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THE SIGNIFICANCE OF SELF-GUIDED INTERPRETIVE TRAILS IN PROTECTED AREAS FOR THE ENVIRONMENTAL EDUCATION OF VISITORS

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Abstract

The aim of this article is to identify the level of environmental knowledge of visitors to interpretive trails. Specifically, this research investigates the factors that influence potential differences in the environmental knowledge of visitors to interpretive trails and to the surrounding protected areas. Only some visitors to protected areas also visit interpretive trails. They tend to be more environmentally conscious and have higher levels of environmental knowledge than all visitors to protected areas. It should be noted that visitors who have more environmental knowledge are also those who have the greatest interest in the surrounding environment. It, therefore, follows that interpretive trails are visited by those with an interest in them, not by visitors to protected areas as a whole. Secondly, visiting interpretive trails contributes to visitors' knowledge, but this potential contribution has no effect on visitors who lack prior knowledge and are the intended targets of environmental-awareness education on the trails. Based on the number of environmentally conscious visitors, interpretive trails, in their present condition, do not make any significant contributions to environmentally friendly tourism in protected areas.

Keywords: *Central Europe, outdoor recreation, environmental tourism, self-guided interpretive trails, environmental programmes*

1. INTRODUCTION[1]

Environmentally conscious tourism (Leslie, 2012a) is crucial in areas sensitive to external intrusion. However, tourism is by nature always such an intrusion (Goeldner and Ritchie, 2012) and poses a threat to many types of areas (Williams, 2000), including large, protected landscape areas and national parks (Hall and Page, 2006). These two types of areas are rare from the perspective of the ecosystem and the landscape but serve as the main

1 The field survey was undertaken by Monika Riedererová, Iveta Ochranová and Jitka Žůrková and financially supported by the Czech Science Foundation – GACR P404/12/0334 "Factors of visitors' relation to the ambience of attractions in vulnerable areas". We are grateful to two anonymous reviewers for many helpful comments on previous versions of the text and to Vivian L. White Baravalle Gilliam for improving our English.

areas for spending leisure time outside the urban environment of everyday life (Balmford et al., 2009). According to the International Union for Conservation of Nature categorization of protected areas (IUCN, 2014), the recreational function of national parks and protected landscape areas is a significant aim of the creation. Coordinating the protection of ecosystems and landscapes (which relates to the protection of species and locations) with tourism activities (and their accompanying influences) is a complex issue (see, for example, Fredman and Sandell, 2009), in which interpretive trails and environmental education play important roles (Newsome, Moore and Dowling, 2013).

This paper has two objectives. The first aim is to identify differences in the environmental knowledge of three groups of visitors to protected areas: those visitors about to enter an interpretive trail, those who have just completed an interpretive trail and those in settlements near an interpretive trail. The first two groups can be considered visitors to interpretive trails, and the third group visitors to the protected area as a whole. We propose the following hypothesis: interpretive trails are omnipresent in large protected areas; in other words, they are easily accessible. Therefore, the samples of visitors to interpretive trails and to protected areas as a whole should be the same.

The second aim of this study is to identify the factors influencing visitors' degree of environmental knowledge.

1.1 Interpretive trails

Networks of tourist trails have been built as an all-purpose tool to solve the spatially oriented issues of tourism in specific regions (Rogerson, 2002; Snowball and Courtney, 2010). The spatial potential of building tourist networks has long been recognised in developed countries (Briedenhann and Wickens, 2004) and developing countries (Lourens, 2007). These networks hold huge potential to aid in the distribution of the attendance burden on localities, the spatial distribution of tourism revenues, the integration of less well-known sites within an existing tourism product, the raising of awareness of destinations, the prolonging of visitor stays, the encouragement of tourists to spend more money at destinations, the attraction of new visitors, the inspiration of new visitors to return and the expansion of sustainable visitation (Marion and Reid, 2007).

Tourist trails are a broad concept that primarily involves a concentration of activities and sites with the same thematic or geographical concept to stimulate businesses to form new, related products (Greffe, 1994). Activities and sites are connected along a single linear or circular track, with or without a variant solution, creating an independent regional tourism attraction with multiple layers of significance—natural, ecological, historical and cultural (Rogerson, 2007). Such trails might encompass a large number of geographical scales (Lourens, 2007) and are intended for numerous transport modes (Lourens, 2007; Rogerson, 2007). Globally, the most frequent types of trails are historical heritage trails (Moulin and Boniface, 2001) and wine trails (Hall, 2005), which are usually intended for visits of several days (Meyer, 2004). Efforts to create innovative offerings have even resulted in underwater trails (Wegner, Tonioli and Cabral, 2006).

The same concept drives the creation of trails with natural- and cultural-heritage themes in national parks and other protected areas (Leung, 2012; Li, Ge and Liu, 2005) for

hiking, bicycle tourism and horseback riding. The main objective of these trails is to convey information (Newsome, Moore and Downling, 2013). Nowadays, such trails have been designed to address the increasing importance of geotourism (Pereira, Ferreira and Rocha, 2012; Zgłobicki et al., 2012) and ecology (Dantzler et al., 2008). Establishing such trails, which involve not only interpretation (Ferreira, 1998) but also current issues concerning nature and landscape protection, is complex (Pickering et al., 2010).

1.2 Environmental education in tourism

Partial or comprehensive environmental education of visitors (Cecioni, 2005; Navratil et al., 2011), leading to increased support for sustainable types of tourism (Epler Wood, 2002), is frequently the aim of such tourism activities and sites. Interpretive nature trails (INT) serve as a major source of sustainable tourism development support (Topole, 2009) and as a means to create an environmentally conscious population (Clark, 1997; Ferreira, 1998). Previous studies have shown that environmental education can encourage pro-environmental behaviour (Jacobs and Harms, 2014), and trails' importance for environmental knowledge is indisputable (Angelini et al., 2011), although some information communicated on trails can be non-objective (Braithwaite and Leiper, 2010), and visitors' future behaviour does not necessarily display more environmental friendliness in the long term (Hughes, 2013). A detailed overview of these papers can be found in Munro, Morrison-Saunders and Hughes (2008).

Interpretive trails are one of the most widely used tools in environmental education in large protected areas in Central and Eastern European countries (Cetkovsky et al., 2007; Foret and Klusacek, 2011; Svec et al., 2012; Frantal and Urbankova, 2014; Kroupova et al., 2014), and there is a notion that all visitors to protected areas visit interpretive trails, much like other backbone sites, such as chateaux, castles and castle ruins (Zelenka et al., 2013). Interpretive trails, including in the Czech Republic, are laid along important natural sites in large protected areas, so they are omnipresent and close to visitors, accommodations and parking facilities. However, research on the influence of information boards along INT is rather limited, and no inquiry has compared the knowledge of visitors entering and leaving trails to that of all visitors to the destination. Similarly, many published studies have focused on the intentions of respondents but only a few on their actual knowledge, which might be more relevant to their actual behaviour (Hughes and Saunders, 2005). That is why we decided to test ties between visiting of INT and knowledge of visitors to large protected areas and stated our two aims mentioned in Introduction.

2. METHODS

The research methodology was a questionnaire survey administered by trained interviewers. The first version was tested around Easter 2013 (at the end of March and beginning of April), and the second version in early May 2013. During these national holidays in the Czech Republic, site visitation is comparable to that during the main tourist season. Both tests were conducted in three protected areas with 15 respondents in each

area. Next, the primary data-collection process was carried out from June to September 2013 at three INTs selected according to the methodology, discussed later. The survey was conducted on both weekdays and weekends. The interviewers approached every second visitor (Madin and Fenton, 2004), conducted face-to-face interviews at the reception desk and approached departing guests at the accommodation facilities before noon. The aim was to obtain 100 completed questionnaires from each site, and 900 questionnaires were collected from three different spots on three trails, with an overall refusal rate of 15%. As mentioned, the standardized interviews were done with three groups of respondents: (1) visitors who had recently been on an INT (after INT); (2) visitors about to enter an INT (before INT); and (3) visitors in a settlement near the trail with a high concentration of accommodation facilities (outside INT; these visitors were interviewed inside these facilities).

2.1 The Study Area

The studied interpretive trails were randomly chosen from a database of all trails in large protected areas in the Czech Republic. This database was adapted from public records available through website of the Nature Conservation Agency of the Czech Republic (http://www.ochranaprirody.cz/aopk-cr-informuje/naucne-stezky/). The records were converted into Microsoft Excel format, and each trail was randomly assigned five numbers using the RAND function. The three trails with the highest average of the five random numbers were selected for this research: trails in the Beskydy Protected Landscape Area, Žďárské Vrchy Protected Landscape Area and Šumava National Park and Protected Landscape Area.

Declared in 1973, the Beskydy Protected Landscape Area is the largest protected landscape area in the Czech Republic (1,160 km^2), stretching across the highlands of the West Carpathians. The area contains an indigenous, primeval mountain forest with rare animal and plant species, pseudokarstic phenomena, a meadow biocoenosis with numerous species and aesthetically valuable landscapes created by the coexistence of man and nature. The Zděchov INT was built in 2011 and stretches across the Javorníky area. The 9.5-km trail has 10 stops and guides visitors through places of natural and historical value in the vicinity of the Zděchov municipality.

The Žďárské Vrchy Protected Landscape Area was declared in 1970. Situated on 709 km^2 in the heart of the Czech Republic in the northern Českomoravská Vrchovina Highlands, it is primarily covered in forests. Typical landscape elements are numerous rock formations on woody ridges and a mosaic of scattered woody vegetation with bosks and agrarian stone walls on cultivated land. Peat bogs and other wetlands are the most valuable landscape segments. The Žákova Hora INT is 2.6 km long and has 10 information boards. The remains of primeval forest vegetation along the trail provide a unique example of indigenous beechwood in higher altitudes.

The Šumava protected landscape area was declared in 1963, followed by the national park in 1991. The protected landscape area covers 996 km^2, and the national park 680 km^2, creating the largest area of protected territory in the Czech Republic. When

combined with the neighbouring National Park Bayerische Wald, it protects one of the largest coherent complexes of forest in Central Europe. The Soumarské Rašeliniště (peat bog) INT was opened to the public in 2012. The 1.5-km trail has seven information boards, including one observation tower. Using the example of a revitalised peat bog, the trail informs visitors about the restoration of the Šumava's indigenous peat bogs, which were nearly destroyed by logging.

2.2 Questionnaire

Separate, two-part questionnaires were developed for each interpretive trail. The first part questionnaire used a quiz-style format (Hughes and Saunders, 2005) to assess respondents' knowledge of information presented on information boards along the selected trails. Respondents answered questions by selecting one of four offered choices, only one of which was correct. Although the contents of the selected trails differed, the questions followed the same pattern: two questions addressed culture and history, two biotic components (zoological and botanical knowledge), one the landscape, and one nature and landscape protection. In this set of questions, three inquired about general knowledge included in basic education, and three about less widely known information about specifics of the protected areas. All the information tested asked was presented in the text or figures on information boards. Environmental knowledge was measured by the total points obtained for correct answers in this section of the questionnaire, leading to a maximum of six points.
The second part was the same across all three questionnaires and included questions regarding leisure activities practised during visit, concerns for culture and environment, number of INT visited, gender and age.
Sustainable tourism differs from typical mass tourism primarily in the motivations for taking part in tourism (Weaver, 2006), which are reflected in behaviour, in this case, the activities performed while travelling (Hvenegaard, 2002). Therefore, this section had a tool designed to measure respondents' level of participation in individual recreational activities, including hiking; bicycle tourism; leisure and sports activities (e.g. swimming, tennis); wellness activities and spa treatments; nature observation; visits to historical sites (e.g., castles, chateaux), museums, galleries and historical festivals; games with children; relaxation; entertainment and shopping. The level of participation was measured using a scale of 1 to 5 (1 = I don't take part in this activity; 5 = I primarily take part in this activity). Another activity studied was the number of interpretive trails visited within the past year, using the categories of none, one and two or more. This section concluded with questions assessing visitors' level of environmental knowledge. The first item inquired about culture and history (respondents' relationship towards history). Respondents selected an answer to the statement "History is… for you" from the choices: 1 = definitely boring, 2 = rather boring, 3 = I don't know, 4 = rather interesting and 5 = definitely interesting. The second question evaluated respondents' ecological views (relationship towards the protection of nature). Respondents were asked, "Do you actively search out information about environmental protection?" and given the answer choices: 1 = never, 2 = rarely, 3 = occasionally, 4 = sometimes and 5 = often (Ballantyne, Packer and Hughes, 2008).

Basic demographic data about respondents, including their gender and age (Goeldner and Ritchie, 2012), were also requested. Data about the interviewed sample are presented in Table 1.

Table 1. *Profile of respondents, N=900*

Sample characteristic	Percentage
Female	57.17%
Male	42.83%
Age 18–25	18.83%
Age 26–35	22.08%
Age 36–45	27.00%
Age 46–55	18.42%
Age 56–65	9.33%
Age 66–75	3.33%
Older than 75	1.00%
No self-guided trails	18.33%
One self-guided trail	26.50%
Two or more self-guided trails	55.17%

2.3 Data processing and analysis

First, potential differences in the characteristics of respondents on interpretive trails (both those who completed the interpretive trail and those about to enter it, which should have differences) and at nearby accommodation facilities were assessed. When possible, one-way analysis of variance (ANOVA) and Tukey's post-hoc test for unequal N were conducted as there were 600 respondents from interpretive trails and 300 from accommodation facilities. Chi-square test was performed to determine any differences in the number of interpretive trails visited in the past year by respondents from interpretive trails and accommodation facilities.

Environmental knowledge was measured as the score for correct answers in the first part of the questionnaire. The influence of the interpretive trail (differences in questions asked in different areas) and of the group to which respondents belonged (before INT, after INT, outside IN) on environmental knowledge was tested by two-way ANOVA, followed by Tukey's HSD post-hoc test for unequal N.

Identification of respondents' characteristics which affected their knowledge of correct answers (the second aim of this paper) was based on testing the predictors of a number of correct answers. Non-parametric regression with a log link function and the forward selection of variables was conducted. The independent predictors were all items concerning participation in individual recreational activities (continuous predictors); number of interpretive trails visited in the past year (categorical predictor, three levels: none, one, two or more); relationship towards history (continuous predictor); environmental

friendly behaviour (continuous predictor); gender (categorical predictor, two levels: female, male); age (categorical predictor, seven levels shown in Table 1) and visitor group (categorical predictor, two levels: outside INT, before INT). All computations were performed using STATISTICA 12 software (*StatSoft*, 2011).

3. RESULTS AND DISCUSSION

3.1 Characteristics of the sample of interviewed respondents

Age and gender differences in the groups interviewed at accommodation facilities and on interpretive trails (both before and after completing the trail) are not statistically significant (gender: Chi-squared test = 0.009, df = 1, p = 0.923; age: F test = 2.126, df = 1, p = 0.145). The reported results then are not affected by an uneven distribution of gender and age, the two most significant segmentation criteria in assessing the behaviour of tourists (Goeldner and Ritchie, 2012).

Statistically significant differences are seen in the results concerning interest in the environment for respondents from the interpretive trails and nearby accommodation facilities. The statistical differences in pro-environmental behaviour and interest in history are significant (Table 2). We might suppose that visitors to interpretive trails are primarily inspired by knowledge or, more precisely, motivated to broaden their knowledge, which is common at similar tourism products (Ballantyne, Packer and Hughes, 2008; He and Chen, 2012). However, we must be aware that interpretive trails are, by definition, primarily designed for those who have no knowledge of the topic discussed as the trails are intended to justify their creation (Hall and Lew, 2009) and increase responsible tourism at the expense of mass tourism (Leslie, 2012b).

Table 2. *Average values and standard deviations for visitors' interest in history and nature protection. Results of one-way ANOVA and Tukey's HSD post-hoc test for unequal N (p*); on INT means visitors before INT and visitors after INT*

	Outside INT		On INT		F	p	p*
	Mean	S.D.	Mean	S.D.			
Relationship towards history	3.703	1.113	3.948	1.036	10.632	0.001	0.005
Relationship towards nature protection	2.967	1.130	3.258	1.133	13.278	0.000	0.002

Similarly, the leisure-time activities of the samples of respondents outside and on the interpretive trail differ, with statistically significant differences in five activities. Respondents surveyed outside INT have statistically higher participation in wellness activities and shopping. The frequency of nature observation, bicycle tourism and hiking was statistically higher in the sample from the interpretive trails (Table 3). The behaviour of respondents interviewed at the accommodation facilities more clearly resembles mass tourism (Weaver, 2006).

Table 3. *Average values and standard deviations of leisure-time activities among visitor groups. Results of one-way ANOVA and Tukey's HSD post-hoc test for unequal N (p*); on INT means visitors before INT and visitors after INT*

	Outside INT		On INT		F	p	p*
	Mean	S.D.	Mean	S.D.			
Wellness activities and spa treatments	2.240	1.195	2.053	1.121	5.308	0.021	0.046
Visits to historical sites (castles, chateaux)	3.093	1.078	3.040	1.023	0.524	0.469	0.531
Work activities	2.517	1.372	2.598	1.343	0.729	0.393	0.460
Visits to museums, galleries and historical festivals	2.800	1.106	2.785	1.035	0.040	0.841	0.862
Shopping	2.813	1.130	2.538	1.211	10.774	0.001	0.004
Entertainment	3.473	1.114	3.525	1.087	0.445	0.505	0.564
Relaxation	3.717	1.058	3.733	1.054	0.050	0.823	0.847
Nature observation	3.127	1.141	3.548	1.091	28.983	0.000	0.000
Bicycle tourism	2.503	1.300	2.905	1.425	16.841	0.000	0.000
Leisure and sports activities (e.g. swimming, tennis)	3.303	1.234	3.387	1.196	0.951	0.330	0.398
Hiking	3.080	1.160	3.433	1.212	17.498	0.000	0.000
Games with children	2.687	1.398	2.913	1.440	5.053	0.025	0.052

The final activity studied in relation to interpretive trail visitation was use of interpretive trails during the past year. More than half of the respondents interviewed on interpretive trails had visited at least two interpretive trails during the past year (Table 4). Only 37.01% of respondents interviewed outside interpretive trails had visited at least two INT in the past year. In this research, respondents on interpretive trails visited trails more frequently than respondents at areas outside interpretive trails. This finding confirms the previous results. The probability of finding visitors who have already visited an interpretative trail is higher on interpretive trails than at accommodation facilities. Tourist's previous experience also plays a role (Madin and Fenton, 2004). This finding confirms previous evidence that only a specific segment of visitors is generally found on interpretive trails.

Table 4. *Representation of visitor groups and number of interpretive trails visited in the past year; Chi-square test = 55.2632, df = 2, p < 0.001*

	Outside INT	On INT
No self-guided trails	31.67%	13.50%
One self-guided trail	31.33%	26.67%
Two or more self-guided trails	37.00%	59.83%

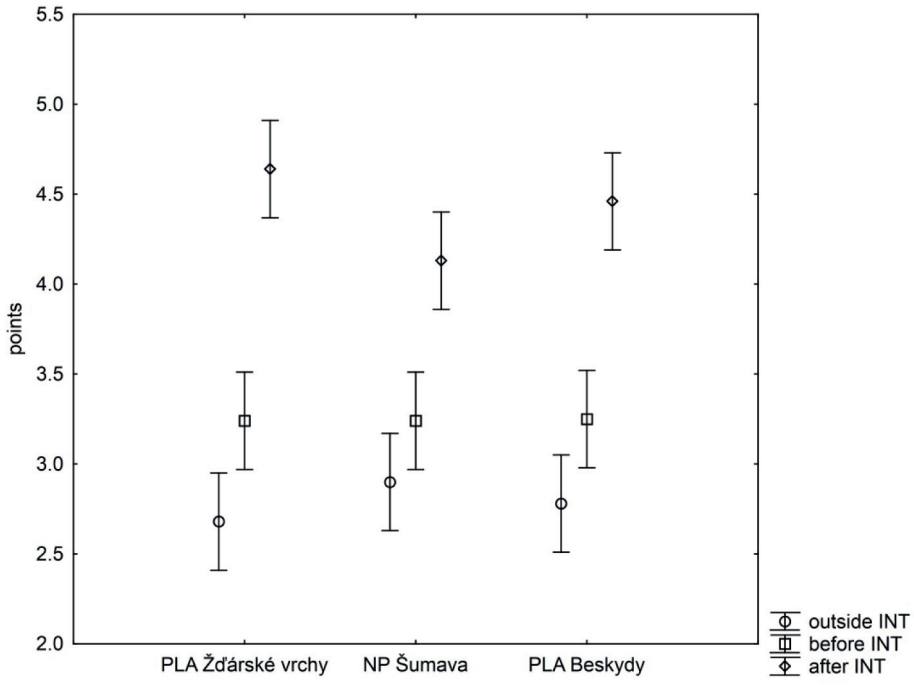
3.2 Environmental knowledge

Environmental knowledge was measured by the score for correct answers to the six questions based on information presented on the information boards along the interpretive trails. All three groups of visitors (before INT, after INT, outside INT) are of interest here. Potential differences in scores were identified through two-way ANOVA (Table 5, Figure 1).

Table 5. *Model of the dependency of knowledge level on place of interview and protected area, results of Two-way ANOVA*

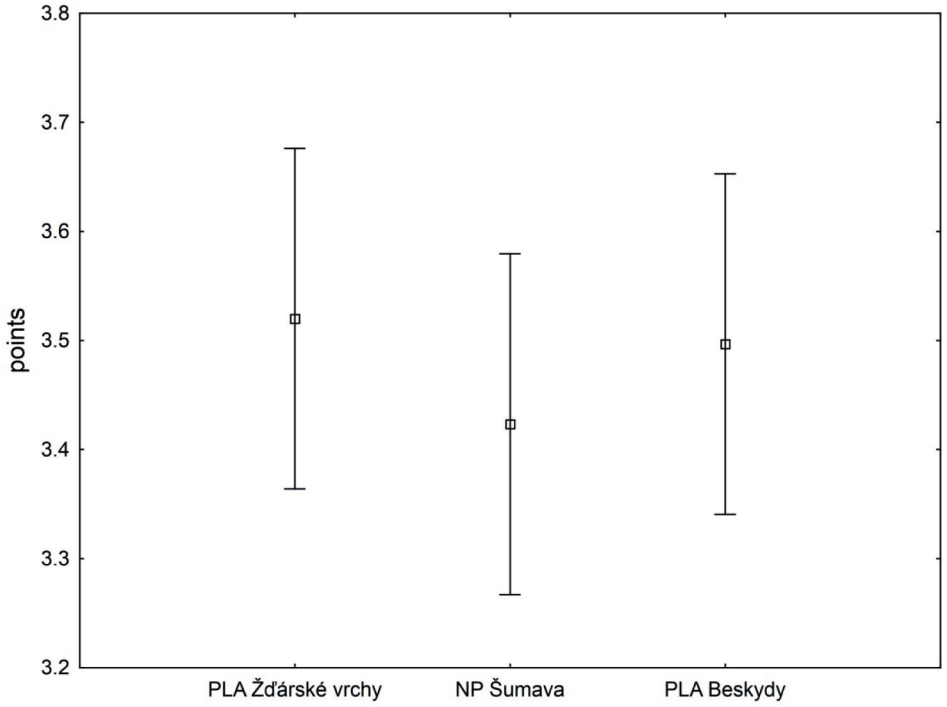
	SS	Degree of freedom	MS	F	p
Intercept	10,899.36	1	10,899.36	5,738.403	0.000
INT trail (outside, before, after)	420.49	2	210.24	110.691	0.000
Protected area	1.53	2	0.76	0.402	0.669
Trail*protected area	14.29	4	3.57	1.880	0.112
Error	1,692.34	891	1.90		

Figure 1. *Average values and 0.95 confidence intervals of scores by place of interview and protected area, N=900*



The average score for correct answers did not show any differences by interpretive trail, which obtained values ranging from 3.41 to 3.51 (Figure 2). The difficulty of the questions asked at the particular trails, therefore, was comparable, although the questions were different according to the content of the information boards. Similarly, a synergic effect between the interpretive trail and whether a respondent was interviewed outside INT, before INT or after INT was not proven (Table 5). Therefore, these results can be better generalised than those of studies of individual localities (see, for example, Jacobs and Harms, 2014; Munro, Morrison-Saunders and Hughes, 2008).

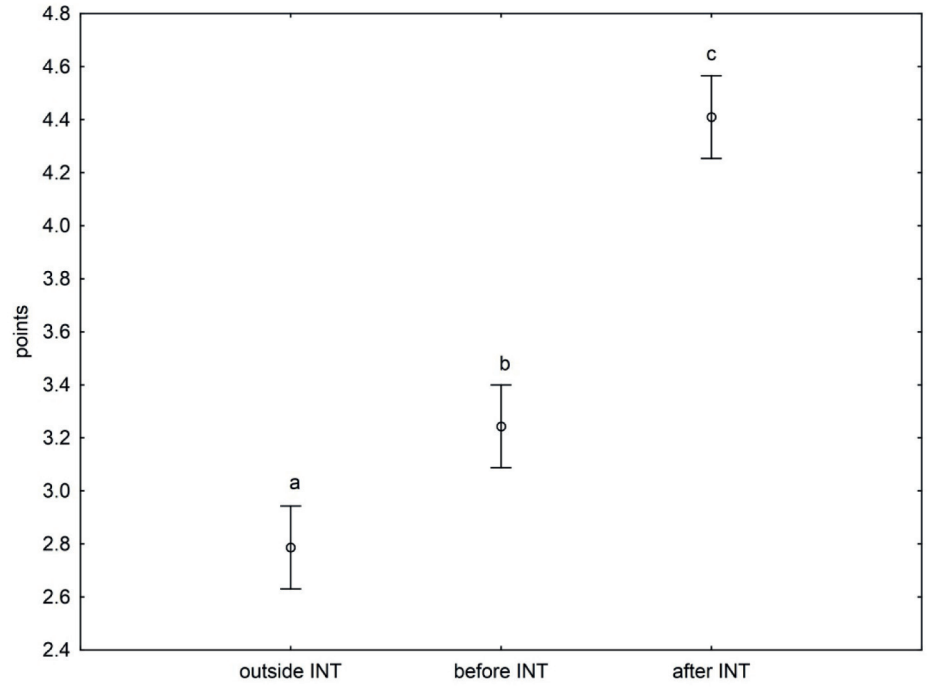
Figure 2. *Average values and 0.95 confidence intervals of scores in individual protected areas, N=900*



There is a significant difference in scores by outside INT, before INT or after INT group (Figure 3). The scores are moderately less than average for the outside INT group, moderately higher than average for the before INT group and 4.5 of 6 for the after INT group. The difference detected in the average number of correct answers among the pre- and post-visitation groups is common with paired measuring (e.g., Jacobs and Harms, 2014; Powell and Ham, 2008) and similar research designs (Madin and Fenton, 2004). An increase in environmental knowledge is detected e.g. for visitors of marine wildlife attractions (Ballantyne, Packer and Falk, 2011), but we must keep in mind that only the immediate impact was measured (Hughes, 2013). The increase is rather low considering

that all the answers were provided by the information boards, and three tasks were of a primitive level and did not require reading the boards (knowing that this information was displayed on the boards). The question arises whether "[t]his might relate to the extent of the information absorption by the visitors ... [or] the effectiveness of the on-site media design in communicating facts" (Hughes and Saunders, 2005: 617). This might be related to the fact that, although visitors to interpretive trails have a higher level of interest and higher motivation to learn than most visitors (Luck, 2003), they are, at the same time, unwilling to read information boards (McNamara and Prideaux, 2010). From these results, it follows that interpretive trails alone cannot solve the problem of environmental knowledge as they can influence only one segment of visitors (Newsome, Moore and Dowling, 2013). One potential solution is a combination of information sources (Coghlan and Kim, 2012) and methods considered more effective, such as new technologies (Wolf, Stricker and Hagenloh, 2013) and guided tours. However, the motivation of visits also plays an important role in these cases (Poudel and Nyaupane, 2013), and the differences between these alternatives and standard interpretive trails might not be noticeable (Roberts, Mearns and Edwards, 2014).

Figure 3. *Average values and 0.95 confidence intervals of scores by place of interview. Averages marked with the same letter do not significantly differ (Tukey's HSD post-hoc test for unequal N, p > 0.001), N = 900*



The previous results indicate statistically significant differences in knowledge and information among all three groups. The low average values relate to the diversity of visitors

on interpretive trails, even among those who complete trails. The obtained data allow examining the links between the knowledge and segmentation criteria of individual visitors, fulfilling the second aim of this paper. Non-parametric regression was used to identify the high and low values of the obtained scores. From our model, it can be concluded that better knowledge of environmental issues is due to a high interest in history, participation in hiking and relationship towards the protection of nature (Table 6). Familiarity with environmental issues among visitors with a higher level of prior (in) formal education (in this case, measured by interest in history and ecology) supports previously reported results (Madin and Fenton, 2004). Traditional hiking again proves to be one of the most important predictors of environmental awareness related to visits to protected areas (Fredman and Sandell, 2009; Hughes, 2013; Koniak, Sheffer and Noy-Meir, 2011). The proposed model has identified one more statistically significant variable: the group of visitors. Membership in the outside INT group is an important predictor of a low number of correct answers. This finding confirms the results concerning the first objective of this paper and indicates that visitors to interpretive trails represent only a specific segment of visitors to protected areas.

Table 6. *Model of environmental knowledge predictors*

	Estimate	Standard Error	Wald statistics	p
Intercept	0.689	0.086	64.745	0.000
Outside INT (vs before INT)	-0.057	0.019	9.414	0.002
Relationship towards nature protection	0.048	0.021	5.404	0.020
Relationship towards history	0.037	0.019	3.965	0.046
Hiking	0.033	0.017	3.856	0.049

4. CONCLUSION

Interpretive trails are not visited by all but only some visitors to protected areas, who are generally more environmentally aware and have higher environmental knowledge. We must bear in mind that those with more knowledge also take more interest in the environment around them. It follows that interpretive trails are visited by people with an interest in them, not by visitors to protected areas as a whole. Visits to interpretive trails contribute to knowledge, but this potential contribution has no effect on visitors who do not already have related knowledge. These visitors are the very ones for whom the trails are primarily intended as trails are believed to increase visitors' environmental knowledge. A kind of a vicious cycle can be hypothesised from this research. The question is how to break this cycle. Interpretive trails, in their present condition, do not significantly contribute to the broadening of environmentally friendly tourism in protected areas (as measured by numbers of environmentally conscious visitors). It can

be concluded that an urgent task for managers of protected areas responsible for environmental education is to bring interpretive trails closer to visitors who do not have any substantial independent interest in the environment and its protection.
The hypothesis of the vicious cycle (in which knowledge is increased only among those who are already informed) which has emerged from this study should be tested in future research. The presented results are based on different groups of visitors, not on repeated research on the same respondents, and so cannot solve this issue. Further research is needed. Especially (1) the longitudinal research with control group and (2) research on the motivation factors among non-engaged visitors to protected areas.

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POUČNE STAZE ZA SAMOSTALNI OBILAZAK U ZAŠTIĆENIM PODRUČJIMA I NJIHOV ZNAČAJ ZA EKOLOŠKO OBRAZOVANJE POSJETITELJA

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Sažetak

Cilj je rada utvrditi razinu ekološke informiranosti posjetitelja poučnih staza za samostalni obilazak u zaštićenim područjima. Radom se žele utvrditi faktori koji potencijalno utječu na pretpostavljene razlike između ekološke informiranosti posjetitelja poučnih staza i posjetitelja zaštićenog područja općenito. Poučne staze ne posjećuju svi posjetitelji zaštićenog područja. Oni koji ih posjećuju predstavljaju ekološki osviješteniji dio populacije. Radi se o posjetiteljima koji posjeduju višu razinu ekološke informiranosti od ostalih posjetitelja zaštićenog područja. Bolje informirani posjetitelji pokazuju i veće zanimanje za prirodni okoliš. U radu se zaključuje da poučne staze posjećuju ljudi koji za njih iskazuju posebno zanimanje, a ne svi posjetitelji određenom zaštićenom području. Nadalje, zaključuje se da dok posjećivanje poučnih staza doprinosi znanju posjetitelja, taj doprinos ipak nema većeg utjecaja na posjetitelje koji već ne posjeduju neko prethodno znanje. Odnosno, nema većeg utjecaja na one kojima su poučne staze zapravo primarno namijenjene, s obzirom da im je cilj povećati ekološku svijest upravo tih posjetitelja. Konačno, s obzirom na broj ekološki osviještenih posjetitelja, zaključuje se da poučne staze u svom sadašnjem obliku značajno ne doprinose ekološkom turizmu u zaštićenim područjima.

Ključne riječi: *Srednja Europa, rekreacija na otvorenom, ekološki turizam, poučne staze za samostalni obilazak, ekološki programi*

DIE BEDEUTUNG DER SELBSTGEFÜHRTEN LEHRPFADE IN GESCHÜTZTEN ZONEN FÜR DIE UMWELTBILDUNG VON BESUCHERN

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Zusammenfassung

Das Ziel dieses Artikels ist es, den Grad der Umweltkenntnisse der Besucher von Lehrpfaden und besonders die Kohärenz der Faktoren festzustellen, die die möglichen Unterschiede zwischen diesen Besuchern und Besuchern in geschützten Zonen generell beeinflussen. Es wurde festgestellt, dass Lehrpfade nicht von "allen Besuchern geschützter Zonen" in Anspruch genommen werden, sondern eigentlich nur von einigen davon. Diejenigen, die Lehrpfade besuchen, stellen den umweltbewußteren Teil der Population dar. Ihre Umweltkenntnisse liegen auf einer höheren Stufe als die Umweltkenntnisse der Besucher von geschützten Zonen generell. Wir müssen bedenken, dass die Besucher mit besseren Kenntnissen diejenigen sind, die mehr Interesse an der Umwelt haben. Daraus folgt, dass Lehrpfade von Leuten besucht werden, die sich dafür interessieren und nicht von Leuten, die geschützte Zonen als solche besuchen, Zweitens trägt der Besuch eines Lehrpfades den Kenntnissen der Besucher bei, aber ein solcher potentieller Beitrag hat keinen Effekt auf Besucher, die keine Kenntnisse haben und für die die Lehrpfade in erster Linie gedacht sind, im Sinne, dass sie das Umweltbewusstsein der Besucher stärken. Die Lehrpfade in ihrem jetzigen Zustand tragen nicht wesentlich zur Ausweitung des (was die Anzahl der umweltbewussten Besucher betrifft) sanften Tourismus in den geschützten Zonen bei.

Schlüsselwörter: *Mitteleuropa; Erholung im Freien; nachhaltiger Tourismus, selbstgeführte Lehrpfade, Umweltprogramme*