

# HERITAGE PROTECTION THROUGH A GEOMORPHOLOGIST'S EYES: FROM RECORDING TO AWARENESS RAISING

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## 1 Introduction

This special issue of *Acta Geographica Slovenica* is dedicated to geographer Bojan Erhartič at the ZRC SAZU Anton Melik Geographical Institute, who died in a plane crash in mid-October 2013 while carrying out fieldwork and photographing Slovenian landscapes clad in wonderful autumn colors. He was only thirty-three years old.

In less than ten years of conducting geomorphology and nature conservation research, his devoted work firmly established him in the Slovenian professional community. He was also gaining an increasing international profile, which is clearly confirmed by a letter from Eric Fouache from the Sorbonne, the chair of the International Association of Geomorphologists, who, among other things, wrote the following upon Bojan's death: *»Our colleague Bojan Erhartič was a pioneer in studying geomorphological values in Slovenia and was developing research on Slovenian geomorphological heritage and geotourism, while also taking part in the development of the Slovenian geomorphological school.«*

## 2 Background

Because geography takes an extremely broad view of physical space, it can contribute significantly to a comprehensive and multidisciplinary natural and cultural heritage protection system. According to UNESCO, which seeks to preserve the greatest achievements of nature and humankind worldwide, *»heritage is our legacy from the past, what we live with today, and what we pass on to future generations. Our cultural and natural heritage are both irreplaceable sources of life and inspiration«* (Internet 1).

Areas with exceptional or rare features, or areas with a great diversity of features, are also relevant to heritage. Both of these qualities are also criteria for determining the significance of surface geomorphological natural values. A great diversity of terrain and features – which is typical of Slovenia, for instance (Ciglič and Perko 2013) – results from the fact that, under the impact of many factors, the Earth's surface is transformed by various geomorphological processes that create extremely diverse landforms and landscapes (Migoń 2010). In order to interpret geomorphological processes correctly, it is necessary to understand rock structure, the origin, development, and movements of the Earth's layers, and the impacts of external processes (Reynard 2004). This means that a complex geographical research approach can be used to detect and evaluate geomorphological heritage from various points of view (e.g., scientific value, diversity, and aesthetics). The correct evaluation of geomorphological heritage includes selecting the most important values, and this forms the basis for its management. An important part of management entails activities such as education, awareness raising, and interpretation (Erhartič 2010; 2012).

Just as it is unnecessary to protect all landforms (Komac, Zorn and Erhartič 2011), it is also not practical to seek to protect heritage as a whole. Therefore the most important or valuable parts of heritage should be defined and protected through appropriate measures. This is also supported by the fact that the impacts and pressures of human activity, especially those on geodiversity and geomorphological heritage, are increasing. The need arises for more extensive knowledge of conserving nonliving nature, at both the scholarly and management levels. In this regard, Bojan Erhartič's work should be highlighted because he was the first Slovenian researcher to tackle the demanding task of comprehensively evaluating geomorphological heritage. Even though this type of natural heritage in particular is the very foundation of a landscape's tourism attraction, it is often neglected because it is difficult to evaluate its significance, let alone bridge the gap between evaluation and its significance for management.

Even though only little heritage is included on the UNESCO World Heritage List, ten generally applicable and completely clear criteria are used for assessing outstanding universal value. Two of them also include geomorphological forms: *»contains superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance«* and *»is an outstanding example representing major stages of Earth's history, including the record of life, significant on-going geological processes in the development of landforms, or significant geomorphic or physiographic features«* (Operational Guidelines ... 2015).

The evaluation of beauty is one of the greatest challenges, also in connection with the criteria mentioned above. Even though many philosophers have asked *»What is beautiful?«* and Lothian (1999) suggests that one receives as many answers to this question as there are philosophers – or, in other words, that this is about the subjective ability to experience beauty (Šmid Hribar 2011) – certain principles are nonetheless

apparent regarding the beauty of a specific landscape. However, philosophers establish differences in perceiving landscape beauty between different population groups according to age, education, and cultural environment (Kaplan and Herbert 1987). Over the past decades, they have also established that beauty affects many economic and social outcomes (Florida, Mellander and Stolarick 2011).

With regard to heritage protection, one must also not ignore awareness raising because it is key for people to recognize heritage as something that needs to be protected and that cannot be preserved for future generations if people do not have an appropriate attitude toward it. This may involve heritage at the local, national, European, or global levels; the paths may vary greatly, but the goal is the same everywhere.

Heritage interpretation is a more recent phenomenon in heritage studies and is one of the most suitable and established forms of informing and raising the awareness of visitors and local people. The goal of modern and comprehensive landscape interpretation, which goes beyond interpreting natural and cultural heritage, is to make people more familiar with a specific topic in a comprehensive way in order to help them understand the landscape. This encourages them to engage in further explorations and critical thinking (Wearing et al. 2008). Protected areas' mission is not only to protect, but also to enable people to experience a specific area's nature, cultural heritage, and intangible values. Arranging and presenting protected areas for visitors are important goals, operational purposes, and hence important tasks in managing these types of areas. However, the presence of visitors often causes disturbances that go against the desired goal to protect unique and diverse natural or cultural landscapes; therefore, it is important to keep careful watch over the visits to these areas (Baldauf et al. 2011) and use them to raise people's awareness.

### 3 The articles

The Acta geographica Slovenica journal has a long tradition in human geography (Urbanc, M., Kladnik, D., Perko, D. 2014). With the articles in this special issue (volumes 56-1 and 56-2) we want to present comprehensive and multidisciplinary nature of geographical approach to the study of heritage. Following this introduction the special issue begins with the article »*The contribution of Bojan Erhartič to geography*« (Smrekar, Zorn and Komac 2016) in which the editors concisely present Bojan Erhartič's short but rich research career. His research path is presented chronologically; his affinity for mountains led him to study the environmental impacts of mountain lodges, followed by an interest in mountain landforms and their protection, which he summarized in a volume on the evaluation of the geomorphological heritage in the Triglav Lakes Valley (*Dolina Triglavskih jezer*) in the Julian Alps in Slovenia.

In their article »The role and importance of the landscape park Udin Boršt,« Mateja Šmid Hribar and Mateja Ferk (2016) studied the currency of the Udin Boršt protected landscape area in Slovenia, which was declared a historical and cultural monument in 1985. Using the Swiss method of evaluating landforms (Reynard et al. 2007), they established that the current ordinance should be amended in order to safeguard this area in central Slovenia as part of the joint protection of monuments and nature.

In his essay article »Aspects of geodiversity of Palaeozoic limestones in the Black Mountains of southern France,« Christian Giusti presents the significance of the diversity of rock composition and related geomorphological heritage. This article is interesting because it presents the cultural importance of geomorphological heritage, which is also reflected in Tolkien's imaginary worlds. Hence it is no coincidence that this article is also conceived as a journey »there and back again,« during which the reader follows, observes, and learns about the geomorphological and geological heritage of France's Savoy Alps.

Natural and cultural heritage protection makes no sense without well-informed local residents and visitors because they are the only ones that can successfully maintain the protected areas. Aleš Smrekar, Mateja Šmid Hribar, Jernej Tiran, and Bojan Erhartič (2016) authored the article »A methodological basis for landscape interpretation: The case of the Ljubljana Marsh,« in which they present a methodological basis for landscape interpretation using a form for identifying suitable topics and selecting the right interpretation tools. The application of this form is illustrated using the case of the Ljubljana Marsh in central Slovenia.

In their article »The importance of mountain geomorphosites for environmental education,« Emmanuel Reynard and Paola Coratza (2016) discuss the importance of mountain areas. They highlight mountains as areas with an extensive diversity of unique features that offer great potential for heritage protection. They review six reasons why mountain areas should be covered separately in school programs as sensitive landscapes on which current landscape changes have a strong impact. The paper presents two case studies in the Italian Dolomites and the Swiss Alps.

In their article »Stakeholder conflicts in the Tivoli, Rožnik Hill, and Šiška Hill Protected Landscape Area,« Aleš Smrekar, Mateja Šmid Hribar, and Bojan Erhartič (2016) study what is probably the most popular protected area in Slovenia, less than 1 km from the center of Ljubljana. Conflicts have arisen between various stakeholders in the area, especially visitors and landowners, and therefore the authors suggest several solutions through which this high-quality environment could be preserved by fulfilling a basic requirement: designating a manager.

Bojan Erhartič evaluated the landforms in the Triglav Lakes Valley (Dolina Triglavskih jezer) using the Swiss method (Reynard et al. 2007), as early as 2012, but he was not satisfied with the results section that involved aesthetic evaluation. In their article »The beauty of landforms,« Aleš Smrekar, Katarina Polajnar Horvat, and Bojan Erhartič (2016) therefore used a survey method to examine the most representative landscape features in this same area. They established that water elements (i.e., lakes) were the most attractive to respondents, and that crushed zones were the least attractive.

## 4 Conclusion

This special edition of *Acta geographica Slovenica* focuses on an emerging topic in geography that brings together geomorphology and environmental protection. The selective perspective on natural heritage used to date and consequently the corresponding operation has proven inadequate. Through his work, our colleague Bojan Erhartič, who left us much too soon, paved the way for us (in geomorphological heritage protection), outlined directions of future research (in heritage interpretation), and also hinted at others (inclusion of aesthetics).

Thus in some way, this special edition rounds off his scholarly creativity; parts of the articles published here, or in some cases the lion's share of them, were created by him. The goal of this special issue is to present the character and work of our esteemed colleague to the reader, which is why the articles must be read together, bearing in mind Bojan's contribution to geography. It is also by design that the journal's cover and some of the articles feature Bojan's photos of natural heritage.

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