

Review: Science, Poetry, and Music for Landscapes of the Marche Region, Italy. Teaching the Conservation of Natural Heritage: Olivia Nesci and Laura Valentini

This paper makes a valuable contribution in two respects: 1) in exploring new and engaging ways of promoting geoscience and geoconservation to the general public; and 2) in demonstrating links between geoheritage and cultural heritage.

1. My main comment is that the conceptual framework could be strengthened and more clearly set out in the introduction by reference to the wider literature on best practice in interpretation*, particularly in relation to stimulating emotional responses and encouraging memorable experiences involving a range of senses and interactive engagement. Emotional experience and making personal connections can be a powerful basis for subsequent positive actions or behavioural changes by those participating - either people attending the events described or visitors to the sites. At present this is scattered through the text: e.g. lines 83/84 (establish a personal connection so that the public cares to further understand and appreciate the landscape); lines 445/446 (The communication of information of any nature through the emotional sphere is recognized to be much more effective than traditional communication methods); Lines 67, 73, 465 (foster desire to protect the landscape). *For example, building on Freeman Tilden's principles, a key reference here is: Ham, S.H. 2013. Interpretation: Making a Difference on Purpose. Fulcrum: Golden, CO, USA. And on the power of imaginative storytelling, see: Strauss, S. 1996. The Passionate Fact. Storytelling in Natural History & Cultural Interpretation. Fulcrum: Golden, CO, USA.

2. In the title, I suggest 'communicating' rather than 'teaching'. The approach of the study is on engaging and communicating with people rather than didactic methods.

3. Evaluation of the methods adopted is critical in demonstrating the wider value of this type of approach and it is encouraging to see this noted as a next step (line 450).

4. I appreciate the focus of this particular paper is on promoting better awareness among local people, but I think the authors could draw more links with geotourism and point out the potentially wider relevance and value of their work to this field, particularly in the conclusion.

5. In places the text is written in a personal style (frequent use of 'you') and using emotive language (e.g. 'guzzling by the jaws of erosion'). I can see that this is appropriate for presentations to the public but is less suited for a scientific publication where more measured language is appropriate.

6. There are some further comments, edits and points of clarification which I have itemised below to assist the authors in finalising the paper. I have also made suggestions for alternative wording for the authors to consider to help clarify the meaning.

Title

Suggest colon rather than full stop after Italy

Abstract

Line 10. arouses rather than arouse

Line 11. comma after Italy and which rather than that

Line 18. geosites rather than geo-sites; their rather than its

Line 19. arriving at rather than to; their rather than its; appreciation might be better than knowledge?

1 Introduction

Line 23. comma after audience

Line 23/24. might be better expressed as ...in several contexts: e.g. protests or movements promoting important social and environmental issues...

Line 27. Tracking used approaches might be better expressed as Evaluating existing approaches?

Line 29. raising people's awareness of complex topics; no full stop after topics

Line 35. no comma after time; learn about

Line 37. has expanded greatly rather than has been very numerous

Line 38. you could also refer to the publication by Reynard, E., Brilha, J. Eds. 2018. Geoheritage. Assessment, Protection, and Management. Elsevier: Amsterdam

Line 38. ideas have emerged

Line 39. no hyphen in geotourism

Line 41/42. Quotation should be in parentheses

Line 49. has produced; great might be better and more measured than amazing

Line 51. delete us

Line 54. suggest high rather than enormous biodiversity

Line 55. and geodiversity? I think you need to add geodiversity here

Lines 55/56. Maybe reword as ... was the birthplace of eminent historical and literary figures [if that applies] (e.g. name one or two), while many others (e.g. name one or two) have travelled through the area

Line 63. address rather than addresses

Line 65. Choices about what?

Line 66. dash rather than comma after communication; dash rather than comma after poetry

Line 67. people's desire?

2 Objectives and methods

Line 69. arriving at

Line 70. I don't understand what the problems and weaknesses of a place are? Do you mean its fragility, natural hazards, geological/scientific problems, socio-economic problems or what?

Line 71. Why must it? Some places are not necessarily attractive. Some may be awe-inspiring but not beautiful. Some discussion of landscape aesthetics and appeal might be appropriate here. The aesthetic appeal of physical features has been an important factor in tourism over the last few centuries (from the Romantic movement onwards) and more recently in geotourism

Line 75. insert and before the culture

Line 77. follows rather than proceeds through?; comma after view

Line 78. delete which things.

Line 79. delete a before simple

Line 82/83. Providing the system..... is not a sentence

Line 83. End this paragraph after environment. Start new paragraph as The second step is to establish... and run on to next sentence This second step

Line 87. suggest insert and before more

2.1 The working method

Line 90. Three sites or Twenty sites?

Line 92. in the region

Line 95. delete a

Line 97. Do you mean characteristics rather than peculiarities?

Line 98. key words relating to the place; the atmosphere it evokes

Line 100. delete the before musical

Line 102. Delete as hereafter described

Line 104. Insert is before aptly

Line 106. At other times; comma after times
Line 107 is rather than was; associations rather than the association
Line 110. Suggest foster love for a place rather than make you love a place
Line 111. emerges
Line 112. natural rather than naturalistic
Line 114. elements rather than contents?
Line 116. Delete we; delete of this work
Line 117. Delete just published
Line 118. Delete same
Line 119. which can be enjoyed rather than you can enjoy
Line 121. where the book is also available in interactive form
Line 122. results rather than contents? no comma after events
Line 123. the individual places?

2.2 Description of the events

Line 124. Consider 'Live events' as an alternative section heading
Line 127. means of simple and popular language; reading rather than acting of poems; performance rather than performing
Line 128. delete of ancient music (this was explained above); The project, as described above, includes
Line 129. took place
Line 130. delete one; employment rather than employ
Line 133 has rather than have
Line 134. delete will; represent the links between the science.....
Line 136. delete in
Line 137. delete comma after public
Lines 140/141. Delete text from 'some of them.....locations but'
Line 141. involving rather than searching; what is a suggestive place?
Line 144 Fortress; comma after Maniscalco"
Line 145. Insert 'the' before program
Line 146. also from elsewhere in Italy?
Line 147. after potential, insert and is

2.3 Experience with the public

Line 151. delete a
Line 154. it is rather than it's
Line 154/155. Suggest rephrasingto quantify these factors because they depend on several variables (e.g. the advertising before the event, the season and the weather, the beauty of the place and how difficult it is to reach)
Line 156. What is receptive capacity?
Line 158. delete just? the book was published in 2019
Line 160. Suggest rephrasing...We have the material to propose and deliver public events and collect the responses of the participants.
Line 161. presented rather than proposed?
Line 162 schools and museums
Line 164. the shows are
Line 165. comma after Region); cultural event rather than moment?

3 The three case studies

Line 168. Suggest the title of the section is simply 'Case studies'

Line 169. Suggest shortening to.. Among the many amazing landscapes of Italy we focus on three case studies from....

Line 174. 200 m high

Line 176. delete comma after Bartolo

Line 178/179. Do you mean the beaches are eroded by the sea only during the strongest storms, whereas the less protected rocky ridges are more exposed to wave erosion?

Line 183. human activity rather than man? natural balance?

Line 182. Is it not that the anthropic causes are superimposed on the natural ones?

Line 186. sediment load rather than solid flow? and again line 186

Line 189. insert they before corrupt;

Lines 189-191. Meaning of this sentence is not clear

Line 192. during the Holocene (the last 11,000 years)

Line 194. the position of the paleo-coast.... advanced by about 2 km

Line 197. an interpretation route? or geotrail?

Line 201. insert and after interpretation and delete the comma; I don't understand the phrase 'other than the critical issues' and suggest it is deleted

Line 205. 'guzzling by the jaws of erosion'. I can see the reason for using emotive language in the public events, but this is a scientific paper

Line 207. The visual (colour), olfactory (scent) and physical (sky and sea) balance is represented...

Line 208. looks? visions might be better?

Line 275. on the previous? suggest delete

Line 276. insert there are before several

Line 282. delete the before Mount Petrano

Line 283. of or across the whole Province?

Line 285. example of an anticlinal ridge; one type of folded rock layers; forces that act slowly over a very long time period

Line 288. comma after 7)

Line 289. the Maiolica Formation

Line 290, The rocks of the Marne a Fucoidi Formation, which rests on the Maiolica Formation,...

Line 291. The rocks above are again more resistant, comprising

Line 297. delete comma after Petrano

Line 299 the Apennines rather than our Apennines

Line 300. space after Fig.

Line 301. space after Fig.; delete the before Mount Petrano

Line 303. suggest replace you with the visitor; From there the visitor can experience..

Line 304. delete the before stop 2; the visitor rather than you?

Line 306. characteristics rather than peculiarities?

Line 306. key words rather than keys?

Line 309. What does reminiscent one day holiday mean?

Line 339. Suggest reword as: The music selected was twelve variations.....KV 265, which is a keyboard.....

Line 359. 5 km; 2 km

Line 368. semicolon after depression; Middle Pliocene -Lower Pleistocene is ~3.3-0.7Ma. If referring to the time interval, use Early Pleistocene

Line 369. low-energy; paleo-surface

Line 370. what is a direct fault system?

Line 371. by intense uplift; disrupted rather than dismantled?

Line 375. oriented N-S

Line 377. Suggest give date for the Middle Pleistocene (~0.7 Ma)

Line 377. Suggest re-wording - filled with debris deposited by streams flowing off the adjacent slopes. The debris originated from glacial and periglacial processes as evidenced from.....

Line 380. at depth

Line 381. which rather than that

Line 383. the Sibillini's thrust plane. What is this?; in all its majesty?

Line 387. for excursions or for visitors, rather than excursionists

Line 389. delete the before Mount Vettore, and again line 392

Line 393. the left

Lines 394/395. form open ground fractures 30-40 cm wide

Line 396. key words; characteristics rather than peculiarities?

Line 400. The natural cycle of nature tends to plan The meaning of this sentence is unclear

Line 424. The music selected is Johann.....

Line 428/429. heights?

Line 433. delete here proposed

4 Discussion and conclusions

Line 441. seeks to promote

Line 443. You could make a stronger statement here - Art has great power.....and provides an powerful means to communicate specific subjects.

Line 447. comma after background; indicates rather than uphold? landscape origins rather than problems posed?

Line 450. delete able; interpretation methods rather than proposing ways?

Line 456. described above

Line 458. to rather than inside

References

The references to Bartolini & Peccerillo and Sala & Westley are not cited in the text.

The references to Curtis and Curtis et al are not in alphabetical order.

Figure captions

Figure 2: Panoramic view of Mount San Bartolo.

Figure 3: Pebbly beach (upper) and substrate eroded by waves (lower).

Figure 4: Panoramic view of the active cliffs of Mount San Bartolo.

Figure 6: The Apennine ridge seen from Mount Nerone. Mount Petrano is located between the incision of the Bosso and Burano streams. Mount Catria is in the background.

Figure 7 - delete bracket after Scaglia Rossa Fm

Figure 9: Delete the before Mount Petrano

Figure 13: Delete the before Mount Vettore