragetum rocheliana* Boşcaiu 1971, - *Aremonio agrimonioidis–Fagetum* Boşcaiu 1971 in Resm. 1972, - *Galio rotundifolio–Fagetum* Boşcaiu 1971, - *Cerastio lerchenfeldiani–Papaveretum* Boşcaiu, Täuber and Coldea 1977, - *Cerastio transilvanici–Galietum lucidi* M. and N. Boşcaiu 1998, - *Potentillo chrysocraspedae–Festucetum airoidis* Boşcaiu 1971, - *Carici dacicae–Plantaginetum gentianoidis* Boşcaiu et al. 1972, - *Peucedano rocheliani–Molinietum caeruleae* Boşcaiu 1965, - *Doronico columnae–Rumicetum scutati* Boşcaiu et al. 1977, - *Melico–Phleetum montani* Boşcaiu et al. 1966, - *Danthonio–Chrysopogonetum grylli* Boşcaiu 1972, - *Xeranthemo annuo–Scabiosetum argenteae* Boşcaiu 1975, - *Cytiso nigricantis–Quercetum cerris* Boşcaiu et al. 1966, etc.

ii) he introduced for the first time in Romania the karyologic analysis of the structure of phytocoenoses, by using S. Pignatti's diploidy index (Boşcaiu, 1971b), the computerized processing of relevés (Boşcaiu *et al.*, 1982) and the application of mathematical distribution to the study of the vegetation cover;

iii) he described a large number of lower coenotaxa and amended the names of others, according to the principles of the international nomenclature Code.

Finally, after 1990, he participated in the foundation and management of the Romanian Society of Phytosociology by organizing, as its president, 3 successful international phytosociological excursions, with the support of his colleagues from Cluj-Napoca, Piteşti and Tg. Mureş.

**2. Palynological researches.** Although these studies occupy the third place in terms of number of articles in Acad. N. Boşcaiu's activity, it is most likely that due to one of his mentors (Acad. E. Pop), they represented "his second great love". Along with the researches performed in the oligotrophic marshes of the Retezat Mountains (Pop *et al.*, 1970, Pop, Lupşa and Boşcaiu, 1971), the Rodna, Bihor, Cerna Mountains, etc., we emphasize his contribution to the initiation in Romania of phytohistorical researches in conservation deposits from caves such as the Haiducilor Cave – Herculane (Boşcaiu and Lupşa, 1967a), the Veterani's Cave in the Danube Gorge (Boşcaiu and Lupşa, 1967 b), etc.

He also performed aeropalynological researches in various regions of the country, such as: Baia Mare Depression and the Transylvanian Plain (Pop *et al.*, 1964), the Southern Carpathians (Pop *et al.*, 1966), the southern Oltenia, and even methodological studies on air pollen capture.

His speech "Symphytosociology and palynology in the interpretation of the current plant landscape" (Boşcaiu, 1999) can remain a true swan song of the

palynologist and phytosociologist, of the nature protectionist and the man of culture N. Boşcaiu.

**3. Nature protection.** Occupying the second place, this field benefited from the largest amount of time invested by N. Boşcaiu in the intricate pathways of the creation of new protected areas, in the minute editing work of the journal *Ocrot. nat. med. înconj.* or of the volumes published by the Cluj branch of the Academy, as well as in the elaboration of principles and strategies to follow or in the organization of conferences on “Nature protection on ecological bases”, between 1970-1980’s. Among his contributions to this field, the following seem significant to us:

i) under the conditions of the clash between systematics and the top fields of biology, expressing his “... concern that the reduction of the interest in the continuation of taxonomic preoccupations might have a negative impact on the most varied fields of theoretic and applied biology” (Boşcaiu, 1986, p. 117), he proposed a reinvestigation of the flora on the “...new grounds of population systematics” (*idem*, p. 120).

At the same time, he mentioned the fact that “... systematics has never raised barriers to systemic approach, on the contrary, it has been the discipline that has fertilized to the greatest extent the ground on which this has developed”, but he also drew attention to the fact that “In the absence of a solid taxonomic base, ecological researches remain exposed to the risk of diluting into increasingly vague abstractions and generalizations cut out from the real specificity of concrete biogeographical conditions” (*idem*, p. 119);

ii) pleading for the setting up of an ecological policy in Romania, 30 years ago he emphasized that “... contemporary reality has increasingly convinced us that the idea of ecological policy should acquire the same importance as economic policy” (Toniuc, Boşcaiu and Filipaşcu, 1975, p. 129).

Although in the mid 80’s he noted that “Today we no longer need a picture of the destruction of nature to increase the awareness of public opinion..., but a realistic presentation of the steps that will help overcome the environmental deadlock of our time” (Boşcaiu, 1985b, p. 163), we see fewer and fewer actions of ecological reconstruction, more and more documented or less documented books that describe the increasing impacts and more and more fellow countrymen concerned with politics, football, etc. And fewer and fewer are those who demonstrate by action the truth emphasized by N. Boşcaiu: “Perhaps in no other area than that of natural resource protection do the interests of the present generation interrelate so closely with those of the future generations” (*idem*, p. 166);

iii) after a period of massive deforestation of the Romanian subalpine area, without the setting up of the long-dreamt-of grasslands for the socialist zootechnical sector, N. Boşcaiu demonstrated that the ecological role of juniper shrubs was much more important than transient and uncertain advantages, that the regeneration of these formations would only be possible at the end of a new Preboreal, and that “...*the legend of juniper shrubs invading grasslands remains pure fiction*” (Boşcaiu, 1975, p. 20);

iv) in the early 1980's, when the documentation for the creation of new national parks was initiated, he emphasized the complex importance of the Apuseni Mountains area with the center in Padiş, proposing the acceleration of the legalization of the national park status: “*Any delay in the creation of the national park would result in the aggravation of the degradation of these national patrimony values*” (Puşcariu and Boşcaiu, 1981, p. 177). Almost a quarter century ago, he certainly did not know that things would change so drastically and that the process of deterioration would affect so much the values of the present natural park of the Apuseni Mountains;

v) his article on the criteria for the creation and the ecological management of botanical reserves is full of innovative ideas, emphasizing that “... *the only real possibility of protecting endangered species remains the attempt to preserve the biological communities and the ecosystems to which they belong*” (Boşcaiu, 1985a, p. 127).

At the same time, he anticipated the criteria to be used (which are used today!) in the characterization of habitats and in the creation of protected area networks, showing that: “*In this way, the classification of plant associations can offer the ground for a detailed typology of ecosystems, intended to ensure a reference framework for the creation of a regional network of reserves*” (*idem*, p. 132).

Finally, after 1990, he approached the problem of the network of “biogenetic reserves”, with their entire role in the conservation of genetic, specific and ecosystemic diversity, and as a symbol of the advanced stage of “*maturity of the population's ecological awareness*” (Toniuc, Purdelea and Boşcaiu, 1994).

**4. Other fields approached.** Even briefly, we should mention the fact that Nicolae Boşcaiu was also involved in the *history of science*, by publishing a series of materials related to the activity of the ethnobotanist S. Manguica (Boşcaiu, 1978), of the botanists T. Săvulescu, Al. Borza, E. Pop, A. Rochel and even of the founder of evolutionism, Ch. Darwin (personality that will be celebrated at Cluj-Napoca, on 11-12 September 2009).

In the period when information sources were not very accessible, the *popularization* of national and international manifestations represented a gain for

those interested in botany or conservation, and N. Boşcaiu offered us many such “information notes”.

Perhaps it is not without interest to mention the activity that Acad. Boşcaiu carried out for the *training of specialists*, by directing PhD students. He contributed to the publication of a series of monographs, such as those elaborated by his former PhD students: V. Alexiu, S. Oroian, S. Mihăilescu, D. Stancu, S. Matacă, M. Sămărghiţan, monographs that fill a number of gaps in the knowledge of the flora and vegetation of Romania and some of them bring interesting new elements in Romanian phytosociology.

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We let the reader to appreciate the importance of N. Boşcaiu’s achievements, under the conditions of an unfavorable destiny, and we express our satisfaction for having the opportunity to read again, with different eyes, a large part of his work, and to show him, even post-mortem, the gratitude of all the Romanian botanists.

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