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ECOLOGICAL TRAILS OF THE "YUGYD VA" NATIONAL PARK: DEVELOPMENT POTENTIAL AND CONSERVATION ISSUES

The relevance of our research is the condition and problems of the park's ecological trails, as well as identifying the potential for their development based on the opinions of local residents and park staff, with an emphasis on preserving the natural environment.

Objectives of the report:

- 1. Describe the existing ecological trails of the Yugyd Va National Park and their characteristics.
- 2. Present and analyze the results of a survey of residents of the Komi Republic and park employees regarding ecological trails.
 - 3. Identify the key issues facing nature trails and tourism development in the park.
- 4. Suggest solutions to the identified problems and possible directions for the development of ecotourism in Yugyd Va.

Object of study: Ecological trails of the Yugyd Va National Park.

Subject of study: Conservation issues and development prospects for the ecological trails of the Yugyd Va National Park and their impact on natural complexes and local populations.

Yugyd Va National Park's unique features include its large area (almost 2 million hectares), its remoteness from populated areas, its lack of population, its underdeveloped road network, and its lack of communications. Based on the structure of the territory and existing infrastructure, Yugyd Va National Park's ecological trails can be divided into two groups based on the location of their starting and ending points: 1. Those linked to bases and shelters: excursions, weekend getaways, shortterm (up to 1 week) tours, and school and student internships. These trails, in turn, can be divided into those that are educational and cognitive, in which information is paramount, and those that are walking trails, or terrain cures, where less information is required and the main effect is achieved through the scenic beauty of the route, impressions, and sensations. 2. Trails associated with multi-day tourist routes planned as radial excursions during any tour, including sports ones. This group of trails is much more diverse, richer in attractions, less populated, but also less accessible both for visitors and for equipment. In terms of "specialization," these trails can be either purely landscape (aimed at visiting natural features such as lakes, peaks, etc.) or with a distinct educational component. [4] This is precisely how the first educational trails were designed during the park's planning in the 1970s, long before its official establishment. At that time, the trail routes were planned as an "educational" component to the tourist route as the "best recreation."

In 2013-2014, work was carried out to design a modular system of 5 ecological trails with a total length of over 10 km in the area of the Pereprava base - complex, primarily botanical, nearby are habitats of "Red Book" plants, such as the lady's slipper, the dark-red helleborine, the white leucorchis, the mosquito lily, the singleflowered cotoneaster, the Kuril tea, etc. Naturally, mass visits by tourists pose a threat to them. The main goal of developing the walking and educational trails was to reduce the impact on natural complexes, including the preservation of the habitats of rare plants. Here, the initial marking of the trails was carried out, a list of species was compiled, descriptions of the main objects of interest were made, and excursion texts were prepared. [1]

In 2004-2008, a network of complex, primarily landscape eco-trails was designed in the northern part of the park from the Sanavozh base, two of which run along the profile of the valley - from towpaths to the bald mountains. These trails offer habitats rare plants: in the mountainous areas – cushion plants (lauseleria, philodozze, campion, dryas, and diapensia), while on rocky outcrops – Yugra poppy, rhodiola, aster, barthsia, and saxifrage. All these plants are ornamental and of great interest to tourists, so their descriptions are included in excursions – not only specialized educational ones but also general ones.

As of 2024, 19 tourist routes, including ecological trails, were developed in Yugyd Va National Park in the Komi Republic.

One of the remarkable trails the "Valley of Ancestors" starts at the border of the national park (500 m from the Europe-Asia stele) and leads to the plateau of Mount Yaruta, covering 4.7 km. On the plateau, you can admire the remnants of various shapes, get acquainted with the vegetation of the Northern Urals, and also encounter representatives of the park's animal world.

The "Brovka" ecological trail is the shortest module of the "Pereprava" trail system. It passes through the most interesting botanical sites: the shoreline is rich in rare shrub species, including those listed in the Red Book.

The "Forest Road" ecological trail has become the key to the modular trail system. Other ecological routes are connected to it. Its distinguishing feature is the wide variety of the rarest plant species listed in the Red Book. The "Poima" ecological trail runs along the edge of the willow thicket and covers a strip that includes a towpath and a floodplain meadow. This route is designed for visitors with a wide range of interests, it provides tourists with comprehensive information about the flora of the Kozhim River. [6]

As part of the research, online surveys were conducted among two groups of respondents: local residents familiar with and having visited Yugyd Va National Park, and park staff. A total of 103 local residents and 14 park staff participated in the surveys, resulting in a total sample of 117 people. In response to the question, "How would you rate the overall environmental condition of Yugyd Va National Park, based on your visits or impressions?", 89 of 117 local residents (76%) and all 14 park staff (100%) chose the highest score (5/5). 28 local residents (24%) rated the condition 4/5. This indicates a high level of satisfaction with the natural condition of

the park. Despite the positive assessments of the overall condition, respondents identified a number of existing environmental problems associated with the park or its outskirts. According to respondents, the most pressing problems are: poaching (indicated by 41 votes (34% of the total number of survey participants)), pollution (noted by 21 votes (17%)), uncontrolled tourism (highlighted by 46 votes (39%)). Economic activity (impact on adjacent territories) (indicated by 9 votes (8%)). These data emphasize that even in the conditions of the high natural value of the park, external factors and certain types of human activity pose a real threat to the ecosystem.

According to the survey results, awareness of the park's ecological trails was incomplete: only 63% of respondents knew about the existence of ecological trails in Yugyd Va National Park. 79% of voters (of the total number of respondents) admitted that they have not visited the park's ecological trails. This is due to a lack of information, limited opportunities to visit the park, and the remoteness or difficulty of accessing it.

Opinions regarding the informational quality of existing trails were divided, but with a slight bias toward high ratings: 52% of respondents considered the trails to be 5/5 informative. The remaining 48% rated the informational quality as 4/5. However, when assessing the problems tourists encountered on ecological trails, difficulties such as garbage were identified, with 45% of survey participants facing this problem, 19% of respondents noticing the resolution of paths, and 36% of respondents facing the lack of navigation.

The most common wish among survey participants was for the expansion and improvement of the existing network of nature trails: 88% of survey participants expressed a desire for more trails and for them to be better equipped. For the national park staff, the main difficulty was funding. This factor was identified by all employees as a key issue. A lack of financial resources significantly limits the ability to create new trails, improve their amenities (e.g., install navigation, rest areas, information boards), and regularly maintain them.

The survey revealed low public awareness of the national park's ecological trails and a lack of financial resources, which poses a significant barrier to tourism development and attracting support. According to survey participants, the overall environmental condition of Yugyd Va National Park is assessed as predominantly positive.

Based on the identified problems, we propose the following measures:

- 1. publish articles about significant events of the park in the media;
- 2. create a cycle of programs or reports on local television dedicated to "Yugyd Va";
- 3. publish photos and video content about the park's ecological trails, animals, and vegetation, as well as organize online contests, quizzes, and live streams with park experts on social media, use targeted advertising to draw attention to the park and its trails;
- 4. add a section with news, event announcements, photo galleries, and video galleries to the official park website;

- 5. organize regular presentations of the park and its tourist opportunities at educational institutions, tourist centers, and city events;
- 6. post volunteer recruitment announcements through the media, social networks, and partner organizations;
- 7. recruit volunteers to help with the development and maintenance of routes, such as clearing, repairing, installing navigation signs, and removing garbage;
- 8. provide students studying biology, ecology, and geography with the opportunity to intern at the park;
- 9. participate in competitions for environmental and nature conservation grants (Russian and international);
- 10.look for and attract corporate sponsors interested in supporting environmental projects and developing the region;
- 11.launch online fundraising campaigns for specific projects (for example, for the development of a new trail, the installation of information stands).

The implementation of the proposed measures will not only improve the condition of ecological trails and increase the level of safety for visitors, but also increase the attractiveness of the park for various categories tourists, contribute to the formation of environmental culture among local population and guests, provide sustainable financing for environmental protection and infrastructure development, create new opportunities for the economic development of the region through tourism, strengthen the status of the Yugyd Va National Park as a unique natural object and an important center of ecological tourism.

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