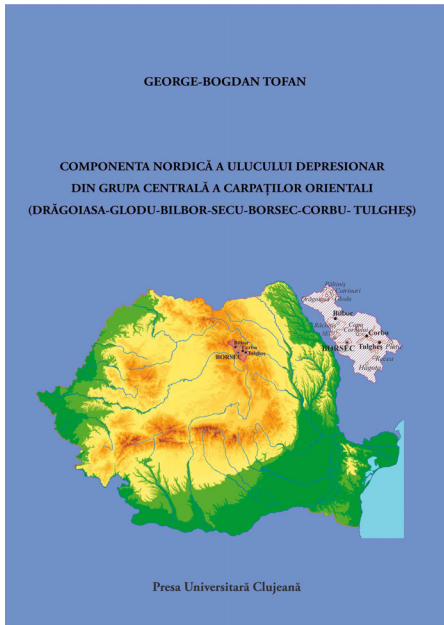


George-Bogdan TOFAN, *Componenta nordică a ulucului depresionar din Grupa Centrală a Carpaților Orientali (Drăgoiasa-Glodu-Bilbor-Borsec-Corbu-Tulgheș)* [The Northern Component of the Depression Groove from the Central Group of Eastern Carpathians (Drăgoiasa-Glodu-Bilbor-Borsec-Corbu-Tulgheș)], Presa Universitară Clujeană, 2013, 510 pages.



When the situation to make a reference towards a scientific paper arises, one must emphasize, above all, its quantitative component. In the case at hand, the author comprised a volume of 510 pages. Within them, a text according to the current requirements, which includes, 470 pages of scientific text excluding the references, 110 figures, three of which are large maps (1, 3 and 41), 70 different maps and graphs, while 37 are photographic images. As standard, the last part of the paper is the Summary (p. 471-490), the Bibliography (p. 491-504, with 287 references) and the Book's Contents (p. 505-510, in Romanian and English).

According to the most suitable method, the paper begins with a **Reference part**,

signed by several representatives of Romanian geography, such as *prof. Nicolae CIANGĂ, PhD* (p. 5-8, Faculty of Geography, „Babeș-Bolyai” University, Cluj-Napoca, the scientific coordinator of this thesis), *prof. univ. Ionel MUNTELE, PhD* (p. 9-13, „Alexandru Ioan Cuza” University Iași, Faculty of Geography and Geology, Department of Geography) and *prof. Martin OLARU, PhD* (p. 13-17, Department of Geography, Western University of Timișoara) followed by a **Preface** (p. 19-21, by the paper's author).

Man of the researched territory, with a proper scientific background and with its inexhaustible diligence, *George-Bogdan Tofan* managed to emphasize the entire geographic complexity of **The Northern Component of the Depression Alignment from the Eastern Carpathians' Central Group**, that is the alignment comprising Drăgoiasa-Glodu-Bilbor-Secu-Borsec-Corbu-Tulgheș depressions, their analysis being made, in each case, according to the places' realities, where the specificity of the analysed geographic units is punctuated by the proper definition elements.

Taking into consideration the fact that this paper falls under Regional Geography, the author had to examine and then present the entire complex of geographic components, both physical, as well as human, a task which was accurately accomplished, their research being made according to the proper geographic logic, in a distinguished and modern setting, in the depth required by each situation etc.

The structure of the paper foremost contains (chapter 1) the issue regarding *the approach model for the small depressions of the Romanian Carpathians*, containing, among others, the Latin origin of the term depression, their discontinuity and high number in the Romanian Carpathian space, remarkable geological, geographical, biological, and

humanization characteristics etc., while the final part of the book contains the general presentation of the depressions from the analyzed territory, this part including the excellent large map (fig. 1), that contains the basic elements of Drăgoiasa-Tulgheș Depression Alignment.

In order to obtain the references necessary for the research at hand, the author suitably made use of the „*Research History*” for the depressions in question (chapter. 2., pp. 33-40), and mentioned researches conducted by several geologists ever since the first half of the 19th century, continuing into the second half and then into the entirety of the 20th century, when geographic analysis joined the geological one, by using the entire complex of physical and human elements.

Having the results of the geological and geographical research, conducted for quite some time by many specialists, at hand, and also the detailed investigation carried out by the author in Drăgoiasa-Tulgheș Depression Alignment, it was possible to present „**The natural premises for the individualization of the northern component of the depression alignment found in the Eastern Carpathians' Central Group** (chapter. 3, p. 41-154).

In accordance with geographic logic, this chapter foremost presents *the geographical position and the limits* (3. 1., p. 41-45), and shows among others that „*this suspended innermountain depression represents the middle area connecting Dornelor Depression with Giurgeu Depression, with its borders flanked by Căliman Mountains to the west and north-west, by Giurgeului Mountains to the south-west, Hăghimaș and a part of Ceahlău Massif to the south-east, and Bistricioarei Mountains to the east*” (p. 41). This issue is followed by the one regarding *the geographical-physical premises of territorial population* (3. 2., p. 45-76), emphasizing aspects concerning the genesis of the depression's territorial microsystem and its geological structure. The author discusses the entire complex of points regarding the formation of depressions in this region, and then clarifies the geology of the formations characteristic

to the three areas within the depressions, that is chrySTALLINE-Mesozoic, Neogen volcanites and Pliocene-Quaternary sedimentary deposits.

Concerning the two above mentioned topics (3. 1. și 3. 2.), one must notice the excellent graphical presentation, with nine photographs (fig. 4, 5, 7, 8, 9, 11, 13, 14 and 15) and seven maps, of great quality in terms of cartography, as well as content, one of them being a large map (fig. 3, The demarcation of Drăgoiasa-Tulgheș alignment). The next five maps are geographical-physical maps of the depressions (fig. 6, Drăgoiasa and Glodu, fig. 10. Bilbor, fig. 12. Borsec) or of depression alignments (fig. 16. Capu Corbului-Corbu and fig. 17. Tulgheș-Pintic), plus the geological map of Drăgoiasa-Tulgheș), the mentioned materials allowing for an easy understanding of the territorial reality.

After accustoming the reader with the geological aspects, the book presents *the relief's characteristics* (3. 3, p. 76-95), and describes: *the main relief units*, defined as basic components in the geographic landscape's form, emphasizing, for each unit, aspects regarding hearth, slopes and surrounding mountainous area (with the geomorphological map of Bilbor Depression, fig. 26, p. 82, allowing for a very exact reading of the analyzed phenomenon); *Relief energy and its fragmentation density*; *Relief gradient and slope exposition* (accompanied by maps depicting relief fragmentation depth, fragmentation density, slopes and slope exposition).

The fourth component of the *natural base, climate* (3. 4. p. 95-109), is presented in relation to the determining factors, emphasizing the geographic position of the analysed depressions, the relief and vegetation characteristics, solar radiation, general, regional, and local air circulation, etc., followed by the climatic characteristics from the depressions at hand, meaning air temperature, precipitations, winds, ending with the description of the topoclimatic and climatic phenomena of risk.

The geological, orographical and climatic features led to a special in-depth study of the *hydrographical base* (3.5., pag. 109-138), especially due to the existence of

undeground aquifers, almost entirely comprised of mineral waters, characterized as follows: „*Most of them are bicarbonated, calcic, magnesian sparkling, sometimes sulphurous, ferric, and moderately-radioactive*” (p. 110). The large scale presence of this type of waters led a more distinguished presentation, with the help of a rich photographic and cartographic material, such as the profiles from Bilbor (fig. 28, p. 115) and Borsec (fig. 38, p. 125), the very eloquent map regarding the localization of mineral water springs (fig. 39, p. 126) and the map from Fig. 41. The map of the Drăgoiasa-Tulgheș hydrographic network (132-133).

The same elevated research conduit can be found in the presentation of the last components of the natural base, that is *Vegetation, Fauna* and *Soils*, mentioned in the book through their specificity traits (p. 139-154).

The fourth chapter of the book – **The geographic-human premises of Drăgoiasa-Tulgheș alignment's humanization** (p. 155-296) – shows us the same logic and the same deep and scientific analysis as before. Thus, we find, in a clear order, the following issues: Geographical-historical considerations (archeological research, historical data, medieval cartographic sources, communication routes, the population and settlement processes in Drăgoiasa-Tulgheș alignment and the administrative-territorial organization), the geodemographic characteristics (population evolution), the general density of population, the agricultural density of population, population dynamics (birth rate, death rate, growth rate, population migration and migration rate), geodemographic structures (population structure per types of habitat, population structure per gender, population structure per age groups, marital status, profession, ethnic structure, religion, education and human risks) and the Settlements of Drăgoiasa-Tulgheș depression alignment (determining factors in the emergence of the habitat component, the genesis and evolution of the settlement network, rural and urban settlements, housing, social aspects, architectural specificities of the basic habitat and toponymy). As it is required by

geographical research, the component from chapter 4 has a rich cartographic and spreadsheet material (12 tables, eight maps and 22 graphs).

The next chapter, the fifth, **Specific activities of Drăgoiasa-Tulgheș depression alignment** (p. 297-453) is only slightly larger than the previous in terms of page numbers, and follows the same path in regards to the specific issue, with a high scientific logic, and excellent cartographic and table component.

Sure enough, according to scientific logic, this chapter begins with *the primary sector* (p. 297-339), containing aspects regarding agriculture (Land fund structure and land usage, Plant husbandry and agricultural production, Animal husbandry and animal production, Sheepherding and its role in local development), forestry, hunting and fishing (Game funds, crop gathering and capitalization) and other primary activities, the presentation of the primary sector being in accordance to the specificity of the environmental factors of the analysed area.

The secondary sector (p. 339-356) contains *Industrial activity*, almost entirely represented by the exploitation and bottling of mineral waters (the description of the mineral water bottling process, the international recognition of Borsec mineral water), plus other industrial sectors, such as former lignite and travertine mines, now represented by small logging units, knitwear factories, food processing units, etc.

The third component of chapter 5 is the *tertiary sector* (p. 356-453), referring foremost to *Commercial activities (trade)*, mainly comprised of mineral water trade, both nationally and internationally, currently being shipped to over 15 countries, most of them European, but also to the US, Canada, Israel, Taiwan, Egypt, China, Japan, Dubai and so on (fig. 87). In terms of *Communication routes and transportation*, the book presents the road network, consisting of a national road (DN 15, Toplița-Borsec-Tulgheș-Grințieș) and several county roads, the situation of the former narrow Toplița-Borsec railway, and the special communication mediums used in the region.

BOOK REVIEWS

According to the specificity of the analyzed territory, a special significance was given to: *Tourism as capitalization factor of the natural potential* (orographic, climatic, hidrographic, biogeographical, etc) *and man-made potential* (archeological, cultural, economi, ethnographic sites etc) (p. 371-435), followed by the material infrastructure, touristic tracks, touristic promotion and circulation, chapter 5 ending with issues on education, culture, and healthcare.

This excellent book by **George-Bogdan TOFAN**, which is not far from being considered a treatise of Regional Geography, ends, in chapter 6, with the issue of **The geographic landscape under the influence of human activities and factor**, where the types of landscapes, the choreme of Drăgoiasa-Tulgheş system, and the SWOT analysis are emphasized.

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