

EIGHT DECADES OF BIOGEOGRAPHIC RESEARCH AT THE INSTITUTE OF GEOGRAPHY OF THE ROMANIAN ACADEMY

Sorin GEACU

Edit. Universitară, Bucharest, 2024

The Institute of Geography of the Romanian Academy in Bucharest was established through the Decree-Law no. 73 of February 6, 1944 as part of the Ministry of National Culture and Cults under the name of the Geographical Research Institute of Romania.

The beginnings of the research activity in the field of biogeography - which lies at the border between biology and geography -, both within the Institute and the country in general, are linked to the activity of the first tenured professor of Biogeography at the University of Bucharest - Professor Raul Călinescu - who, in 1944, was in full creative force, a trained biogeographer. Professor Călinescu was also one of the founders of the Institute of Geography, among the list of “permanent members” in the same year.

This milestone, the 80th anniversary of the Institute of Geography, has led to the creation of this presentation on the development of biogeography, a field in which not only valuable, but also significant results were obtained within the Institute, as biogeographical researchers published - over these eight decades - several hundred scientific works (national and regional studies). We mention, first of all, the collaborations which led to the elaboration of various fundamental national or regional works. For some of the individual papers, or for the collaboration on certain collective works, some biogeographers were awarded prizes of the Romanian Academy - the “Gh. Munteanu-Murgoci” prize, or the “Gr. Antipa” prize.

Even at the most cursory analysis, it is easy to notice and appreciate the progress of biogeography, highlighted equally by the number and importance of the published works, but also by the diversity of the issues addressed. The scientific accuracy of the expression of the research results is strongly supported by numerous cartographic materials. At the same time, biogeographical studies not only have scientific value, but also meet practical needs.

Over time, the biogeographical research activity was organized, within the Institute, on sectors, sections and then groups, which were led by R. Călinescu, A. Bunescu, A. Popova-Cucu, C. Drugescu and S. Geacu.

It is worth noting that biogeographic research was of continuous interest at the Institute of Geography, unlike at almost all university centers in the country (with the exception of the University of Bucharest), where it was done sporadically or incidentally.

The first Romanian biogeography volume was written by R. Călinescu immediately after the establishment of the Institute, and was published under the title *An Introduction to the Biogeography of Romania*, part of “The Library of the Geographical Research Institute of Romania” collection, as its 2nd issue, in 1946. Shortly after, in 1947, R. Călinescu published two more important works called: *What is*



Biogeography? A brief look at the principles, methods and issues of biogeography and Between Biogeography and Anthropogeography. The field of human influence. At the time, he believed biogeography focused on “the explanatory study of the distribution of plants and animals accross the earth” (1947, p. 167). The second work concluded that “in biogeography it is absolutely necessary to take human action into account” (1947, p. 202).

In the synthesis treatise from 1972, R. Călinescu and his collaborators provide the following definition: “*biogeography is the science that studies the geographical distribution of living things and their complexes (biocenoses) on the surface of the globe as an integral part of the geographical layer, while also analysing the historical (genetic) causes and the ecological aspects of this spread*” (p. 7). Later on, C. Muică et al. (2006), believed that “*Biogeography studies the spatial distribution of living organisms (plants and animals) around the globe, as well as the determining factors*” (p. 11). It resembles very much an interdisciplinary science.

The biogeography works issued in the Institute of Geography mainly belong to its two fundamental branches - phytogeography (the geography of plants) and zoogeography (the geography of animals). The biogeographical research related to the natural protected areas is also important, as is that of the biogeographic complex of geocology. At the same time, there are works that include aspects of historical biogeography, causal biogeography or comparative biogeography, but general biogeography syntheses have also been published, useful both in scientific research and in the teaching activities carried out by some researchers.

Thus, in the works of phytogeography, several aspects were tackled, such as: the analysis of the geographical distribution of some floristic elements, the study of the structure and dynamics of some plant associations, the changes in the vegetation layer due to human activities, the reporting of several rare species, the study of invasive species, various aspects of phenology, as well as methodology.

The animal geography studies comprised: regional zoogeography approaches, analyses of the geographical distribution of various faunal elements, works tackling genetic zoogeography, the study of various colonised, reintroduced or invasive species, aspects of entomology, the chrono-spatial dynamics of the populations of certain species of mammals and birds. Cartographic synthesis works were also compiled.

In a special chapter, the contribution of biogeographers to the development of representative works published by the Institute of Geography was analysed, namely:

- works of a national character, i.e.: *Introduction to the Biogeography of Romania* (1946), *The Geographical Monograph of the P.R. of Romania* (1960), *The Atlas of the S.R. of Romania* (1972-1979), *The Geography of Romania in five volumes* (1983-2005). *Romania. Space. Society. Environment* (2005, 2006, in Romanian and English, respectively), *Romania - Nature and Society* (2016), *Romanian Civilization - Geographical Sciences* (2018, volume published on the occasion of the centennial celebration of the Great Union).

- works of a regional character, i.e.: *The Geography of the Romanian Danube Valley* (1969), *Cerna Valley - A Geographical Study* (1981), *Geographical research on the environment in Buzău County* (1986), *The Environmental Potential of the Subcarpathians of Buzău County* (1989), *A study of natural hazards in the Carpathians and Subcarpathians between the Trotuş and Teleajen rivers* (2005), *The Romanian Danube Valley – Perspectives for sustainable development* (2022).

- or other volumes published by the Institute: *Achievements in Romanian Geography during the 1947-1957 period* (1960), *Récueil d'études géographiques concernant le territoire de la Roumanie [A collection of geographical studies on the territory of Romania]* (1960), *Geographical studies alongside students on the quality of the environment* (1981).

Among the volumes on biogeography published by the members of the Institute, we mention but a few: *The sciuridae in the P.R. of Romania* (1956), *Life in equatorial forests* (1958), *The vegetal resources of Romania* (1960), *Geobotany* (1966), *The zoogeography of Romania* (1994), *A compendium of general zoogeography* (2003), *A compendium of biogeography* (2009), *The dynamics of cervid and bovid populations in the fauna of Romania* (2013), *Romania's European fallow deer* (2012), *Romania's great bustard. A biogeographic study* (2016), *The vertebrates of Romania during the 1940-1950 period* (2018), *The theriofauna of southeastern Moldova. Environmental conditions, populations, distribution, anthropogenic impact* (2021), *Buffaloes in the Romanian Plain. A zoogeographical study* (2023).

The biogeographical research regarding the protected natural areas, which took place in different regions of the country, is also important.

Geoecological studies were also carried out in Cindrel Mountains, Vâlcan Mountains, Covurluiului Hills, Oltenia Plain, Rodnei Mountains, etc. as part of the Institute of Geography.

At the same time, palynology studies were also undertaken, supporting the reconstruction of the vegetation evolution in the Quaternary.

Biogeography figureheads from the Institute are also mentioned (Alexandra Bunescu, Raul Călinescu, Constantin Drugescu, Cristina Muică and Ana Popova-Cucu).

A list of biogeography works published by the members of the Institute during the 1944-2024 period was added at the end of the volume.