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Original Theoretical Research

Promising Directions for the Development of Popular Science Tourism in the Rostov Region

Vadim S. Makarenko ✉, **Alisa V. Miroshnichenko**
Don State Technical University, Rostov-on-Don, Russian Federation
✉ vadim251@yandex.ru

Abstract

Introduction. The problem of the publication is related to the problem of formation and implementation of popular science tours in a specific region as a specific type of tourism. In this regard, it is relevant to consider the specifics of popular science tourism and the prospects for its organization in the Rostov region. The purpose of the article is to identify promising areas for the development of popular science tourism in the Rostov region based on the analysis of the specifics of popular science tourism.

Materials and Methods. The following scientific methods are used in the study: comparative analysis, which allows comparing the subjects of the Russian Federation by the level of development of popular science tourism; documentary, which facilitates the inventory of existing program documents in the field of popular science tourism; prospective, on the basis of which the directions of further development of the type of tourism under study are determined; and the "keys" method, within the framework of which the Rostov Region was considered as a key object for the formation of popular science routes.

Results. The conceptual and terminological apparatus of the researched problem, materials of domestic and foreign researches of popular science tourism are analyzed and the applied methodology is described. The current state of popular science tourism in Russia is analyzed, in particular, the distribution of existing routes by administrative subjects of the country. The main program documents on the researched topic are studied.

Discussion and Conclusion. Focusing on the Rostov Region as a "key" region, the authors identified promising areas for organizing popular science routes, such as the formation of comprehensive excursion programs based on universities, expansion of the interactive component and integration of popular regional tourist destinations into tours. The content and advantages of each of the proposed areas are determined from the standpoint of including the Rostov Region in the sphere of popular science tourism.

Keywords: tourism, popular science tourism, tourist destination, Rostov region, resources, excursions, tourism development

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Оригинальное теоретическое исследование

Перспективные направления развития научно-популярного туризма в Ростовской области

А.С. Макаренко ✉, **А.В. Мирошниченко**
Донской государственный технический университет, г. Ростов-на-Дону, Российская Федерация
✉ vadim251@yandex.ru

Аннотация

Введение. Проблематика публикация связана с проблемой формирования и реализации научно-популярных туров в конкретном регионе как специфического вида туризма. В связи с чем актуальным является рассмотрение

специфики научно-популярного вида туризма и перспективы его организации на территории Ростовской области. Цель статьи – на основе анализа специфики научно-популярного туризма выявить перспективные направления развития научно-популярного туризма в Ростовской области.

Материалы и методы. При проведении исследования применяются научные методы: сравнительный анализ, позволяющий сравнить субъекты Российской Федерации по уровню развития научно-популярного туризма; документационный, способствующий инвентаризации существующих программных документов в области научно-популярного туризма; перспективный, на основе которого определяются направления дальнейшего развития исследуемого вида туризма; и метод «ключей», в рамках которого Ростовская область рассматривалась как ключевой объект формирования научно-популярных маршрутов.

Результаты исследования. Проанализирован понятийно-терминологический аппарат исследуемой проблематики, материалы отечественных и зарубежных исследований научно-популярного туризма и описана используемая методика. Проанализировано современное состояние научно-популярного туризма в России, в частности, распределение существующих маршрутов по административным субъектам страны. Изучены основные программные документы по исследуемой теме.

Обсуждение и заключение. Ориентируясь на Ростовскую область как «ключевой» регион, авторы выделили перспективные направления организации научно-популярных маршрутов, такие как формирование комплексных экскурсионных программ на базе университетов, расширение интерактивной составляющей и интеграция в туры популярных региональных туристских дестинаций. Определено содержание и преимущества каждого из предложенных направлений с позиции включения Ростовской области в сфере научно-популярного туризма.

Ключевые слова: туризм, научно-популярный туризм, туристская дестинация, Ростовская область, ресурсы, экскурсии, развитие туризма

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Introduction. In the period of domestic tourism boost, reflected in the “Strategy for Tourism Development in the Russian Federation until 2035” [1], the task of identifying and developing tourism resources in the regions is actualized [1], the task of identifying and developing tourist resources in the regions is actualized. At the same time, special attention should be paid to the resources that have not been previously involved in the tourism sphere of territories, but are capable of becoming a “growth point” of their development. In particular, such resources include those that contribute to the development of popular science tourism.

Speaking about the definition of this type of tourism, we note that popular science tourism implies a type of tourism associated with visits to scientific institutions, such as laboratories, research institutes, educational institutions, as well as destinations in open areas (archaeological excavations, polygons and others).

The multidimensionality of objects of popular science tours implementation on the one hand and the specificity of the content of their programs on the other require special approaches to their formation both at the level of specific locations and at the level of regions. The object of the study is popular science tourism as a specific type of tourism. Rostov region acts as a “key” subject for the analysis of the organization of popular science routes. The aim of the article is to identify promising directions of popular science tourism development in Rostov region on the basis of analyzing the specifics of popular science tourism.

Materials and Methods. The material of the study was the works of foreign and domestic authors, considering the concept and features of the organization of popular science tourism. The difference of the studied direction of tourism from others is outlined in the work of E.A. Krylova. E.N. Plieva [3] characterizes this type of tourism as part of the educational process, which poses special challenges to the identification of the resource base. V.V. Verna, S.S. Skaranik, A.V. Soroka [4] consider popular science tourism from the point of view of the current industry conjuncture, which is also important to consider when conducting this study.

In scientific literature, the concept of popular science tourism has a certain diversity [5; 6]. In the work of S. Slocum, A. Holden and S. Kline outlines the problem of integration of theoretical issues of popular science tourism development [7]. On the territory of the post-Soviet space the study of A.G. Koshim, the object of which is popular science tourism at Baikonur Cosmodrome, deserves attention [8]. In the aspect of the application of popular science tourism at the level of regions, the authors relied on the works of I.Yu. Ponomareva, V.Yu. Savinov [9], devoted to the development of this type of tourism in the Tula region, M.V. Rygalova and E.V. Rygalov (Altai Krai) [10] R.I. Loktev, R.A. Kolesnikov, D.V. Chernykh (Yamalo-Nenets Autonomous Okrug) [11] and V.G. Shepilova and E.R. Pisarenko (Donetsk People’s Republic) [12].

In conducting the research, scientific methods and approaches were used: comparative analysis, which allows comparing the subjects of the Russian Federation in terms of the level of development of popular science tourism, documentary analysis, which facilitates the inventory of existing program documents in the field of popular science tourism, prospective analysis, on the basis of which the directions for further development of the type of tourism under study were determined, and the "keys" method, within the framework of which the Rostov Region was considered as a key object for the formation of popular science routes.

Results. Currently, issues related to the organization of popular science tours are being updated, in particular, popular science tours in the regions of the country are posted on the portal наука.рф. At the end of 2024, 70 tours were presented on the portal, taking place in the territory of 23 subjects of the Russian Federation (Table 1).

Table 1

Distribution of popular science tours by subjects of the Russian Federation on the portal наука.рф

№	Region	Tour name
1	Amur Region	Journey to Science. Vostochny Cosmodrome
2		Journey to Science. Vostochny Cosmodrome
3	Volgograd Region	Teach me how to become a scientist, teach me.
4	Irkutsk Region	Baikal Territory is an astronomical paradise
5		Tunka Valley Observatories
6		Living Geology of Olkhon
7		Tunka Valley Observatories
8		"All Wonders of Nature are Scientifically Explained"
9		Diving (winter version)
10		From Kurykan to Cossacks. The development of Eastern Siberia
11		Catastrophic events traces
12		To ancient Baikal
13		Tour to the first biological station on Baikal
14	Kaliningrad Region	Exploring the world's oceans
15	Kaluga Region	What the atom can do
16		Obinsk – Kaluga
17	Karachay-Cherkess Republic	Dark Sky Park
18		Dark Sky Park (2 days)
19		Dark Sky Park (3 days)
20	Krasnodar region	Science Day. Sochi Centre
21		Journey into Science in Sochi
22		Science Day in Adler and Sirius FT
23	Leningrad Region	Ivan Pavlov's Biostation
24	Moscow	Travelling to science. Moscow Universities: Moscow State University
25		Moscow Universities: Natural Sciences
26		Moscow Universities: Rosbiotech
27		Legal World
28		Moscow Space
29		Physicists and Chemists
30	Nizhny Novgorod region	Unreal is Real
31		Let there be light!
32		Journey to Science. Nizhny Novgorod
33		People ahead of time

End of table 1

№	Region	Tour name
34	Novosibirsk region	Physics. Planes. Space
35		Science but fun
36		Science about the Earth and its inhabitants
37		Siberian Sciencecity
38	Perm region	Travelling to science. An innovative Perm
39		A pharmaceutical Perm
40		In search of the Perm period
41		In search of the Perm period (2 days)
42	Republic of Bashkortostan	Popular science excursion to Yangan-Tau Geopark
43		Take a new look at the world
44		'Socrates'. popular science route of humanitarian orientation
45		Ufa through the prism of mathematics and physics
46		From the origin of life on Earth to V.I. Vernadsky's noosphere
47		'Pythagoras'. IT-UFA
48		Ufa 'Avicenna'. Biological and medical excursion
49		Shen Kuo. world of scientific and technical developments
50		"«Dmitry Mendeleev». Ufa – the chemical capital of Russia: from atoms to materials of the future"
51	Republic of Dagestan	A scientific Makhachkala
52	Republic of Crimea	Crimea: from the mysteries of history to the mysteries of space
53		Crimea as the peninsula of discoveries
54		Crimean Kaleidoscope
55		Crimean Sprint
56	St. Petersburg	Travelling to science. St. Petersburg
57	Sverdlovsk region	Science: the foundation of national industry
58		From space to atom
59		Ekaterinburg
60	Tambov region	Tambov Science-Popular: From Idea to Discovery
61	Tomsk region	Tomsk-Siberian Athens
62		Tomsk Chemistry
63		City of Science and Innovation
64	Tyumen region	When conquer the subsoil, preserve nature
65		Siberian Energy
66	Chelyabinsk region	To the birthplace of Kurchatov
67		Where electricity comes from
68		Secrets of unclassified laboratories
69	Chechen Republic	Chechnya: from history to innovation
70		Welcome to Chechnya!

Table 1 shows that currently popular science routes cover the territory of less than 1/3 of the subjects of the Russian Federation, which makes it possible to recognise this type of tourism as only developing in the Russian tourism field. Also, the Rostov region is absent among the subjects, despite the available tourist resources. In particular, the research base of the Don State Technical University and the Southern Federal University, South-Russian State Polytechnic University (NPI) named after M.I. Platov, All-Russian Research Institute of Viticulture and Winemaking named after Y.I. Potapenko – a branch of the Federal Rostov Agrarian Scientific Centre, State Natural Biosphere Reserve 'Rostovsky' and State Natural Reserve 'Gornensky'. Due to the described above, this region seems to be promising for the implementation of popular science routes.

The Concept of popular science tourism development in the Russian Federation for the period up to 2035 acts as a 'catalyst' for the development of the studied type of tourism. This concept presents the terminological apparatus of popular science tourism, identifies potential objects of visit, identifies the target audience and reflects the role of educational organisations in the implementation of popular science tours [13].

Another document is the Roadmap (In Rus.: Дорожная карта) for the development of popular science tourism in the Russian Federation, approved by the Government of the Russian Federation on 19 December 2022. This document presents activities planned for implementation at the national and regional level. It should be noted that despite the fact that the designated period of implementation of the main activities is 2022–2024, the need for their implementation after this period is reflected [14].

An important document for the formation of popular science routes is the All-Russian Register of Popular Science Tourism Objects [15]. By the end of 2024, 1,154 objects were included in this register, including educational institutions, museums, specially protected natural areas, historical sites, etc. In 2025, it is planned to update this register, which allows us to predict a significant expansion of official objects for the implementation of popular science routes.

Discussion and Conclusion. Based on these documents, we can identify promising directions. Development of popular science tourism in the Russian Federation, in particular in Rostov region. In this case, a separate role should be attributed to higher educational institutions as institutions that combine scientific and educational function, which makes it possible not only to familiarize with different types of scientific activities, but also to offer appropriate educational trajectories.

As one of the promising directions it is possible to emphasize excursions to universities, including objects related to different branches of scientific activity. On the one hand, this allows to move away from the limited content of excursions and makes it possible to focus on a wider contingent of participants, on the other hand, this approach allows to familiarize excursionists with the profile of leading higher education institutions (for example, Don State Technical University and Southern Federal University in Rostov-on-Don).

The second promising direction is to increase the interactivity of routes. In addition to the currently widespread master classes included in the program of popular science routes, it is possible to include in the programs elements of virtual and augmented reality, animation program, reflecting, for example, the key moments of the history of science development and the lives of great researchers, which cannot be shown in real time.

The third direction is the integration of popular science routes with cognitive, ecological, rural and other. In particular, it seems promising and customer-oriented combination of popular science objects and key tourist destinations of the Rostov region within one tour. It is possible to use the objects included in the tourist routes "Peter's I Startup" and "Big Cossack Circle", as well as the locations of natural areas, such as the State Natural Biosphere Reserve Rostov and others (Table 2).

Table 2

Perspective directions of organization of popular science tours in Rostov region

№	Direction	Content	Advantages
1.	Popular science tourist routes on the territory of universities	Conducting tours of higher education institutions, including introducing tourists to university research activities and research carried out in local laboratories	Involvement of possible entrants in scientific activities, introduction of institutes of higher education in tourism activities
2.	Introduction of interactive component	Inclusion in the programme of virtual or augmented reality elements, animation components reflecting historical events or personalities related to science	Drawing attention to complex scientific topics through playfulness
3.	Integration of popular science tourist routes with other destinations	Display of scientific objects in tourist routes not originally aimed at popular science tourism resources.	Engaging disinterested tourists in scientific activities

The highlighted directions will allow solving several tasks of popular science tourism development in Rostov region:

1. Increasing the interest of one of the main target categories of such tours, i. e. schoolchildren by diluting the scientific component of the tours with interactive and animation components.

2. Expansion of potential segments of tourists due to the inclusion in tours of locations representing various types of tourist resources (natural, cultural and historical).

3. Export of the positive image component of popular regional destinations on popular science tours, in which they are included as objects of demonstration. This will make it possible to predict increased interest to such tours even at the initial stage of realization.

4. Use of the developed tourist infrastructure of the region, contributing to the realization of the required tourist services without additional costs for the construction of new facilities.

It seems that the realization of popular science tours in these directions will give the opportunity to consider popular science tourism as one of the potential "points of growth" of the tourist sphere of Rostov region.

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About the Authors:

Makarenko Vadim Sergeevich, Cand. Sci. (Geography), Associate Professor of the Department of Tourism Service and Hospitality Industry, Don State Technical University (1, Gagarin Sq., Rostov-on-Don, 344003, Russian Federation), ORCID, ScopusID, SPIN-code, vadim251@yandex.ru

Miroshnichenko Alisa Vitalievna, Undergraduate Student of the Department of Tourism Service and Hospitality Industry, Don State Technical University (1, Gagarin Sq., Rostov-on-Don, 344003, Russian Federation), ORCID, ScopusID, SPIN-code, alisa_miroshnichenko@list.ru

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All authors have read and approved the final manuscript.

Об авторах:

Макаренко Вадим Сергеевич, кандидат географических наук, доцент кафедры сервиса туризма и индустрии гостеприимства, Донской государственный технический университет (Российская Федерация, 344003, г. Ростов-на-Дону, пл. Гагарина, 1), ORCID, ScopusID, SPIN-код, vadim251@yandex.ru

Мирошниченко Алиса Витальевна, студент бакалавриата кафедры сервиса туризма и индустрии гостеприимства, Донской государственный технический университет (Российская Федерация, 344003, г. Ростов-на-Дону, пл. Гагарина, 1), ORCID, ScopusID, SPIN-код, alisa_miroshnichenko@list.ru

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