

**IN MEMORIAM UNIVERSITY PROFESSOR DR.
OCTAVIA BOGDAN
(1936-2023)**



At the end of September of this year, our colleague, university professor Dr. Octavia Bogdan from the Geography Institute of the "Dimitrie Cantemir" University in Sibiu, left us. The entire geographical community in Romania learned with sadness about the loss of a special man, valuable from a professional point of view, an accomplished geographer and a genuine specialist in climatology.

Mrs. Octavia Bogdan, under the girl name Șeitan, was born in the locality of Niclești Jianu, the old name of the current commune of Dudești - Brăila County, located in Bărăganul Călmățuiului, after the primary school in her native village (1943-1947) followed one year (1947-1948) at the Normal School for Teachers in Brăila, year equivalent to the 5th grade of secondary school; and after an interruption of one year (1948-1949), she continued the gymnasium in the nearby commune of Tătaru (1949-1951), and then she was directed again to Brăila where she attended the same school that became the Teachers' Pedagogical School (1951-1955).

If she did not become a teacher, probably at her parents' will, although she had the vocation and special qualities, as is proven even today, but at the university level, she ended up at the University of Bucharest to study Geography at the Faculty of Geography-Geology (1956-1960).

After graduation (1960), by government assignment, according to the custom of the time and which was good at the time, he entered the Institute of Geology-Geography, Department of Geography, where, after a short geomorphological activity, he found his most suitable place, indifferent of the name of the organizational structures, in Climatology-Topology. Thus, starting from Brăila, he followed the path also travelled by Ștefan Hepites who, born in Brăila in 1851, established in his hometown (1878) the first meteorological station in Romania on which Mrs. Octavia Bogdan was morally entitled to write some materials, serving Him as a model of life and activity.

So, from the year 1961, Mrs. Octavia Bogdan began to carefully and persistently put one "brick" at a time to the edifice sketched by the acad. Vintilă Mihăilescu and Ștefan Stoenescu, the geography research direction - Topoclimatology, which involves the deepening and climatic particularization of

the multitude and variation of the geographical landscape through field research, an aspect that together with the colleagues of the Topoclimate Collective he practiced abundantly from the years of his youth and in the following decades.

In her journey, from the 60s of the 20th century until the beginning of the second decade of the 20th century and the 2nd millennium, Mrs. Octavia Bogdan, in parallel with field research, especially in the Romanian Danube Valley and the Danube Delta (these for the development of the collective work of the Institute of Geography with the title Geography of the Romanian Danube Valley, published by the Romanian Academy Publishing House in 1969), followed the doctoral internship at the University "Al. I. Cuza" from Iși under the guidance of Prof. Univ. Ion Gugiuman, Ph.D. The doctoral thesis with the title "Contributions to the study of the climate of Bărăganului", a work that defines and consecrates her as a climatology geographer, also constituting a tribute to her birthplace. The scientific and practical value of this doctoral thesis also emerged from the 10 reviews published by specialists from the country and abroad.

If we refer to the workplace, as we "veteran" researchers of the Institute of Geography call it "our home", Mrs. Octavia Bogdan passed, starting from 1960 until 2008 (after which she remained as an associate researcher) , through all the steps included in the researcher's status, starting with that of trainee researcher followed by that of researcher, principal researcher III, II and I, having, in parallel, other functions of coordination and guidance in the field of Climatology/Topoclimatology, throughout the period as long as it was maintained in the organizational chart of the institute.

In all this interval, the main fields approached by Mrs. Octavia Bogdan were those of Topoclimatology and then, of Hazards and weather-climatic risks, both unique for which she can be considered a trailblazer. The contributions made in these two research directions are numerous, varied and of great scientific and practical importance.

Scientific research.

In the field of Topoclimatology, the methodological aspects of the organization of expeditionary and stationary field research should be emphasized first.

In expeditionary research on topoclimatic profiles, selecting representative landscapes, portable topoclimatic stations were used; observations were made at the levels of 0, 25, 50, 100 and 150 cm, respectively, in the microclimatic space with the necessary equipment - ordinary and extreme thermometers, psychrometers (at 150 cm), evaporimeters (at 25 and 100 cm), from 15 to 15 minutes in the most important periods of the day, of different types of time.

Instrumental observations were supplemented with visual ones on the state of the atmosphere, soil and vegetation, as well as on some hydrometeorological phenomena (dew, fog, frost, poles, characteristics of the snow layer deposition, etc.).

Based on the measurements obtained, the vertical thermal gradients were calculated, which allowed establishing their variation in accordance with the types of time: insolation, direct thermal stratification, radiation with thermal inversions, and their duration and isotherms. An essential condition was the comparison of the values obtained with those from the nearest meteorological station for the integration of the respective topoclimate into the regional climate.

Stationary research has been carried out at the Geographical Research Station in Pătârlagele, Buzău county, of the Institute of Geography, since its foundation in 1968. Here, in the yard of the station, observations were made permanently at a standard meteorological shelter similar to those in the National Meteorological Network, with recording devices (thermographs, barographs, hygrographs) and with direct reading (ordinary and extreme thermometers, psychrometers), and on a mini platform, temperature observations at the soil surface and at 0-25 cm depth. Also, in addition to the station in the yard of the resort, observations were also made at three other fixed points in the Valea Muscelului experimental basin, in parallel with those of liquid and solid runoff, landslides, vegetation correlated with land use. All topoclimatic observations were compared with those from the Pătârlagele meteorological station of the National Meteorological Network.

The processing of expeditionary and stationary observations was an important objective of topoclimatic researches consisting in the cartographic elaboration of topoclimatic profiles (with relief as a support, on which climatic parameters, vegetation, soil and land use were superimposed), as well as the drawing up of maps topoclimatic. Thus, the active surface of the geographical landscape - natural and anthropogenically modified, determines a variety of topoclimates ranked in elementary and complex topoclimates of different orders of magnitude.

Having established the principles and criteria for the delimitation of topoclimates and the role of the active surface, topoclimatic maps were developed at different scales, the most important of which are: The topoclimatic map of Romania in the scale of 1:1 500 000 published in *Studii și Cercetări de Geologie-Geofizică-Geografie, Geografie Series* (1970), as well as in the *Atlas of Romania* (1972), the *Climatic and Topoclimatic Region of Romania* also included in the *Geography of Romania* (1983), the *Topoclimatic Map of the Danube Delta*, the topoclimatic maps on topographic sheets in a scale of 1:200 000 (in manuscript at the Institute of Geography), in collaboration with the Geography Collectives from the Branch of the Romanian Academy in Cluj-Napoca and from the Research Station "Stejarul" Piatra Neamț (based on the same methodology developed by Mrs. Octavia Bogdan).

All these results obtained in Topoclimatology under the guidance of Mrs. Octavia Bogdan, from the Institute of Geography, were presented at various symposia, conferences, congresses in the country and abroad (taken up and developed in

appropriate university centers and research stations), as well as in other fields such as: Urban Topoclimatology, Forest Topoclimatology, Agrotopoclimatology, Biotopoclimatology, Balneoclimatology, Speoclimatology (also used as higher education subjects). Research in the field of weather-climatic hazards/risks constituted another direction of research to which Prof. Octavia Bogdan dedicated herself, which dates back to 1990, also determined by the non-inclusion in the research plans of the Institute of Geography of topics regarding topoclimates.

The first approaches in this field referred to the definition of the terms of hazard, risk, vulnerability, which in Climatology are confused or overlap with the terms of extreme climatic phenomenon, climatic record, disaster, climatic calamity, climatic catastrophe, etc.. On these aspects – weather-climatic hazards/risks, scientific communications were presented using some conceptual models, at sessions, symposia, ending with a reference work, used/cited in many publications, namely the climatic risks from Romania, authors Octavia Bogdan and Elena Niculescu (1999).

The classification of natural risks, and obviously the weather-climatic ones, was made by Mrs. Prof. Octavia Bogdan, according to origin, climatic zones, mode of manifestation, evolution, surface, season/season, approach methodology, in particular, statistical data analysis climate, drawing up vulnerability maps. In this sense, we highlight the comprehensive works: Weather and climate hazards in the temperate zone, Genesis and vulnerability with applications in Romania (Octavia Bogdan, Ion Marinică, 2007); Southern Carpathians. Climate, weather-climatic hazards and their impact on tourism, editor Octavia Bogdan, 2008, with the participation of established climatologists - Elena Niculescu, Elena Teodoreanu and the editor's young doctoral students, Dana Micu, Cătălian Mărculeț, Loredana-Elena Mic and Ion Marinică.

We must emphasize that in this field, Mrs. Prof. Octavia Bogdan was also concerned with climatic mapping, in particular, the mapping of climatic phenomena and the regionalization of hazards, creating a rich graphic material of scientific interest.

Many of the published materials, starting from the year 2000, refer to some climatic anomalies manifested in the last 10-15 years, such as those concerning the drought, heat wave, warm winters, historic floods, frosty winters, etc.

Particular attention was paid to the vulnerability of Romania's territory to some weather-climate hazards such as: thermal inversions, frost, fog, sleet and wet snow, ice deposits, sleet, blizzard, strong winds, the intensity of torrential summer rains, acid rains, the phenomenon of aridity and drought, global warming and environmental policies at national and world level, to reduce its impact.

The prodigious scientific research activity, carried out for 57 years by Mrs. Prof. Octavia Bogdan, constitutes a special scientific endowment, embodied in 280 articles, contributions in 34 volumes (author, co-author, editor, co-editor) and 109

chapters in specialist volumes, maps in 5 atlases, reviews, prefaces to specialist volumes and others.

From the many published works, in addition to the doctoral work, *The Climate Potential of Bărgan*, and those related to the previously mentioned climate risks, we emphasize his participation as an author and member of the editorial committees of the works published under the auspices of the Institute of Geography, such as: *Atlas R. S. Romania, Geography of Romania vol. I, V*, the atlases in collaboration with Transelectrica, etc., as well as his activity as coordinator of all climate topics included in the Research Plan of the Geography Institute.

It is also worth emphasizing the activity of Prof. Octavia Bogdan in the framework of inter-academic exchanges carried out in different countries (Bulgaria, Poland, Czechoslovakia, USSR, Greece, France, Republic of Moldova, China, etc.), on which occasion she held discussions or presented scientific communications.

Scientific activity.

As I mentioned at the beginning, Mrs. Octavia Bogdan combined her research activity with that of a university teacher, starting from 1992, when she could also participate in higher education, as an associate professor, at several private universities, first at the "Dacia" University " from Buzău, the "Columna" University and the "Spiru Haret" University from Bucharest, starting as a university professor in 1999 at the "Dimitrie Cantemir" Christian University, the Faculty of Tourism Geography from Sibiu, holding the positions of department director and head of masters.

Obviously, at all mentioned universities, the basic discipline was Meteorology-Climatology (in collaboration with Elena Niculescu), Methodological Bases of Meteorology (in collaboration with Ioana Câmpean), Meteorological-Climatic Hazards (in collaboration with Ion Marinića), Bases theories of meteorology; General Climatology (in collaboration with Sanda Costea), to which is also added Environmental Geography (in collaboration with Valeria Velcea). In addition to these, she also taught Touristic Climatology, Geomorphology, etc.. The tourist potential of the relief, Monitoring and management of natural and anthropogenic sources, Balneoclimatic tourism (the last three at the master's degree, and the last two published as course support in electronic and xerox format).

An important aspect of Mrs. Octavia Bogdan's activity is that of guiding numerous bachelor's and dissertations/master's theses at the Faculty of Tourism Geography - Sibiu, but much more significant is that of managing a doctorate under the auspices of the Institute of Geography since 1996, under whose competent guidance, 32 people took the title of Doctor in Geography (of which 16 published their doctoral theses) with topics specific of Climatology, as well as that of referent to numerous doctoral theses in the country and in the Republic of

Moldova, where he had scientific relations with the Academic Institute in Chisinau, but also in France (Lyon).

About parallel concerns.

Although it cannot be "surrounded" by scientific research, we must mention the sensitivity of Mrs. Octavia Bogdan towards "painting" the geophysical landscape and, not only, in poems and essays. Perhaps the time between reading the meteorological parameters on the slats on the topoclimatic profiles and admiring the moving hydrological landscape were moments of inspiration and reflection, when writing pastels with deltaic themes. In the work mentioned at the beginning of this brief portrait - A life for an idea - the last chapter is entitled "Original Poems", in which poems are inserted on several themes, among which we mention: geographical, dedications, idyllic, holiday customs, philosophical, pastels, so a varied theme.

Crowning and gratitude.

The work in the field of science and university education highlighted by the existing "baggage" has been rewarded with numerous scientific awards, the most prestigious of which is the academic one - the Gheorghe Murgoci Award, awarded on the occasion of the first volume in the series of 5 of the Geography of Romania (1983), followed by the AGIR Prize in the field of Electrical Engineering (2002) for the work "Romania, the environment and the electric transmission network. Geographical Atlas" (author and co-author with Dr. Ing. Doina Frumușelu), the "Nicolae Cernescu" Award (2004), awarded by the "Gheorghe Ionescu-Sișești" Academy of Agricultural and Forestry Sciences, for the work "Romania. Soil quality and the electric transmission network. Geographical Atlas" (author and co-editors: Dr. Octavia Bogdan, Dr. Ing. Doina Frumușelu, Dr. Ing. Ion Munteanu).

Added to these are numerous diplomas and medals, written and unwritten appreciations which, all of these, place the distinguished Mrs. Prof. Octavia Bogdan in the gallery of contemporary Romanian geographical personalities.

The personality of Professor Octavia Bogdan has established itself in Romanian geography, not only through special contributions in the promotion of new directions in scientific research, especially in the fields of climatology, materialized through a rich and varied publishing activity, specialized articles from the country and from abroad, through works of great diversity (atlases, books, courses and university textbooks), estimated at over 200.

God rest her in peace!

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