

România. Atlas Istoric-Geografic (Romania. Historical-Geographical Atlas), Institutul de Geografie al Academiei Române, Editura Academiei Române, București, 2007, 227 pages, 68 polychrome maps and 49 plates (titles and legends in foreign languages), texts in Romanian, French, English and German.

This second edition, published by the Institute of Geography in 2007 on the initiative of the Romanian Academy, is an enlarged and updated version of the Historical-Geographical Atlas printed in 1996.

The outcome of the interdisciplinary endeavour of a team of specialists in Geography, History and Demography, the work offers a synthetic view on the formation and development of the Romanian people within the Carpathian-Danubian-Pontic space that has been inhabited from earlier times. The Atlas also illustrates the current human and economic potential of this country.

The 49 plates included in the volume contain a rich cartographic and explicative material.

The maps are grouped by three thematic sections.

Section One, *The Territory and Its Administrative Organisation*, includes seven maps: Romania in the European Union; a general map; the evolution of the country's state borders (1864–2006); a present administrative map; the administrative – territorial organisation between 1918 and 1968; regional development; and Romanian territories part of cross-border cooperation known as Euroregions.

Section Two, *Historical Landmarks*, numbers 19 plates which depict major moments in the evolution of the Carpathian-Danubian-Pontic society, at the same time attesting to human activity as early as the pre-historical period; the organisation of the Geto-Dacian state; the Roman rule in Dacia; the first political and state formations on the territory of Romania; the Romanian Principalities; the formation and completion of the modern Romanian state.

Section Three, *Geographical Landmarks* (23 plates), broaches a wide range of topics, e.g. the ethnic structure of Europe in 1885, of Central and Southeastern Europe (1876–2000), the ethnic structure of Romania's population represented on the maps of 1930, 1966, 1992 and 2002 (source: general population censuses); the religious structure of the population, education, language, political options expressed in the elections of 1992, 1996, 2000 and 2004; density and distribution in the territory of population and settlements, the folk costume and the peasant house, land use, mineral resources, industry, tourism, protected natural areas, and Bucharest city (territorial evolution, functional zones, a satellite image of the city's central zones and surrounding areas).

The text and legends of this Atlas are translated in languages of international circulation. This updated edition makes a useful reading for specialists, professorial staff and the public at large.

Sorin Geacu

*Dicționarul Geografic al României**, vol. I (A–L) (A Geographical Dictionary of Romania, vol. I (A–L), coordinators Mircea Buza, Lucian Badea, Șerban Dragomirescu, Institutul de Geografie al Academiei Române, Edit. Academiei Române, București, 2008, 662 pages.

Toponymic studies have captured the interest of geography researchers ever since the foundation of the Romanian Geographical Society in 1875. The five-volume *Great Geographical Dictionary of Romania*, edited by George Lahovary during 1898–1902, is still an important source of documentation in various fields of science.

A senior researcher with the Institute of Geography, Prof. Ion Conea was the initiator of toponymic studies at this institution, continued by the Institute's Toponymy Team, the organiser of a forum of debates and of numerous scientific gatherings over the 1960–1985 period. As of 1996, the activity of the Romanian Commission for the Standardization of Geographical Names, coordinated by Academician Victor Tufescu, has been unfolding under the aegis of the Romanian Academy's Geonomic Sciences Section.

Geographical names represent a basic element of any geographical information system that organises spatial data in a territory. It is a valuable tool for a wide range of domains, e.g. the elaboration of national strategies of economic planning and sustainable development, the management of the environment, the coordination of services for emergency actions, trade and communication systems, the promotion of the cultural heritage, tourism and global information facilities.

The publication of this *Dictionary* meets an obligation assumed by Romania as UN member-state and is an important moment in the cartographic standardization of geographical names and their use in specialist publications and on the Internet in line with the standards set by the UNGEGN expert group (United Nations Group of Experts on Geographical Names).

The elaboration of this *Dictionary* benefitted from the contribution of over 40 specialist geographers in various domains, who have a comprehensive field and laboratory experience, within the framework of the Institute of Geography of

* Review based on the preface of the volume signed by the same author.

the Romanian Academy. Beside the topographic maps on the scale of 1:100,000, documentation work involved a wide-ranging bibliography (treatises, encyclopaedias, locality sign-marks, geographical dictionaries, etc.), as well as dictionaries of historical provinces toponyms elaborated by linguists.

Unlike the other dictionaries of geography and toponymy, the present one has all the characteristic features of a Gazetteer based on the recommendation of the UN Group of Experts for the Standardization of Geographical Names.

As a result, a series of qualitative and quantitative elements are attached to the entries, such as the category which the respective name belongs to, its exact geographical position within the natural and administrative regions, the number of inhabitants (according to the latest population census), minimum, medium and maximum altitude (as the case might be), length of running waters, the surface-area of counties and of nature reserves, latitude, longitude, etc.

The administrative status of localities has been assessed on the basis of all the laws and decisions issued in Romania over the past few decades.

In order to fall in line with the European legislation and with the Romanian Government Decision No. 1206/2001, the *Dictionary* follows the recommendations formulated in the Resolution of the European Commission stating that names of localities should be written also in the mother-tongue of the minorities in case they represent over 20% of a locality's population.

Since the *Dictionary* observes the grammar standards of the Romanian language elaborated by the Romanian Academy, it will contribute to the standardizing of geographical names, primarily in Romania, but also worldwide.

As the UNGEGN document reads, the international standardization of geographical names is conditional upon national standardization, which is an attribute of the state on whose territory the respective names exist.

A correct usage of geographical names is essential to global communication, also benefitting the local, national and international communities involved in commercial activities, as well as population censuses and national statistics, the royalties regime, regional and urban planning, the management of the environment, security strategies, the assessment of natural and technological hazards, the elaboration of maps and atlases, tourism and the means of mass communication. The *Dictionary* is expected to be a useful tool for the geographers' teaching and research work.

Dan Bălțeanu

GEORGE MURĂTOREANU, *Munții Leaota. Studiu geomorfologic* (The Leaota Mountains. A Geomorphologic Study), Editura Transversal, Târgoviște, 2009, format 17 x 24 cm, 182 p., 149 fig., 11 tab., bibliogr.

The Leaota Mountains, located in the central south-eastern part of the Romanian territory, belong to the Bucegi Mountains group. This small unit of relief (336 km²) is part of the few Romanian mountainous units studied very little from a geomorphologic point of view. The reduced number of geomorphologic studies, along with the area itself, well covered by forest, having just a few ways of access and a maximum altitude of over 2000 m, increased not only the difficulty of the research undertaken by George Murătoareanu, but also this young geographer's merit.

After the *Preface* (signed by Lucian Badea, PhD) and the *Introduction*, the book begins with *I, General Considerations*. Given the main geomorphologic features of the Leaota Mountains, the author belongs to that group of geographers who place the Leaota Mountains in the Southern Carpathians (occupying 2.2% of this branch). In chapter *II, General Geographical Characters*, the main physical-geographical features of the studied region are reviewed and so are some aspects of human geography, linked (in one way or another) to the relief (land use, toponymy). Chapter *III, Geological Constitution*, has a rich bibliography. Based on this bibliography the author summarizes the lithological and structural characteristics of the Leaota Mountains, located (from the geological point of view) at the southern part of the crystalline-mesozoic area of the Eastern Carpathians. The fourth chapter, *Morphographical and Morphometric Analysis*, includes numerous morphological profiles, morphometric data and maps. With their help, various classifications of the slopes were made (morphometric classification, morphodynamic classification etc.) and connections between morphographical / morphometric features and certain geomorphologic processes or physical geographical characteristics were established. The most important and largest chapter follows: *V, Morphogenetic analysis*. Here, the author thoroughly analyses the relief on genetic categories (the petrographic relief, the erosion surfaces, the fluvial relief etc.); then he analyses the present day morphodynamics (the morphodynamic factors and the present day geomorphologic processes). The last and the shortest chapter, *VI, Geomorphologic Regionalization*, includes a brief characterization of the four sub-units separated by the author within the Leaota Mountains. The paper ends with *Conclusions and References*. The book benefits from an accurate graphics and includes a large number of figures, of which almost 1/3 are maps (some of them are coloured).

In *The Leaota Mountains. A Geomorphologic Study* there is a whole series of original contributions on the morphology of this Carpathian unit. Among these contributions the most relevant are those on glacial and cryo-nival relief. George Murătoareanu argues convincingly both the possibility of the existence of a Pleistocene glaciation in the Leaota Mountains, and the occurrence of a small glacial suspended cirque, the Mitarca cirque, located at the valley head of the brook with the same name (under Leaota peak, 2 133 m). After a welcome clarification of the 'periglacial' and 'cryo-nival' terms,

the author concludes that, in the studied region, one can talk, at present, only about the existence of the cryo-nival morphoclimatic system. The cryo-nival processes are then exposed and the various forms of cryo-nival relief existent in the Leaota Mountains are analyzed. Some of the cryo-nival relief forms of these mountains had already been reported, sporadically, in several works, but never were made such a rich inventory and thorough analysis of these forms of relief.

When geographers who are not trained as pedologists approach soil issues, they often commit errors. And in this excellent geomorphologic study there is such an error. In Chapter II, p. 42, it is stated that 'The soils on which these formations [the coniferous forests] installed are varied – argillic brown soils, argillic yellowish soils, the parent rock being uniform – crystalline schists'. But these soils (equivalent to *Luvisols* in WRB, 2006) are not characteristic for the coniferous forest belt, and their presence was not reported at an altitude of 1,100–1,750 m in the Romanian Carpathians (these are the altitudinal limits specified by the author for the coniferous forest belt in the Leaota Mountains).

But soils are neither the main subject of this study nor the result of own research (the above erroneous information has been taken from the published works on vegetation and soils of the Leaota Mountains). Therefore, the geomorphologic study of the Leaota Mountains made by George Murătoareanu remains a work of reference on the geomorphology of these mountains. It will be a valuable and indispensable work tool to those who will deal with the improvement, development and protection of forest or agricultural land, or to those who want to learn thoroughly about the geomorphology of this well individualized Carpathian unit.

Nicolae Băcăința

ELENA DUMITRESCU, *Clima oraşului Bucureşti* (Bucharest City and Its Climate), Edit. Ars Docendi, Bucureşti, 2007, 400 pages, 3 parts, 10 chapters, 138 figs., 171 tables, 3 annexes with reviews, maps and photos, black and white and coloured, and 287 references.

This Ph. D. thesis, elaborated under the scientific supervision of Prof. Tiberiu Morariu, corresponding member of the Romanian Academy, was successfully presented in 1971. Alongside other works, e.g., *Cluj City and Its Climate* by V. Belozherov and the *Climate and Microclimates of Iaşi City Area* by Elena Erhan, it was one of the first productions of urban climatology in Romania. Its publication in 2007 has been long overdue.

The first to embark upon this research trend was Ştefan C. Hepites, the author of *Album climatologique de Roumanie* (1900) winner of a Paris prize, of *Carte pluviométrique de Roumanie*, awarded a Silver Medal, the author himself receiving a Diploma of Honour.

Hepites' *Album* is a synthetic picture of the general climatic traits of Romanian 20 localities among which the City of Bucharest. He had previously published various articles on this subject in the *Annals of the Central Institute of Meteorology of the Romanian Academy*.

A major achievement, *Bucharest City and Its Climate*, together with the other two volumes, represented a theoretical approach to the urban climate/topoclimate that was to preface a series of works and Ph. D. theses that followed. It is regrettable, indeed, that this much expected work was published some 35 years after its presentation. But, as it is said, better late than never.

Though many urban climatology studies have focused on Bucharest, Romanian's capital-city, this all-embracing approach due to Elena Dumitrescu, professor at the University of Bucharest, and subsequently at Sorbonne in Paris, stands out its problematic, even through the large observation period (40–60 years) stops in 1960.

The complex urban active surface, is subjected to the influence of some natural morpho-hydrographic factors that interact with the anthropic ones, e.g. many-storied blocks-of-flats built from various materials; artificial heating, the street pattern with large avenues and squares, numerous green areas, recreational areas, etc. In the course of its evolution, a number of functional zones strated being developed (industrial, residential, recreational, etc.), generating a multitude of micro-and-topoclimates with distinct characteristics, from the outskirts to the city-centre is term geographical position and the overall local features of each active surface-type.

The work offers a substantial data-base for all the climate variable registered at the two representative stations: Bucureşti-Filaret in the central part of the city and Băneasa at its northern periphery. Besides, other shorter observation data-rows from 11 pluviometric posts and 8 weather stations with a temporary regime, located in Bucharest's metropolitan area and 8–9 stations more, situated in the limitrophe areas, with highlight on the specific urban climate and its impact on these areas.

Since the active urban surface is particularly complex, Elena Dumitrescu placed numerous points of micro-climatic observations on various profiles across the city, all along its four cardinal points.

The statistical analyses of the active urban surface in terms of daily and yearly moments, as well as of the characteristics of the atmospheric circulation enabled the author to outline for the first time in Romania and in Bucharest the existence of an urban heat island and the forms it takes in the day-time, at night, in winter or in summer, etc. The heat island is the most representative element of urban climatology, temperature differences sometimes exceeding 2..3°C between centre

and periphery, clearly underlines the anthropic impact on the urban climate. A remarkable set of profiles and heat maps worked out by the author, showing various hypostases of the heat island, are relevant for the large expansion of Bucharest City in the 1970s. Worth noting are also the micro-climatic observations of the air layer adjacent to the soil (0...2 m) made in market-places, parks, intersections, in sunlit and shadowy spots, under the trees, in glades, on the pavement, in paved or cobbled streets, in front of buildings, etc. which complete the range of Bucharest's topoclimatic particularities.

As significant are the calculations of the differences between the urban and the limitrophe areas, as well as the sliding averages established for every ten year-periods and singled out by each successive years used to work out the isoplethes of various elements and highlighting not only what is specific to the urban climate, but also its evolution in time. And, as the city kept developing weather stations were encompassed within its bounds, detecting a certain warming trend.

Other elements of climate, such as precipitation, wind, atmospheric pollution, and urban mist, all visibly influenced by human activity, are also discussed.

Also a novelty is the synthetic Map of the micro-climatic/topoclimatic complex of Bucharest City.

This original work, published in 1971 only in the form of an extended 47-page summary, proved to be of particular interest for Romania's climatology of the 1970s, while the urban heat island and the Map of microclimates has come to represent a reference point for various authors dealing with the climate of the capital-city. As a matter of fact, the work as a whole has become a landmark for urban climatology researchers engaged in studying this subject also in other Romanian towns.

The originality of this endeavour consists in the content of the topics, the methodology, structure of the analytical material, the presentation and logical interpretation of the illustration. These turned it into a climate guide, or approach model for similar works.

Despite its belated publication, *Bucharest City and Its Climate* can be considered a treatise of urban climatology. Future research-works are called to develop similar studies of theoretical and practical value, establish the evolution trends of the urban climate against the present climate warming background, and the prospective intensification of this phenomenon, currently a much controversial issue, in which case the urban heat island could also become severer.

Octavia Bogdan