Tourists' Specialization and Wildlife Values in the Context of Wildlife-Viewing Tourism in Protected Areas: A Study of Elephant-viewing Tourists at Udawalawe National Park in Sri Lanka

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Abstract
Wildlife-viewing has become a popular nature based tourism sector worldwide providing opportunities for tourists to enjoy wildlife in natural habitats such as protected areas. With the number of participants steadily increasing, there is a growing concern that even the non consumptive use of wildlife for tourism such as wildlife-viewing can have detrimental effects on wildlife and its habitat. Understanding tourists’ specialization in wildlife-viewing and their environmental concerns such as wildlife values are important factors for visitor management in protected areas as majority of the problems originate from the tourist behavior. This study identified three types of tourists in a famous elephant-viewing destination in Sri Lanka; novices, generalists and experts based on their specialization levels in wildlife-viewing. Majority of the tourists were novices in wildlife-viewing and there were very few experts. The three groups were different in their environmental concerns such as wildlife values. Novices were less conservation minded where as experts emphasized on co-existence with wildlife. Visitor management strategies such as interpretive programs should be revised and developed in order to encourage minimal impact behaviors.

I. Introduction
Nature-based tourism is a rapidly growing tourism sector worldwide. Especially, wildlife based tourism have become a very popular nature-based tourism activity worldwide with the number of participants steadily increasing (Reynolds & Braithwaite, 2001). Wild animals are increasingly used by marketers in many countries (e.g. Scotland: birds and marine mammals, India: tigers; China: giant pandas) as flagships for promoting tourism (Higginbottom 2004). Although there is a segment of wildlife based tourism which seeks consumptive use of wildlife such as hunting and fishing, it is the demand for wildlife based tourism that focuses on non-consumptive uses of wildlife that has grown dramatically in recent times such as wildlife-viewing (Reynolds & Braithwaite, 2001). Wildlife-viewing tourism takes place on free ranging animals in natural areas such as reserves, parks and sanctuaries. One of the main arguments for the continuing development of wildlife attractions is that they help to secure long-term conservation of wildlife and have potential to positively influence the knowledge, attitudes, and behavior of tourists (Ballantyne et al., 2009). However, a significant proportion of tourism focuses on endangered or threatened species and visitation leaves imprints that can have cumulative and substantial negative impacts on wildlife and their habitat (Marion and Reid, 2007). Therefore, one of the greatest challenges of wildlife tourism is protecting and conserving the wildlife and their habitat whilst managing the needs of tourists. Especially, with the number of participants steadily increasing, there is growing recognition that wildlife viewing can have detrimental effects on wildlife and their habitat. These effects include animal death due to collision with vehicles, spread of disease due to feeding of wildlife by tourists, habitat modification due to construction of roads and tourist facilities and pollution due to increase of garbage (Knight and Gutzwiller, 1995). Further, behavioral changes of wildlife due to human disturbance such as increased habituation, decreased feeding time, changes in hormonal milieu, decreased survivorship, increased predation, and death, and, increased alertness have been documented as effects of tourist activities on wildlife. (Constantine et al. 2003). Individuals that are subject to disturbance will spend less time on feeding or resting, and more energy on trying to move away from the source of disturbance, perhaps shifting to more remote or less productive feeding grounds. They
may also face greater competition with other species, and be more vulnerable to predation, in less favored feeding grounds. Therefore, visitor management in wildlife-viewing areas is highly important as majority of wildlife management problems originate from the behavior of visitors.

Understanding the visitor characteristics is critical for visitor management because it improves the managers’ ability to consider the public demands in decision making and the ability to predict human behavior and the ability to identify ways to affect thought and behavior of visitor. However, wildlife tourism as a whole lacks important information on the needs, desires, and opinions of the public (Duffus and Dearden, 1993). Characteristics of nature-based tourists, especially wildlife tourists are often revealed based on socio-demographic factors (Carver, 2009) However, it is difficult to understand the aspects such as involvement, commitment, centrality of tourists in a wildlife tourism activity or the attitudes towards wildlife only based on socio-demographic factors. Therefore, this study aimed to find out tourist characteristics in terms of specialization which can better identify the domains such as tourists’ commitment, interest and centrality and their environmental concern such as wildlife values in the context of rapidly growing wildlife-viewing tourism.

II. Study site and methods

Study site was a famous elephant viewing destination in Sri Lanka called Udawalawe National Park (Fig. 1). Sri Lanka tourism has expanded considerably over the past three years after the conclusion of the civil war in 2009. Especially, Sri Lankan government is promoting tourism in Sri Lanka under a tourism campaign called “refreshingly Sri Lanka” under which eight aspects of Sri Lanka are highlighted. Wildlife is one major segment of the campaign and the number of local and foreign tourists visiting wildlife parks in Sri Lanka has considerably increased (Sri Lanka department of wildlife conservation, 2011). Wildlife-viewing is the main tourism activity in the wildlife parks in Sri Lanka, and Udawalawe National Park is one of the most famous parks for elephant viewing.

Udawalawe National Park, established in 1972, lies on the boundaries of Sabaragamuwa and Uva provinces in the southern part of Sri Lanka and provides habitat for over 1000 elephants in a land area of 30,821ha. It is recorded that the park is the third most visited park in Sri Lanka (Sri Lanka department of wildlife conservation, 2011). Tourists can move in the park on jeeps or off road vehicles to view elephants in the natural habitat.

Ecological and biological studies of elephants have been carried out in this park such as ecology and behavior of elephants (Weerakoon 2000) and demography of Asian elephants at Udawalawe NP (De Silva et. al 2011), however, no previous researches related to tourism have been conducted. With the increasing number of tourists, there is a growing concern for visitor impact on wild elephants. Sri Lankan elephant, *Elephas maximus maximus* is listed as a threatened species (EN) in the Red List (IUCN Red list of threatened species, 2012). Therefore, visitor management in the park is highly important and this study focused on identifying the characteristics of elephant-viewing tourists to find out how specialized they are in wildlife-viewing and their attitudes and values towards wildlife.

![Figure 1 Location of Udawalawe National Park](image)

A questionnaire survey was carried out in March 2012 for a period of one week and 112 tourists to the park participated in the survey among which 62 were foreigners and 50 were locals. The questionnaire consisted of two sections. The first section included questions to reveal tourists’ specialization on wildlife-viewing. The questions were adopted from a concept called recreation specialization developed by Bryan (1977). The “Recreation Specialization”
concept was to explain diversity among participants in a given activity. Bryan proposed that within any given activity, there are distinct “classes of participants” who exhibit distinct “levels of specialization”. The classes of participants vary from highly specialized to novices based on their levels of specialization in the activity. The levels of specialization are measured using three indicators; behavioral indicator such as frequency in participation or prior experience in the given activity, affective indicator meaning the centrality of the given activity to lifestyle and intensity of involvement, cognitive indicator such as equipment ownership and environmental group affiliation. Novices have a greater interest in the non-wildlife aspects of their tourism experiences than do specialist participants. Specialist users, on the other hand, are more concentrated on the focal species, and are more likely to be conservation minded. Bryan contends that an understanding of these variations is crucial to the provision of desired experiences, prediction of visitor behavior and identification of ways to affect visitor behavior. Therefore, this study used the above concept in designing the questionnaire and identifying the characteristics of the tourists to Udawalawe National Park. First, visitors were asked to what extent does the opportunity to view wildlife influence on their decision making in leisure based on a five point Likert type scale from 1 = ‘never’ to 5 = ‘always’. This was to find out the centrality or importance of wildlife viewing in leisure decision making compared with other leisure pursuits followed several other specialization indicators such as frequency in participation in wildlife excursions, involvement in environmental activities, specialized equipment ownership and purpose of visit. Fisher’s exact test was used to analyze the difference among tourists with different specialized levels.

The second section of the questionnaire inquired about wildlife values of tourists based on the wildlife value orientation scale developed by Fulton et al. (1996). An understanding of values is important because values are the most fundamental factor that directs much of human volitional behavior (Heberlein, 1981; Stern & Dietz, 1994). An understanding of wildlife values is useful in predicting patterns of attitudes and behaviors across a set of wildlife issues (Fulton et. al., 1996). Therefore, in this study, wildlife values of wildlife-viewing tourists were measured using the Wildlife Values Orientation Scale (WVOS), which includes two scales; Utilitarian and Mutualist (Fig.2).

Utilitarian scale includes domains such as wildlife use, wildlife rights and hunting beliefs. Visitors were asked to assess these domains using seven point likert scale from 1= “Strongly disagree” and 7= “Strongly agree”. For example, to assess wildlife use, visitors were asked how strongly they agree or disagree with the statement; “Humans should manage wild animal populations so that humans benefit” and to assess hunting beliefs, visitors were asked how strongly they agree or disagree with the statement; “Hunting enables people to enjoy the outdoors in a positive manner”. Mutualist scale includes domains such as wildlife education, residential wildlife experience, bequest and existence of wildlife. For example, to assess wildlife education, visitors were asked how strongly they agree or disagree with the statement “I enjoy learning about wildlife” and to assess residential wildlife experience; they were asked to rank the statement “Having wildlife around my home is important to me”. Based on these two scales, WVOS divides visitors into four categories; Utilitarian (people who believe wildlife exist primarily for human use), Mutualist (People who believe wildlife and humans should co-exist in harmony), Pluralists (mix of Utilitarian and Mutualist types) and Distance (people who are less interested in wildlife or not oriented towards wildlife issues). Factor analysis was conducted to identify to which type the visitors belong to.

III. Results and Discussions

3.1 Specialization of tourists to Udawalawe National Park

The highest percentage, 43% of the total participants (n=48) gave negative answers; i.e. “never” or “rarely” (Fig. 3). 39% of the participants (n=44) answered “sometimes” and 18%, the least number of participants (n=20) gave positive answers; i.e. “often” or “always”.
Visitors who answered that opportunity for wildlife viewing “never/rarely” influenced their decision when making for holidays had very low frequency in participating in wildlife-viewing since 46% of them said that it was their first time to take a wildlife excursion (Fig. 4). At the same time, 85% of these visitors said that this park was not their main destination and it was only a one among several other destinations or they did not even have a plan to visit the park originally (Fig. 5). The purpose of their visit to the park was mainly to be with friends or family togetherness (Fig. 6). They placed extremely low importance on studying/exploring wildlife or getting close to nature. Regarding the equipments they brought with them for the wildlife excursion, there were a significant number of people who did not bring any equipment with them and even if they bring it was only photographic equipments (Fig. 7). 90% of these visitors were not involved in any environmental group related to wildlife conservation (Fig. 8). Therefore, the visitors for whom opportunity for wildlife-viewing never/rarely impacted when deciding for their holidays had low frequency in participation in wildlife-viewing, less interest in studying or enjoying wildlife and more emphasis on being with friends or family outing, less equipment ownership, no affiliation with environment groups could be recognized as the “Novice wildlife-viewing tourists”.

Visitors who answered that opportunity for wildlife-viewing “sometimes” influenced their decision when making for holidays had some frequency of participation in wildlife-viewing activities compared with the Novice wildlife-viewing tourists (Fig. 4 and Table 1) as most of them take wildlife excursions every few years (48%) or once a year (32%). Most of them said that the visit to the park was one of several destinations (Fig. 5). It was not a sudden drop in compared to previous group as less number of people answered “not a planned destination” (Table 1). Their purpose of participation was to be with friends and family as well as to study and enjoy wildlife (Fig. 6). Regarding the equipments, it was mainly photographic equipments as the previous group (Fig. 7). There were few people who also brought binoculars with them. However, compared to the previous group there were very few people who did not bring any equipment with them . At the same there was certain amount of environment group membership (27% were involved in some sort of conservation work) in this group (Table 1). However, 73% of visitors did not have any such experience and were quite similar to Novice group. Therefore, the visitors for whom opportunity for wildlife viewing sometimes influenced when deciding for their holidays had some level of frequency in participation in wildlife viewing, interest in family/friends togetherness as well as enjoyment/studying wildlife. Some level of equipment ownership and environmental group membership could be recognized as “Generalist wildlife-viewing tourists”.

Visitors who answered that opportunity for wildlife-viewing “often/always” influenced their decision when making for holidays had a very high frequency in participation in wildlife-viewing as majority (45%) of them answered that they take wildlife excursions 2-5 times a year and there were also people who participate in wildlife viewing more than 5 times a year (Fig. 4). Majority of the visitors said that this park was their main destination (Fig. 5). In the purpose of participating in wildlife excursions, these visitors placed a high emphasis on studying/enjoying/exploring wildlife and least on being with friends or family. They reported a significantly greater diversity of equipment ownership in contrast to other two groups as they brought not only cameras or video cameras, but various other equipments such as binoculars, scopes, field guides, maps and torches (Table 1) . They also had a greater degree of environmental group affiliation. 75% of these visitors were involved in environmental activities such as wildlife conservation (Fig. 8). Therefore, the visitors for whom opportunity for wildlife-viewing often/always influenced when deciding for holidays had a high frequency in participation in wildlife-viewing, their purpose of the visit was to study/enjoy/explore wildlife, they had a high level of
equipment ownership and affiliation with environmental groups compared to other two groups (Table 1) and could be recognized as “Expert wildlife-viewing tourists”.

As explained above, three types of tourists; Novices, Generalists and Experts could be identified based on their specialization levels in wildlife-viewing. Majority of the visitors were Novices who were less experienced and less interested groups in wildlife. These results suggest that the tourist specialization in elephant-viewing at the Udawalawe National Park was very low.

Figure 4. Purpose of visit to the park

Figure 5: Visit to the park was main destination or not

Figure 6: Equipment ownership of the three groups

Figure 7: Environmental group affiliation
Table 1. Comparison of the three groups for each specialization indicator

<table>
<thead>
<tr>
<th>Specialization indicator</th>
<th>Novice-Generalist</th>
<th>Novice-Expert</th>
<th>Generalist-Expert</th>
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<td>Frequency in participation</td>
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<td>0.00000001</td>
<td>0.00099900</td>
</tr>
<tr>
<td>To be with friends</td>
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<td>0.00164000</td>
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</tr>
<tr>
<td>To study wildlife</td>
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<td>0.00000000</td>
<td>0.00000628</td>
</tr>
</tbody>
</table>

3.2 Wildlife values of tourists to Udawalawe National Park

Many novice wildlife tourists fell into the categories of “Utilitarian” (42%) and “Distance” (27%) in the wildlife value orientation matrix (Fig. 9) which is associated with consumptive practices of wildlife or uninterested in wildlife or wildlife related issues. Many of the generalists fell into the category “Pluralist” (48%) in the matrix (Fig. 9). These tourists scored both Utilitarian and Mutualist scales with high points. It showed a mix of values as consumptive practices of wildlife as well as co-existence with wildlife. All of the expert wildlife tourists fell into the category “Mutualist” as they scored mutualist domains such as wildlife education, residential wildlife experience and bequest higher than other two groups.

Figure 9: Wildlife Values of Novices

3.3 Implications for visitor management

In this study, three types of tourists; novices, generalists and experts to a famous elephant-viewing destination could be identified based on their specialization in wildlife-viewing. These three groups were further revealed on their orientation towards wildlife values. Most of the tourists were novices or generalists with low or no experience in wildlife-viewing. Especially, novices considered their visit to the wildlife park as a mere family outing or being with friends and did not bring useful equipments to explore or study wildlife. Wildlife-viewing was not their main focus of their trip since their visit to the park was one of several other destinations or not a planned destination. Furthermore, novices were less involved in conservation activities and they placed a high emphasis on utilitarian aspects of wildlife or uninterested in wildlife issues. On the other hand, expert wildlife tourists were well experienced, well equipped and were highly involved in conservation activities. They visited the park mainly to enjoy/study or explore wildlife. They showed a great support for co-existence with wildlife. However, expert wildlife tourists represented the lowest number of tourists to this site. This result provides an important guideline for visitor management in the park.

The park has an information centre to provide visitors with information on the park, and the elephants. There is a system of volunteer guides in the park. However, the information centre and the guides provide general information on the park (such as land area of the park, number of elephants) and do not consider the diversity of the tourists to the area. The results of this study showed that the majority of tourists with less orientation towards wildlife-viewing on free ranging animals do not value co-existence with wildlife and emphasize on wildlife use for human benefit. Values are the most fundamental factor that directs much of human volitional behavior (Heberlein, 1981; Stern & Dietz, 1994). This provides an indication that the behavior of less wildlife oriented tourists may have negative impact on wild animals. For example, according to the park management, there were cases where tourists trying to feed wild elephants, speaking loudly during the excursions which causes disease and disturbance to wild elephants. Therefore, interpretations given by the information centre and the guides should be revised and developed based on a thorough understanding of the different types of tourists utilizing the park. For example, tourists should not only be given the information on the number of elephants in the park or their demographic details, but tourists should be informed about the importance of conserving elephants, current issues of elephant conservation and also encouraged to support these conservation efforts. As Gray (1993) explained, interpretations can raise visitors’ knowledge and awareness...
of wildlife and habitats and thus can encourage pro-conservation attitudes and motivation to act on broader conservation issues. Therefore, understanding visitor characteristics in terms of tourists’ involvement, commitment such as specialization and attitudes such as wildlife values provide useful implications for park managers in designing and deciding on their visitor management strategies in order to influence visitor behavior and encourage minimal impacts.

Reference


Sri Lanka department of wildlife conservation: www.dwc.gov.lk