

CONTRIBUTION OF THE GEOGRAPHY STUDENTS' PRACTICAL PERIOD TO THE MODELLING OF THE ENVIRONMENTAL EDUCATION. CASE STUDY – THE PARANG MOUNTAINS

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Abstract. The permanent education for the environment represents a main component of the educational process. The major purpose of the study is to underline the role of the education that evolves from 'to know' to 'to know what one must do' and 'to act'. Thus, the Romanian university educational system sustains this purpose by the thematic content of the curriculum documents (programs, courses, manuals, notebooks of practical works, up-dated bibliography, as well as filed applications). According to the place and way they develop, the practical periods are grouped into three main types: within the local horizon, of itinerant type along representative itineraries, and stationary ones within a well-delimited area, in our case the Parang mountains. There were established many itineraries covered by our students during which we reached the proposed objectives. The conclusions we reached illustrate that these practical periods contribute to the formation of certain convictions and attitudes meant to support the education for the environment, as well as to the modelling of the future teachers of Geography.

Keywords: environmental education, practical period, objectives.

AIMS AND BACKGROUND

A main component of the education is *the permanent education for the environment*, which imposes itself due to humanist considerations meant to offer to human beings the premises of a harmonious life with nature and oneself. The complex problems of the environment, of its resources' protection, preservation and rehabilitation acquired the dimension of a major imperative of the present times.

The main purpose of the study is to underline the role of the education that evolves from 'to know' to 'to know what one must do' and 'to act' in this way. Thus, it is necessary to set up an ecological education of the students. This can be implemented by a coherent assembly of information able to induce constructive and responsible convictions and attitudes regarding the environment protection, preservation and rehabilitation.

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The Romanian university educational system sustains this purpose by certain specialisations: Geography, Horticulture, Physics, Chemistry, Environment engineering, etc.

The content of the themes comprised in the curriculum documents (programs, courses, manuals, notebooks of practical works, up-dated bibliography, as well as internet information), seminars and practical periods make the way environment problems are intercepted become more sensitive.

GEOGRAPHY PRACTICAL PERIOD – A MODEL OF APPLICATIONS WITH THE STUDENTS

The practical field activities that are so common for Geography contribute to the propound study of the theoretical knowledge, formation of certain skills of observing, measuring and relating between the natural and anthropic components of the environment.

In the 'nature laboratory', there can be noticed the fragility of ecosystems and the factors that contribute to their deterioration. According to the place and way the practical periods develop, they can be grouped in three types: within the local horizon, of itinerant type along representative routes and stationary ones within a well-delimited area.

Applications within local horizon. Namely within the perimeter of the Craiova municipality, develop in representative places by the end of the week (in autumn and spring): Romanescu Park, the alluvial plain of the Jiu, Bucovat settlement – the fossils area, Leamna forest, Simnic researches station, Craiova meteorological station, 'Doljchim' chemical combine, East-Craiova industrial platform, Podari settlement (industrial objectives and the Jiu valley), the Botanical garden, Isalnitsa hydrological station.

Itinerant applications. Develop during a week with each year of study: the 1st year of study goes on the following route: Craiova – Targu Jiu depression – the Sohodol valley – the Valcan mountains at the beginning of May; the 2nd year goes in the Doroudja plateau – the Danube delta and partially on the Black sea littoral during the first decade of July; the 3rd year of study goes along the Olt valley and within the Cozia mountains; we mention that the 4th year students will go within a specific area, which they have previously chosen in order to elaborate their graduation paper, under the direct coordination of a professor (Fig. 1).

Stationary practical periods. This kind of practical periods lasts for two weeks in July. The camp is settled in two representative places that also offer possibilities of accommodation and meal. Thus, the 1st year goes to Orsova and the 2nd year in the Parang mountains, namely at Ranca where there is also located the ex-

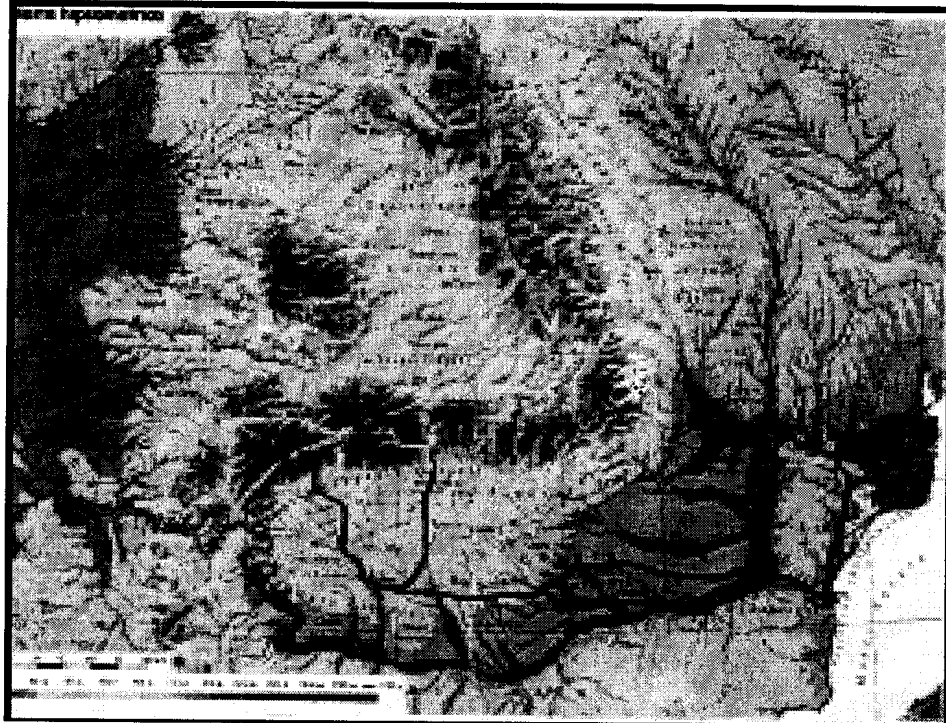


Fig. 1. Itineraries covered during the itinerant practical period within Romania

perimental station for the amelioration of the alpine meadows led by the University of Craiova.

The general objectives of the practical period are:

- observations in the field regarding the relief forms (mountainous, hilly, plateau and plain relief, the Danube delta and the littoral of the Black sea), as well as the specific geological structure;
- the analysis of the present geomorphologic processes and karst relief;
- observations regarding the climatic and hydrological phenomena that can represent high-risk factors;
- observations regarding the vegetation belts as compared to the levelling of the relief forms and climatic elements.

We shall further exemplify in details the programs we developed with our students within the Parang mountains starting from the importance of the mountainous areas in maintaining the natural balance and the impact of the anthropic activities upon the biodiversity of the mountainous environment.

The main routes included in our practical periods (Fig. 2) as follows:

- Ranca chalet – Cornesu Mare (Big Cornesu) and Cornesu Mic (Small Cornesu) peaks – Cerbu peak and back;

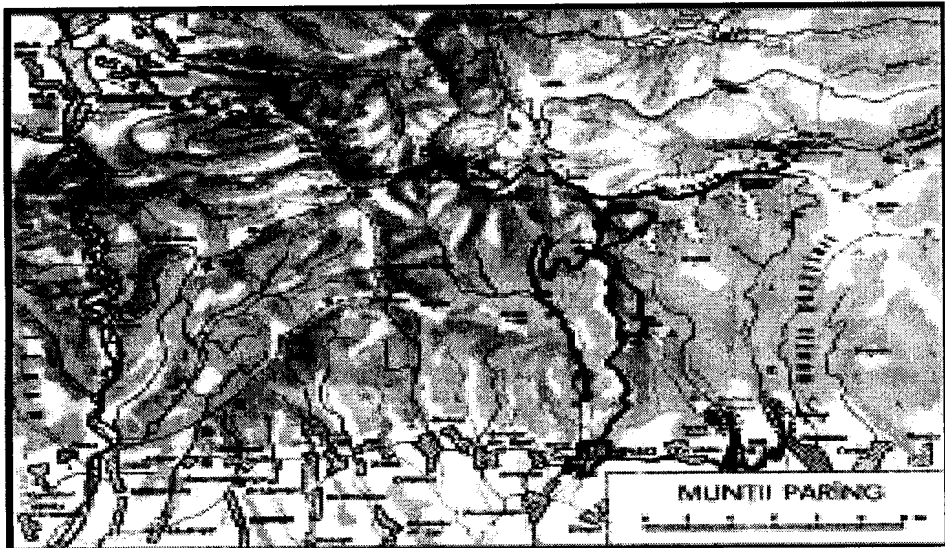


Fig. 2. Map of the Parang mountains rendering the covered itineraries and delimitation of the studied areas

- Ranca chalet – Dengheru peak – Dengheru saddle – Urdele peak – Urdele saddle – Iezer, Mohoru, Plescoia peaks – Galcescu chimney – Galcescu glacial complex and back;
- Ranca chalet – Papusa, Cioara, Galbenul, Micaia, Pristorul peaks – the Oltet saddle – the Latorita valley – the Petrimanul lake and back;
- Ranca chalet – Novaci – Muierilor cave (Women's cave) – the Galbenului gorges – Novaci – Targu Jiu – Craiova.

During these itineraries, there took place the following actions:

- Recognition, in the field, of the main complexes of rocks and minerals, as well as their location on the geological map; collection of the main types of specific rocks, minerals and their classification;
- Identification and mapping of the karst topography located at the foot of the Parang mountains: the Galbenului gorges, the Muierilor cave and the Gilort gorges;
- Observation of the withdrawal of the upper limit of the coniferous forests along the valleys only and stint of the areas covered by juniper trees due to deforestation and excessive grazing on the slopes and extension of the degraded meadows, the dominant species being the matweed (*Nardeus stricta*);
- Observations of the Quaternary glacial phenomena within the area of more than 2200 m high peaks and slopes; within the Parang mountains, they are represented by ranged complexes of glacial cirques previously covered by

well-developed glaciers that went down by their several kilometres long ice tongues along the upper valleys of the Lotru, the Latorita and the Jiet;

- Mapping of the glacial relief forms: the assembly of narrows summits, ridges, glacial cirques, steep slopes and unsettled rubbles at the foot of the peaks (Carja, Parangu Mare, Vidraru, Papusa, Dengheru, etc.);

- Determination of the thickness (A horizon) of the soil located within the alpine and coniferous zones and within the zone located at their foot and covered by specific vegetation; observations regarding the soil fragility due to torrential erosion;

- Registering of the meteorological phenomena characteristic to the alpine zone (high-speed winds, sudden cloudiness and short rain showers alternating with intervals of clear sky, etc.);

- Observations regarding the species of plants characteristic to the alpine belt (more than 2400 m) with many gaps of vegetation within the areas covered by rocks and unsettled rubbles; here, the grassy vegetation predominates (*Silene acaulis*, *Doronicum carpaticum*, *Poa alpina*, *Poa minor*, *Chrysanthemum alpinum*, etc.). On the main summits (about 2000 m high) with small plateaus, there can be noticed alpine meadows covered by associations of *Feastuca ovina*, *Agrostis rupestris*, *Juncus trifidus*, plants of poor quality, but resistant to severe cold and Podzolic soils.

- Identification and annual monitoring of certain rare species of plants that are also protected by law (the Galcescu natural reserve and its neighbouring area the surface of which is of 25 ha), such as: arolla pine (*Pinus cembra*), small juniper tree (*Juniperus sibirica*), mountain osier (*Salix herbacea*), rose bay (*Rhododendron katschyi*), angelica (*Angelica urchangelica*), edelweiss (*Leontopodium alpinum*);

- Cleaning the area by picking up the garbage (cans, plastic materials, bottles) left by different tourists and installing certain tin plates with messages for the environment protection, such as: 'the wet mountainous area is fragile from an ecologic point of view, but it represents a real oasis of tranquillity and untamed nature for each visitor';

- Certain actions supporting the tourists' ecological education by distribution of different booklets with thematic content;

- Actions of marking or re-marking of the touristic itineraries meant to prevent tourists from going within those fragile areas from an ecological point of view.

CONCLUSIONS

- These actions in the field bring to the consolidation of the scientific information base regarding the components and functionality of the environment.

- From an educational point of view, they render the youth sensitive with regard to the mankind's interference in the environment and appearance of certain ecologically fragile areas within the Parang mountains and induce the idea of a better environment protection.

- The developed activities contribute to the formation of certain convictions and attitudes of the students with regard to the identification and protection of the environment fragile elements.

- Finally, they contribute to the students' modelling as future Geography teachers. Thus, they will know how to organise, direct and evaluate the supplementary activities with the pupils during school trips, sightseeing and expeditions.

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