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PALEONTOLOGICAL TOURISM AS A NEW MARKETING APPROACH IN BULGARIA

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ABSTRACT

Bulgaria has a unique chance of identifying the tourism market using its paleobotanical deposits and geological phenomena that can successfully be included not only in the cultural heritage list but also in the tourist branding. The presence of natural paleontological surface outcrops with a fossil flora from the Rhodopean Paleogene create real conditions for modeling of successful tourist destinations, which is offered for the first time in the country. The tourism resources in the Rhodopes mountain have been identified, with an analysis of the geological conditions, the paleobotanical records and the accessibility to the natural fossil sites in the area of Mesta and Polkovnik Serafimovo grabens. An assessment of the potential for development of paleontological tourism in the Rhodopes region was made.

KEYWORDS: paleontological tourism, Rhodopes mountain, Bulgaria, marketing approach

1 INTRODUCTION

The presence of natural paleontological deposits with fossil flora (well preserved leaf imprints from ancient geological time) creates prerequisites for modeling of tourist destinations that are targeted to visitors who have special interest as researchers, experts or to tourists who are emotionally connected with nature. The specificity of such a destination is the choice of a suitable geological objects with impressive history records. The paleontological routes themselves take place in geo parks, protected environment areas with described geological objects, which are natural phenomena or preserved natural paleontological deposits as “Paleontological Path” in Cortona, Italy, dinosaurs trip in Patagonia, Argentina, fossil collection trips for different target groups, visits to paleontological museums as an education trip or for collectors. The Canadian’s experience in management of paleontological tourism is very impressive.

The real experience in Bulgaria of organizing and offering of high specialized tourist products, based on paleontological routes is not enough rich. Several fossiliferous sites are waiting to transform into tourist routes and paleontological visiting centres with special focus on relevant

museum expositions. Some of interesting places are in Dorkovo village, town of Asenovgrad, town of Elena etc.

All of them have their special place on the alternative tourism map of Bulgaria. Obviously the lack of well packaged paleontological tourist destinations or trails does not contribute to more complete tourist vision of our country. Our chance to present paleontological sites depends on obtained projects results with different scopes of research activity- geological, paleobotanical, paleoecological, cultural, social, tourism, etc. According to idea that the alternative tourism is a vital approach for sustainability development of economy, we promoted some geological phenomenas and unique finds that have a high scientific, and aesthetic value. Part of the recognizable natural sites as an element of tourist routes are related to Karlukovo karst area in North Bulgaria and more precisely to the territory of Geopark Iskar-Panega. Bulgarian Association of Geomedicine and Geotherapy (BAGG) developed and promoted a new geomedical tourist product since 2007 in the same area with focus on geo trails and routes [9].

2 AIM, OBJECT AND METHODOLOGY

The aim of research was to create a new marketing strategy for Bulgarian tourism, based on identify a suitable paleontological resource for tourism in the Rhodope mountain region. To describe a new product mix in order to achieve the positive vision of Bulgarian niche tourism.

The paleontological deposits, which are located in the Southwest Bulgaria (Borino-Teshel graben and Polkovnik Serafimovo graben) are the main objects of investigation.

The study was done in the following order:

Analysis of geological conditions and paleo-floristic deposits in the Rhodope Paleogene bedrocks - Accessibility analysis of deposits for tourists- Analysis of tourist infrastructure in the areas under study - Analysis of generating tourism markets -Modeling of the new tourism route "Rhodope Paleogene".

3 RESULTS

The geological deposit called "Rhodopean Paleogene" has been extensively researched by a number of researchers for more than 60 years. The geological section is distinguished by a variety of volcanic-sedimentary rocks and paleontological finds with biostratigraphic significance. The described paleofloristic collection of more than 27 rich fields has been processed and systematized both in its own paleobotanical and lithostratigraphic aspect. Among the sites surveyed, a special place occupied two grabbing decreases, where the conditions for storing floristic materials (leaf imprints) were really good and the fragments of them were fit for their identification. A detailed characterization of the geological profile, lithostratigraphic division based on the established macroflora and paleoecological reconstruction of the studied sites is made.

GEOLOGICAL AND PALEONTOLOGICAL OVERVIEW OF POLKOVNIK SERAFIMOVO GRABEN

The object is situated in the Smolyan Palaeogene Basin and is an element of the Smolyan depression. The Paleogene geological cross-section is formed by alternating sands, aleurolites, limestones, coal shales, tuffs, organogenic and bituminous limestones. Paleofloristic imprints were obtained in the carbonate sediment rocks. Representatives of Lauraceae, Pinaceae, Platanaceae, etc. are among the paleobotanical finds. More of them represent a serious scientific interest due to the species variety of the palaeoflora - 51 species, belonging to 23 families and 38 paleo genus. Among them, there are two paleo species, which are very new in Bulgaria and their determination expanded their geographic range to the east direction of Hungary. *Platanus neptuni* and *Dewalquea fraxinifolia* are specific paleontological finds that have a high value for specialized tourism [5]. The paleoecological and paleoclimate reconstruction of Polkovnik Serafimovo basin was made. Specified paleofloristic species are belonged to Mediterranean climate with a predominantly warm and humid period. The age range of obtained taxa in the Polkovnik Serafimovo deposit is an early Oligocene, Paleogene.

GEOLOGICAL AND PALEONTOLOGICAL OVERVIEW OF BORINO-TESEL GRABEN

The researched area is situated in West Rhodopes mountain, West Bulgaria.

The geological section is represented by fine-grained sandstones and argillites, which alternate with granitoid conglomerates, gneisses and marbles. The age range is early Oligocene [8]. According to the palaeoecological reconstruction of the deposit it connects with evergreen laurel forests, developing in subtropical climatic conditions. The finds from some paleo species are indicative of the existence of wetlands in the Borino-Teshel region.

More than 80 paleofloristic species are found and described in the deposit, which are predominantly of the Lauraceae, Fagaceae and Ferns families. Two endemic species have been identified, which gives the field even higher information and scientific value [6] [7].

TOURISM SURVEY OVERVIEW

The successful tourism/visitors destinations depend on the physical environment quality and a wide range of natural resources, as climate, waters, soils, landscape, energy and management of environment quality in general.

The analysis conducted by the Bulgarian Association for Geomedicine and Geotherapy (2010-2018) on the main generating markets for a specialized tourist products shows that the main tourist's interest is related to cultural (including geological, paleontological) and ecotourism destinations as additional tourist services. The best fossil hunting places in the world for 2017 are in line to paleontologists interests only. In the other hand, the specific supply as paleontological exhibitions or trails would provoke the interest in our country not only to geologists but also to visitors and free tourists who share the philosophy of Wellment tourism [3].

The successful tourism/visitors destinations depend on the physical environment quality and a wide range of natural resources, as climate, waters, soils, landscape, energy and management of environment quality in general.

Natural tourism resources in Mesta and Polkovnik Serafimovo grabens are determined by recreation landscape, geological phenomena, panoramic views, water falls, rivers, lakes and paleontological spots.

The assessment of tourism resources is available using collected data about the more than 14 ecotourism well known routes near Borino village, several geological objects with national value as caves “Jagodinska peshtera” and “Devil throat”, gorge “Trigrad jdrelo”, natural protected area “Kastrakli. Special focus is taken to evaluation of recreational potential of the natural landscape and the good ecological characteristics. The Rhodope Karst region is a quite suitable place for development of different geomedical tourist practices also [10]. There is famous eco route Waterfalls Canyon, which is a recognizable tourist site.

The availability of thermal springs and highly developed SPA tourism is a further argument for including the paleo-floristic natural deposits in the tourist portfolio of the Rhodope region.

In addition, the strong developed tourist infrastructure with different possibilities for relax, offering at the hotels, guest houses, wild tourism bases and authentically Bulgarian and local cuisine, we can conclude that there are key prerequisites for manage of creative or recreation tourism.

ASSESSMENT OF PALEONTOLOGICAL THEMATIC ROUTESPOTENTIAL OF RHODOPES AREA

Our interest in the described areas is directly related to the their potentials for developing high specialized scientific geoheritage tourism or paleontological creative tourism, recognizable and practiced in Australia, USA, Mexico, Brazil and many European countries [1], (<http://www.geoparkralsko.cz/sites/default/files/files/Geopark%20Ralsko-brozura%20A4-maleEN.pdf>).

The real market segmentation, tourists interests and geographic preferences were taken into account when modeling the tourist destination "Rhodope Palaeogene". The creation's aim is to develop specialized paleontological routes in Rhodopes mountain which have to be a recognizable with their geological (geoheritage value), paleontological and cultural characteristics, as an element of Bulgarian and world cultural heritage.

The detailed study of the local palaeoflora and geological sites in the period 1995-2015 is considered as the main prerequisite for the development of paleontological tourist destinations in these areas. In this case, all of them have a high scientific value. The abundance of the palaeoflora in the well developed Rhodopes tourist area, draws our attention to the creation of paleontological specialized type of alternative tourism. Its organization requires a good infrastructure that provides clear and safety access to natural paleontological deposits and offers comfort to clients. More than 27 paleofloristic collections from different localities has been processed and systematized. Among the studied sites, a special place occupied two grabens-Polkovnik Serafimovo and Mesta graben, where the conditions for storing floristic materials (leaf imprints) were really good and the fragments of them were fit for their identification. A detailed geological and lithostratigraphical profile based on the established macroflora and

paleoecological reconstruction of the studied sites is made [6,7,8]. Part of the Rhodopean finds have applied for palaeoclimate reconstruction of the Smolyan Paleobasin later [2] which gives a general idea of the geological development of this region and would represent both scientific and tourist interest. The restored paleoclimate environment in which the floristic remains were developed was subtropical, with two periods - dry - hot and warm - humid [2]. The described paleofloristic data, which carry specific information about the prevailing climate conditions in the ancient Smolyan basin, are considered as a major tourist resource with a tourist identity characteristic of the Rhodope region. The obtained information is included in the tourist portfolio of famous destinations, enjoying lasting interest and success (http://smolyanpress.net/?page_id=389).

Seven steps for successful paleontological destination are described on fig. 1.



Figure 1. Modeling key for paleontological destination management

The main drivers for special paleontological tourism development in Bulgaria are increasing incomes, new and cheaper transport, and intensive use of the info-communication technology. We can orient our client to the different scopes (core tourist product) of paleontological tourism in Bulgaria as a part of alternative tourism mix:

- Museum exhibitions core;
- Finding of paleontological examples (fossils) core with terrain work;
- Creative/education paleontological trails core;
- Alternative tourism package with paleontological basic elements core;
- Scientific paleontological destinations with thematic core.

4 CONCLUSION

If we accept the definition about cultural tourism, “Cultural tourism is the movement of persons to cultural attractions away from their normal place of residence, with the Heritage Tourism, Thematic Routes and Possibilities for Innovation 47 intention to gather new information and experiences to satisfy their cultural needs” [4], we have to clear term about paleontological tourism: it is most impressive, creative and complementary cultural products, oriented to visitors with high emotional needs.

The tourist interest in Paleo-Ottoman Gardens in Mata, Brazil, is too remarkable. And the attendance of the Fossil Forest in Chemnitz, Germany and that one in Dorset, England, are

seriously evidence of the increasing tourist interest in paleontological deposits. Bulgaria has a unique chance for image positioning on the tourist market using its paleontological deposits and geological phenomena that can successfully be included in the tourist branding.

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BAGG 2007

BAGG 2018

Source: BAGG archive 2007-2018