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Conservation tourism and the citizen scientist.

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Abstract

This paper shares findings from an ongoing ethnography of an Australian conservation organisation that manages volunteers in a number of settings. It explores a program of volunteer tourism operated in a single publically owned park and draws on the idea of citizen science to conceptualise the tourists' activities there. Initial findings suggest that this citizen research is seen as relatively effective by management, employees and volunteers (tourists) alike, though a number of challenges have been identified, not least associated with differing perceptions and expectations of the tour 'breaks' offered by the organisation.

Keywords *Volunteer tourism; citizen science; ethnography; conservation*

Theme *What's going well in tourism/events*

Focus of Paper *Practical/Industry (but with theoretical implications)*

Introduction

This paper draws from ongoing research into the nature of conservation volunteering. The project investigates an Australian organisation, Environment Protection Volunteers (EPV)¹, that manages conservation activities, including flora and fauna monitoring and management. The projects organised by EPV include free-of-charge, one-day projects and more commercial residential ‘volunteer tourism’ trips. This research takes a multi-perspective approach, seeking to better understand the nature of volunteering from employee, manager and volunteer points of view.

The paper focuses particularly on the volunteer tourism activities in Lyme Park, a state owned park of approximately 5,500 hectares that is managed by EPV as part of their wider conservation activities. It explores volunteer tourists’ contribution to a variety of research projects that investigate park fauna and flora, a key part of the organisation’s conservation activities.

Overview of key concepts

Volunteer Tourism

There is a varied and growing literature on volunteering (Anheier & Salamon, 1991; Grimm & Needham, 2012; Pegg et al., 2012; Pantea, 2013), reflecting its significance both economically and socially. Researchers have investigated a variety of topics such as volunteer management and retention (Hager and Brudney, 2004), volunteering outcomes (Gollan et al., 2012) and, more broadly, the experiences and motivations of the volunteers themselves (Pegg et al., 2012). Within this diverse literature, this paper is primarily concerned with two distinct areas of volunteerism; volunteer tourism and volunteer researchers, or citizen scientists.

Lyons and Wearing (2008a,p.6) suggested that volunteer tourism has been seen as a socially appropriate “‘poster-child” for alternative tourism’, representing authenticity and sustainability in a field (tourism) that has endured considerable criticism over recent decades. It is perhaps rather trite to begin a discussion of volunteer tourism by bemoaning the concept’s ambiguity and weak conceptualisation, yet much of the literature does just that, although often framing this around Wearing’s (2001) definition that links holidaying with societal/environmental contribution. However, it may be inappropriate to develop too prescriptive a definition and Lyons and Wearing (2008b,p.147) even suggest that the very ‘fuzziness’ of the concept can encourage ‘critical understandings of volunteer tourism that may be overlooked if a narrower and more rigid view was adopted’. They go on to suggest that ‘it is valuable to focus upon how volunteering and tourist behaviours intersect and manifest in a variety of ways’ (2008b,p.152) in their championing of a flexible approach to its classification and conceptualisation.

Citizen Science

The second key concept here is the citizen scientist. This is based on the idea that *amateur* scientists, volunteering their time and effort, can contribute significantly to research projects, based on the assumption that ‘collaborations between scientists and volunteers have the potential to broaden the scope of research and enhance the ability to collect scientific data. Interested members of the public may contribute valuable information as they learn about wildlife in their local communities’. (Cohn, 2008,p.192). However, the quality of research projects that incorporate volunteer work has been questioned, often quite negatively by stakeholders. For example, in 1993 the use of volunteers was prohibited in the USA’s National Biological Survey, due to concerns about their competence and objectivity (Gollan et al., 2012,p.970). Gollan et al (2012) go on to explore how effective volunteer activity can be in some fields, investigating how far volunteers working on research projects can actually provide high quality data They conclude that volunteer-collected data can be acceptable depending on various factors such as the type of data required, the individual volunteer’s ability (moderated, in part, by suitable training) and appropriate quality control measures; in effect, such factors relate equally to *professional* or paid researchers.

It is clear that at least some types of volunteer tourism are likely to involve the tourists in research projects and this paper draws on both volunteer tourism and citizen science in order to explore the activities

¹ Names of individuals, organisations and places have been anonymised.

of volunteers who participate in research projects during weekend trips to Lyme Park, with EPV. The remainder of the paper will introduce the research design and initial findings.

Methodological Orientation and research design

This research takes an ethnographic approach, utilising participant observation fieldwork to explore the nature of volunteering in EPV over an extended time period. Participant observation is not unusual in this field, although such research is rather time-delimited, often based on relatively short periods of fieldwork necessitated by the short-term nature of volunteer projects. For example, Grimm and Needham's (2012) fieldwork focused on a single reserve over a nine week period while Pegg et al's (2012) spanned two volunteer groups over a period of two weeks and Harrison (2007) conducted two short fieldwork visits (10 days and 5 days) to investigate eco-tourism in the Trinidadian village that he had researched more traditionally (over 15 months) thirty years before.

This paper focuses on fieldwork during various weekend volunteer tours to Lyme Park. Taking the role of volunteer tourist, I seek field immersion during multiple projects. This fieldwork takes an increasingly focused approach, following Spradley's (1980,p.108) three stages and types of activity – moving from broad-based 'descriptive observation' through 'focused observation' to 'selective observation'. This particular paper comes at a time when the research is moving towards 'focused observation' after a number of key themes have begun to emerge from the data – one of which, the volunteer tourist as citizen scientist, serves as the main topic of this paper. I have maintained a field-diary to record and reflect on observations and experiences shared with other participants. In addition, sixteen volunteers and six EPV employees have been formally interviewed, although considerably more have contributed during the fieldwork, to further discuss and reflect on those shared experiences.

Initial analysis

Fieldwork has been underway for about two years including one 4-day project, thirteen weekend projects and one 1-day project in Lyme Park, within the wider investigation. All the overnight projects were 'Enviro-smart' conservation breaks, as volunteer tourism, except for the 4-day project which was part of an international collaboration between EPV and an American volunteer organisation. Fieldwork has involved 89 volunteers from every continent and across most age-groups, six different team leaders and five trainee leaders. Most of the weekend projects contribute to an ongoing long-term survey of the habitat (warrens) of one species of mammal, although there are occasionally differences in this, such as vegetation surveys, lizard surveys and a recent bird survey working with external specialist researchers.

Environment Protection Volunteers

The EPV website summarises the organisation's vision as: believing in 'a healthy and sustainable environment, and for everyone to be involved in managing and protecting that environment'. Indeed, when asked about the number of volunteers within EPV, One manager, often points out that they have a potential membership of "24 million" (the approximate population of Australia). At any one time there are likely to be several active projects nationwide, involving activities such as removing invasive weeds, track maintenance, tree planting, seed collecting, flora and fauna surveys which are easily accessible to any local volunteers. In addition, the Enviro-smart projects/breaks offer an opportunity to do similar things, in more remote parts of the country. On one occasion, a manager explained that all employees were given the opportunity to participate in interstate Enviro-smart breaks as incentive travel, seeing them as an opportunity to travel experience exotic locations and work with, or at least see and learn about, charismatic and even endangered animals.

Eco tourism or volunteering?

The nature of the Enviro-smart breaks is often a little blurred, akin to Lyons and Wearing's (2008b) point about the conceptual blurring of volunteer tourism more generally. Some element of volunteer work is always incorporated into them, although this is combined with a significant amount of leisure time, often organised by team leaders. For example, there is always a guided tour of key parts of Lyme Park during weekends there and this can also include night 'spotlighting' for nocturnal animals (sometimes as part of formal surveys, sometimes purely for the participants' experience). The mixture of activities is structured

around an eco-tourism ideal with a relatively short proportion of time involved in actual 'work' when compared to the one-day projects.

The volunteer tourists come from all walks of life, including students studying relevant subjects (environmental land management, biological sciences etc.) who see participation as an opportunity for field experience and students in other subjects and non-students of all kinds who focus on the volunteering (and/or leisure) aspect of the experience. Many combine a genuine desire to contribute with more instrumental resume enhancement. Linked to this is a key theme of learning, whether in conservation/environmental research, more generally in soft skill development or simply as life-experience. Certainly, participants identified many different reasons for taking Enviro-smart breaks. One enthusiastic participant agreed that she would like to do more with EPV, although in a different project at a different venue the next time, focusing on variety of experience. Another reflected on her commitment to conservation volunteering explaining, 'I think if I like to be engaged I should be going from time to time, rather than once – one experience as a photo [laughs], to be framed'.

The participants' diverse motivations and expectations also demonstrate the importance of flexible conceptualisation of volunteer tourism more generally, not least because some, at least, clearly do not identify with a tourist *label*. Some participants were surprised by the cost of the breaks, apparently not recognising the (commercial) tourism element of their experience. One overseas participant found it 'quite embarrassing' because his friends were 'really shocked' to hear that he had paid to volunteer and another also reported friends' surprise – 'they think they [we] are volunteers, they have already contributed their time; why do they have to pay some costs?' Such perceptions suggest more emphasis on volunteering rather than tourism as the key activity; indeed other participants could react quite negatively to the label 'tourist', apparently seeing it rather demeaning, being much more comfortable with the idea of 'volunteer' or 'citizen scientist'. This could seem to resonate with the long discussed differentiation between traveller and tourist (eg Culler, 1981), although apparently it was more about their perceptions of the activities engaged in (ecological contribution), rather than self-aggrandisement or a professed search for self-discovery through *authentic* travel experiences.

Enviro-smart as Citizen Science/Citizen Research

The scope of EPV's projects within the Enviro-smart program is broad, though the Lyme Park weekends mostly focus on research activities, emphasising a need for community involvement, in line with EPV's vision and implying a commitment to the ideal of citizen science. Fieldwork has included the four types of volunteer research introduced earlier in the paper (warren/habitat surveys – the most common, lizard and bird surveys and vegetation surveys).

Each group receives some training in Health and Safety and research practice, including an introduction to the research study and data collection procedures. Team leaders are expected to ensure that the volunteers have a positive experience while also ensuring that the research task is completed to a high standard. Thus, in addition to an initial briefing, each team leader must supervise the team as it engages in the weekends' surveying, reinforcing data collection and recording procedures, while enabling everyone to participate as fully as possible. One state manager asserted that 'we are a people organisation first and foremost as opposed to conservation ... we look for team leaders who have skills in managing people'. This was often illustrated by volunteers, one of whom explained 'you don't even realise you're learning a lot when you are there but later you find yourself talking about it... I believe that it's team leaders influence on you.' She valued the team leader's informal leadership skills as much as her conservation related knowledge – although the latter is also an important factor; in many discussions during the fieldwork, volunteers have made it clear how much they value the general eco-knowledge shared by all the leaders.

Three research contexts

The residential research activities can be broadly categorised in three contexts specified in table 1. Of these the most common in Lyme Park is the 'closely supervised' type, notably the warren/habitat survey; EPV's primary research priority is to map the whole park, establishing detailed habitat information. This is also an effective way of utilising volunteers over a relatively short (weekend) break, It is time consuming to train more autonomous researchers and quality control can be problematic, an issue that is of particular and growing importance (Taplin, 2013), while participation in the more highly skilled types of research, such as finding, handling, measuring, tagging and taking blood samples from fauna requires extensive training and

licensing, so such activities can only take place when external specialists are conducting their own research and are happy to involve the volunteer tourists in their work.

Table 1. Types of Enviro-smart Citizen Research

Research Type	Summary	Example	Activity
1.Participant as data collector semi-autonomous citizen science	Collecting data in small groups somewhat remote from team leader	Vegetation surveys	Volunteer pairs (or small groups), observing and recording details of vegetation in systematically identified locations around warrens
2.Participant as team member closely supervised citizen science	Collecting data with whole team under constant supervision	Warren/Habitat Surveys	Locating, analysing and recording details of warrens/habitat
3.Participant as observer Little active citizen science	mostly observing researchers at work and/or being trained; little active contribution	Night time spotlighting Bird Surveys	Passengers with teams of researchers observing and recording nocturnal wildlife Assisting with some equipment (eg nets); observing trained researchers working; limited training in bird handling and data recording.

Warren/Habitat Surveys

The surveys involve quartering the park into one-kilometre stretches which are searched systematically for warrens; these are analysed and recorded, identifying active burrows, surrounding vegetation and other relevant data (such as scat and signs of other significant life, especially predators). A key part of the team leader role is to involve everyone in the activity. This tends to be easier with smaller groups where individuals/pairs can be allocated to different tasks (GPS operator, scribe, measurer, burrow counter etc). Most data are checked by the team leader, though volunteers soon become relatively consistent in their efforts; in any case, Gollan et al's (2012,p.973) research comparing *expert* researchers' findings with volunteers' was notable, not so much for the percentage (53%) of volunteers' findings that reflected benchmarked data, but because the *experts* themselves only achieved 67% agreement with benchmarks. This suggests that the type of data recorded in this sort of fieldwork are not particularly amenable to objective identification and recording (in this case, even counting burrows in a large warren is not easy; with possible cave-ins, hidden entrances and identification of 'active' burrows is not straightforward). There is a further challenging element to the warren surveys. As the warrens' inhabitants are nocturnal and notoriously shy of humans, many project teams never actually see one alive. Leaders make up for this by arranging night-time spotlighting or focusing on scat (droppings), fresh paw-prints, smelly occupied burrows and other evidence of the elusive animals.

Participants' perceptions of the survey experience are mostly positive. Individuals from non-conservation or naturalist backgrounds often express an interest in the methodological implications, especially students and others with an interest in research more generally. Being exposed to this sort of research served as an 'eye-opener' to some, contributing to a sense of learning about 'scientific' fieldwork and a sense of achievement at being able to contribute to significant investigations. One Business researcher explained that, although the research was very different to her own, she did feel a certain 'commonality' with it, identifying resonance with her own research as 'there is so little we know about human activity or animal activity'. This

idea derives from the tendency for team leaders to reinforce the value of the research (and participant contribution), explaining that our knowledge of the species and habitats being researched is very limited. This often surprises participants when they find their questions often elicit a ‘don’t know’ response from team leaders; surprising them because many come to their first Enviro-smart experience with a comfortable faith that this ‘science’ has (or should have) already answered most of the questions that they could think of. To some extent, this was demonstrated by the same Business researcher who recounted a conversation with a friend afterwards; having told the friend “‘I’ve done something scientific” [laughing] they would ask me “What did you do? Like, you are not a scientist. You don’t understand...”” In this case, her friend simply did not recognise *her* research as having the same scientific strength as this *real* science, a prejudice that her reflection on the experience started to unravel somewhat.

Not everyone was wholly positive about the Enviro-smart break experience. A young international student suggested that most of his learning had been informal and that he would have valued more ‘formal’ training and more information about how the data that he contributed to would be processed and used. Another pointed out that, ambivalently, he felt he was ‘contributing to the environment. Although I don’t know whether it did or not’. So, he questioned the overall value of the research he had participated in. A more experienced volunteer, who had participated in several different projects and studied animal behaviour previously, also questioned the procedures, suggesting that the fieldwork procedures were rather inconsistent and could be improved, but he agreed that ‘there was no sure-fire way to do it. So, everybody was just happy to be there, you know? Happy to be thinking that they’re doing something. So I don’t think it matters.’ This could question the authenticity of the volunteer tourist role as citizen researcher. However, at the most basic level, the mapping data collected gives an accurate location of the warrens, even if some of the detailed data has been collected and recorded a little haphazardly.

Conclusion

This paper explores the idea of citizen science in relation to Enviro-smart research projects in Lyme Park. The fieldwork has progressed into Spradley’s (1980) second, focused, stage – focusing on issues of utilising volunteer tourists as citizen scientists.

A key challenge facing EPV is the nature of the Enviro-smart program, especially in relation to participants’ perceptions of the Enviro-smart offerings. EPV Managers recognise the need to offer a satisfying volunteer-tourist experience, though the blurred conceptualisation of this type of tourism is clearly a complicating factor; participants may perceive themselves as eco-tourists (hoping to contribute a little more than usual) or as volunteers who happen to stay overnight at a project site (paying for the privilege) and it is difficult for leaders to identify to whom each self-perception applies.

Most participants (management, employees and volunteers) also recognise the challenge of ensuring research quality. This further complicates project management, as leaders are responsible for catering for, training (in survey procedures) and educating (more broadly) enthusiastic, but often inexperienced, volunteers, as well as supervising their data collection efforts over relatively short (mostly two-day) projects. The fieldwork continues to explore these issues and promises further insights to be shared during conference.

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