

Geotourism in the Limestone Coast of South Australia, an explorative study of interpretation.

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Abstract

This paper is based on my Bachelor of Nature Tourism honour's thesis completed last year. This study had two research aims: firstly to explore and identify the current relationship between the limestone geology of the region and its tourism. To address this aim, data from previous literature and current tourism resources were used, and it was found that there was a strong relationship between the location of surface karst features and the location of significant tourism developments. The second aim of this study was to explore how geology as a science, is used in the interpretation associated with the limestone coast. This aim was explored using four case studies in the tourism region; Engelbrechts Cave, Blue Lake (Aquifer Tours), Tantanoola Cave (Parks South Australia) and the Naracoorte Caves National Park (Parks South Australia). Each case provided a different approach to the research and presentation of interpretation. Three key recommendations from this thesis were the need to strengthen the relationships between science and interpretation; keeping tourism and interpretation up to date in light of scientific research, increasing the links between geology and tourism on a broad scale; providing interpretation which focuses not only on individual sites but also the landscape as a whole, and exploring the possibilities between public and private collaboration on interpretative resources, training for guides and tourism presentation.

Introduction

To begin this paper I would like to mention why I chose to spend a year researching geology, tourism and interpretation. Most of it grew from a strong personal interest in caving, but also a University field trip (...and subsequent assignment) which identified and explored karst features and landscapes. As an excited caver I was interested to learn that most of what makes karst special cannot be seen, yet the surface features and underground caverns tell an incredible story of what is going on. This first brought me to question, where is the karst tourism? Where is the interpretation on the incredible story just under our feet? From the literature addressing cave and karst tourism in Australia, it appeared that we have

numerous show caves on display in every state, yet there is very little tourism involved in other karst features or the greater landscape in which these show caves are situated.

This research consisted of two aims;

1. To explore and identify the current relationship between the limestone geology of the region and its tourism.
2. To identify and explore how geology as a science, is used in the interpretation associated with the limestone coast.

The research, as an explorative study, was guided by three themes that were identified in the literature: these were geology, tourism and interpretation. These three themes provided structure and boundaries to the research. The research setting was the South East corner of South Australia, an area which has a significant tourism industry known for its limestone geology and caves. There were four data sets collected for this study these were; analysis of current literature, interviews with guides, owners and managers, personal observation of guided tours and tourism, and the collection of tourism print and web resources.

Research Aim One: To explore and identify the current relationship between the limestone geology of the region and its tourism.

This research aim was addressed through two research questions;

- A. How are geological features promoted throughout the Limestone Coast tourism region?
- B. How many similarities are there between geologically significant sites, and significant tourism developments?

To address this aim, documents and websites from Parks South Australia and the South Australian tourism commission were searched for the use of the terms 'geology', 'limestone' and/or 'karst'. These two organisations were found to play a key role in the tourism and promotion of the region.

Significant tourism, promotion and interpretation of geological sites was determined in an objective way by the researcher's perspective, strongly supported and guided through the data collected. Although geology was found to be mentioned at, or about, many of the sites throughout the Limestone Coast region, the significance of geology was usually described as part of the main attraction, over other aspects such as bird life, flora and fauna, or recreational opportunities. For example, Parks South Australia presented the following seven park areas which could be identified

by 'geological focused tourism': the Naracoorte Caves National Park, Canunda National Park, Tantanoola Caves Conservation Park, Ewens Ponds Conservation Park, Piccinini Ponds Conservation Park, Beachport Conservation Park, and Penambol Conservation Park (Figure 1). By contrast, the South Australian Tourism Commission promoted five regions where significant links to the geology could be identified: Mount Gambier, Naracoorte, Nelson, Tantanoola and Port McDonnell.



Figure 1: The Limestone Coast Tourism Region. Areas of geological interest identified from Parks South Australia shown in purple spots, areas of 20+ karst features, as identified by Grimes et al. (1999) shown in orange squares, and key tourism townships are labelled (Source: Adapted from The South Australian Tourism Commission, 2013).

The recognition of significant karst features is work that has been done by a handful of authors (Grimes, 1997; Grimes *et al.*, 1999; and White, 2005). Grimes *et al.* (1999) identified many karst sites throughout the Limestone Coast region, and demonstrated a

concentration of karst features occurring around Naracoorte and an area stretching from Mount Gambier to Tantanoola and South to the Coast (Figure 2).

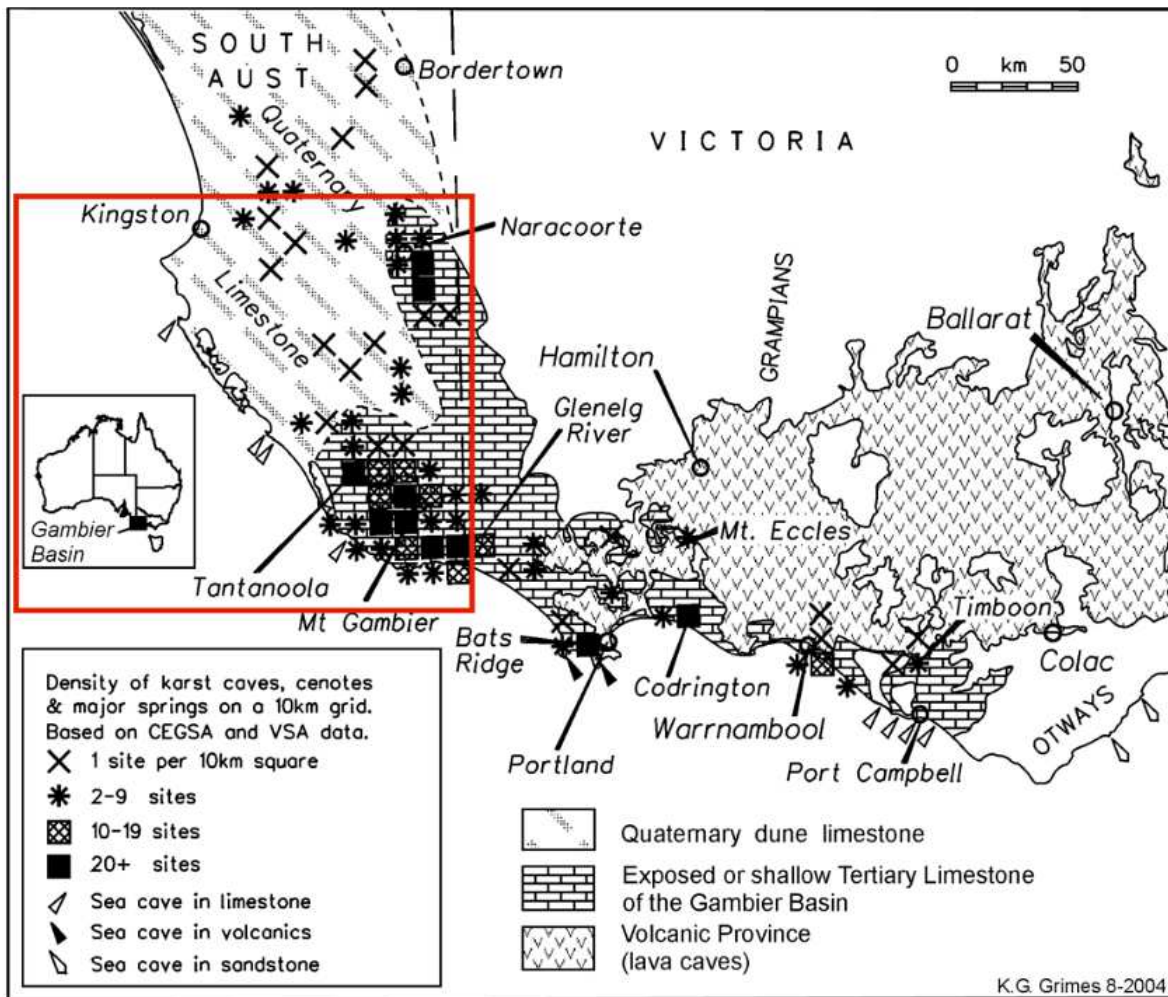


Figure 2: Location of karst features in the Mount Gambier region, red box outlining approximate boundary of the 'limestone coast' tourism region (Source: Grimes et al., 1999).

Although never explicitly stated in any of the collected data, there are numerous similarities between the location of tourism promotion and concentrated areas of karst development as identified by Grimes *et al.* (1999). Overall there were four recurring areas that were presented through the collected data as being areas of major geological attractions for the tourism region; Mount Gambier, Naracoorte, Tantanoola and the coastal region surrounding Nelson and Port McDonnell (Figure 1).

Research Aim Two: To identify and explore how geology as a science, is used in the interpretation associated with the limestone coast

The second research aim was addressed through two research questions:

- A. How do tour guides, managers and owners of tourism sites engage with science and the geology of the region?

- B. How is science and geology interpreted in the Limestone Coast?

The second research aim carried the weight of the thesis. To address this research aim, four case studies were used: Aquifer Tours at Mount Gambier's Blue Lake; Englebrechts Cave in Mount Gambier; Tantanoola Cave at Tantanoola; and the Naracoorte Caves National Park. This research focused on the use of face-to-face interpretation provided on guided tours, and these four cases represent a selection of tourism available in the Limestone Coast Region. It is acknowledged that there is extensive print and web material that could have been analysed here and is a topic worthy of future research.

The data for these particular questions were drawn from my own observations as a participant on the tours and supported through subsequent interviews with tour guides and managers. My thesis provides a detailed summary of each tour describing the way in which interpretation was presented. Common themes

and styles were identified from these observations in relation to each of the above research questions.

A. Influences on Engagement with Geology and Science

Through discussions with managers and owners it was apparent that there were regularly occurring themes that influenced interpretation. These influences were identified into four categories; funding, organisational size, ongoing research or participation, and use of the site by special interest groups. Funding was a key influence on the level of resource development for guides throughout all sites. This was often discussed in association with other difficulties such as political situations, local council employee's, media reports or included aspects of how the local community was involved in supporting the site. It became apparent that influences on the processes for engagement of tour guides may also be the size of the organisation, as the larger the organisation the more structure and effort was placed onto developing these interpretative resources. Larger organisations require more staff, and the use of interpretative resources and training allows for guides to have a similar knowledge base and allow for consistency between tours. Another influence identified was the use of the site for ongoing research and the involvement of groups such as the Cave Divers Association of Australia and those conducting research at the Naracoorte Caves National Park. Generally this cross organisational use of caves made guides and managers feel like they were playing a much more important role in interpreting information for their visitors. Guides were appreciative of this inclusion and connection, providing their job with more enthusiasm.

Two of these influences; ongoing research and organisation size, were never discussed explicitly in the interviews. The involvement of special interest groups was discussed briefly as a recurring response to interview questions associated with the topic of 'guide training'. These three influences developed from underlying idea's and themes that were identified after further analysis. Links between these influences were found throughout the documents and interview responses.

B. The presentation and interpretation of science and geology in the Limestone Coast

From interviews with tour guides, managers and the observations of tours, five themes were identified which related to methods or styles of presentation. Three of these themes - adaptability, passion and personality - were related to the presentation of all

information and content, whilst the last two - language and theory/fact - were specific to the presentation of scientific information or geological concepts.

Adaptability was discussed through the ability of guides to be responsive to their audience, the focus of the tour, or the particular interests of the visitors. Guides saw this as a key requirement of their job and is also what sets them apart from other interpretative resources such as movies, mobile phone applications, voice recorded tours and audio tours.

Passion was used to describe their job, a sense of pride associated with where they worked, or the importance they perceived their job in having. This related to how they presented the site to their visitors.

Personality was used to describe collectively the communication strategies that the guides could use to engage with their audience. This included aspects such as humour, storytelling, and the use of creative language or analogies.

Language encompassed the way in which guides communicated larger abstract concepts and their use of terminology and analogies throughout this. Although the overall information and broad concepts remained the same the language and terminology used to communicate these were dependent on the audience it was presented to.

Tour guides were conscious of not presenting scientific *information as fact*, although certain information that was irrefutable was presented as fact. When explaining different concepts some guides would refer to previous theories in their discussion to justify why the current theory was accepted, or detail why further research needs to be conducted.

It should be noted that both the tourism guides and providers were aware of the research I was conducting and this may have influenced the tours and tourism that I was shown.

Summary

Throughout some of the interviews it was suggested that guides may be the dominant source of information for visitors who are interested in learning more about a topic. This referred not only to their own knowledge base, but also to the direction they could provide to visitors about where to conduct their own research. Guides were viewed as being adaptive in a way that non-face-to-face interpretation could not match; their adaptability allowed them to pass on a range of information tailored to their specific audience. This underlying theme was found to be adopted in the analysis of the combined data sets.

Although documents were the largest and most diverse data set analysed for this study, the information that could be interpreted in the space of a single tour far outweighed that of any single non-face-to-face resource. In addition, most of the detailed interpretative resources only covered one topic whilst tour guides were able to draw on information and stories from a range of both topics and sites.

Conclusion: Recommendations and Future Research Opportunities

Strengthening the connections and opportunities between science and tourism

Due to the similarities between outcomes, I would like to address some of the strategies White (1999) proposed for the use of science in karst management and interpretation. White's 1999 paper reflected on the nature of scientific theory as a "constantly changing pattern of hypotheses, theories and facts" (White, 1999, p. 2) and that interpretation is more fixed in its nature. As such, her key recommendations were: to address the hindrances between the adoption of new theories, over continuation of the old; address issues around communication; and overcome challenges of limited time, resources and funding. The findings of this study suggested that links between ongoing researchers, cave guides, managers, organisations and special interest groups such as caving and dive clubs promoted engagement with science. Although this study was unable to identify signs of a detrimental effect from lack of engagement, guides and managers often discussed numerous benefits where special interest groups and researchers were regularly involved.

Engagement with science should be facilitated to ensure that interpretation and tourism is relevant and up to date.

Sharing of Public and Private Resources

Parks South Australia plays a large role in managing our protected areas. They are involved in the land ownership, management, tourism, and interpretation of numerous sites throughout the Limestone Coast region. However there are numerous private tourism operators outside the Parks system in the Limestone Coast region. Geology may be one of the few nature tourism attractions that can be found both inside and outside these protected areas. As such the Limestone Coast represents an area where tourism and interpretation of

geology is just as evident outside of parks and reserves as it is inside.

Related to the first recommendation, the best opportunities for increasing engagement between science and tourism already exist, with Parks South Australia providing irregular but ongoing workshops and presentations for their guides. There are numerous tourism providers outside the parks department who could also benefit from inclusion in this initiative, and if Parks South Australia were willing to extend an invitation, this may overcome challenges of limited time, resources and funding experienced by non-government tourism providers. An important aspect of the current training programs was their ability to cater for a large and varied audience. Musser (2012) has also suggested that an interpretative tour that went in depth and elaborated on specific aspects of science or cave tourism could be developed to address this need. Additionally, one off topic-focused tours may represent a unique opportunity for engaging and increasing visitation from the local community and public.

Interpretation in this way should focus on telling fifty million years' worth of stories rather than a single story about a fifty million year old cave.

Increasing the links between geology and tourism on a broad scale

Geology, geological processes and scientific understanding were reoccurring topics throughout the interpretation and tourism investigated in this study. Interpretation for these topics was displayed through a diverse range of methods and styles, and communicated through diagrams, maps, metaphors, stories and the presentation of information and facts. A key feature identified by this study was the lack of interpretation and information available on the Limestone Coast landscape as a whole geological region. Each site provided interpretation on the significance of the geological process to local features, with some also providing links as to how the site was influenced by and a part of the larger landscape. Yet very little interpretation was available which addressed the region as a whole.

Additionally this study supported what Joyce (2010) identified, that there is still a lack of geologists present throughout tourism and interpretation. However, the opportunity that

Parks South Australia's training provides may be doing enough to overcome this imbalance.

Tourism providers should consider working collaboratively to develop an interpretative strategy where each site has the ability to tell its own story and also contribute towards a 'chapter' in the story of the wider landscape.

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