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Managing marine wildlife tourism activities: Analysis of motivations and specialization levels of divers and whale watchers

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ABSTRACT

This paper reports findings derived from two samples, each of which numbered over 400 respondents. The first was of divers and the second of whale watchers, and both samples were from the Azores, a major diving and whale watching tourist location in the northeast Atlantic ocean. Distinctions were made between generalists and specialists in the recreational activities with the objective of assessing differences in perceptions and behaviors. While there are commonalities in concerns over environmental issues distinct differences were found. The findings also question previous studies that suggest higher degrees of involvement are related to greater frequencies of a given activity. With reference to the passive activity of whale watching no such relationship was found, but the behaviors of divers are consistent with such hypotheses, and it is suggested that the requirement for training is one determining factor that reinforces involvement as people become more specialized and skilled.

1. Introduction

Whale watching and scuba diving are marine wildlife tourism markets with the potential to generate considerable economic and environmental benefits for local communities (Higham & Lück, 2008). In Europe, whale watching generated 97 million dollars of revenue in 2008 and had an annual growth rate of 7% during the last decade. The Azorean islands are an important center for whale watching in Europe with a 15.5% annual growth rate that contributes 23% of the total revenues generated by whale watching activities in Portugal (O'Connor, Campbell, Cortez, & Knowles, 2009). Whale watching is reported by 12.5% of tourists as the main motivation to visit the Azores (Serviço Regional de Estatística dos Açores (SREA), 2007). Diving tourism is also one of the fastest growing recreation and tourist activities (Musa & Dimmock, 2012). Previous research on diving has concentrated mainly on tropical and coral reef environments (e.g. Anderson & Loomis, 2011; Dearden, Bennett, & Rollins, 2006; Lucrezi, Saayman, & van der Merve, 2013). The Azores are a non-tropical diving destination with large iconic species such as manta rays, sharks and groupers. Understanding specialization levels and exploring motivations and attitudes of marine wildlife users can help decision makers and local operators assess the potential for future development of this market as well as design better management practices and policies. Specialization of wildlife tourists has shown to be associated with specific behaviors, different motivations, perceptions, and ultimately with satisfaction (Dearden et al., 2006; Higham & Carr, 2003; Lucrezi et al., 2013; Orams, 2000).

1.1. Specialization in marine wildlife tourism research

Bryans' *leisure specialization continuum* has been applied to numerous case studies arguing that recreationists, such as wildlife tourists, differ in terms of investment in, and knowledge of, the activity, or degree of specialization (Bryan, 1977). The variables Bryan used to position users along a continuum were commitment, preferences for activity settings, skills, and equipment ownership. More specialized participants are considered more knowledgeable and skilled about the activity and the destination, and require minimal infrastructure or interpretative materials in order to achieve an enjoyable wildlife experience. Specialists are enthusiastic participants who are committed to the activity and use more sophisticated equipment and approaches. Generalists are infrequent participants who do not consider the activity to be a central life interest. They generally do not invest much in equipment or the activity (Bryan, 1977; Needham, Vaske, Donnelly, & Manfredo, 2007; Scott & Shafer, 2001). Duffus and Dearden (1990) applied the specialization concept to wildlife tourism and suggested additional variables such as knowledge of the target species and involvement in conservation initiatives to describe expertise in a wildlife tourism

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context. Increased specialization leads to increased awareness of the environment and a smaller impact on the environment and on the focal species (Duffus & Dearden, 1990).

Duffus and Dearden (1990) integrated Bryan's concept of recreational specialization and Butler's Tourism Area Life-cycle Model (Butler, 1980) into their framework of non-consumptive wildlife-oriented recreation, proposing that the different stages of development of a site — discovery, exponential growth, consolidation and collapse, will be characterized by different levels of specialization. Initially a wildlife tourism activity will attract explorative users who are essentially wildlife specialists. As the popularity of a site increases, so does the proportion of generalist wildlife tourists among the visitor population. As a wildlife tourism activity evolves to meet the demands of generalists, specialists are less attracted and seek out other areas for their activities (Duffus & Dearden, 1990). Unless management interventions are applied this process will lead to increased environmental impacts, declining satisfactions and the ultimate failure of the site as a wildlife tourism attraction.

Duffus and Dearden's (1990) model has been shown to be a useful guide for improved management interventions for managers, operators or researchers who seek to derive sustainable benefits that wildlife tourism can bring in the form of support for conservation and economic growth (Catlin, Jones, & Jones, 2011). A number of studies have found that specialization relates to the stage of development of a wildlife tourism industry (e.g. Augustine, Dearden, & Rollins, 2015; Catlin, Jones, Norman, & Wood, 2010; Catlin & Jones, 2010; Jones, Wood, Catlin, & Norman, 2009; Lemelin, Fennell, & Smale, 2008; Malcom & Duffus, 2008; Manfredo & Larson, 1993; Peake, 2011) and confirm that specialization increases pro-environmental behavior, attitudes and environmental awareness, and is accompanied by growing support for management interventions (e.g. Dearden, Bennett, & Rollins, 2007; Leujak & Omond, 2007; Luna, Pérez, & Sánchez-Lizaso, 2009; Malcom, 2003; Musa, Seng, Thirumoorthi, & Abessi, 2011; Ong & Musa, 2012). However in other studies, more specialized participants did not differ from less specialized ones in the way they interacted with the environment (Camp & Fraser, 2012; Di Franco, Millazzo, Pasquale, Tomasello, & Chemello, 2009), nor in their commitment to rules and codes of conduct (Anderson & Loomis, 2011; Ziegler, 2010) nor in their support for management measures (Edney, 2012; Sorice, Oh, & Ditton, 2007) suggesting potential variation among activities and the type of specialization index employed (e.g. Malcom, 2003). Lemelin et al. (2008) argue that consensus on the indicators defining specialization has not been reached, possibly due to the largely open way in which Bryan's paradigm was originally formulated, which allows many different interpretations. In addition, the existence of a progression of recreationists to higher levels of specialization may not be equal for all activities (Scott & Shafer, 2001).

Given the variation in findings regarding the specialization concept described above, this study aims to unbundle how two different marine wildlife tourism activities behave with regard to specialization and to understand the different types of clientele within activity types.

The concept of recreation specialization has been applied to diving but there are few studies on whale watching (but see Lambert, Hunter, Pierce, & MacLeod, 2010; Malcom, 2003; Peake, 2011). The research reported here assesses two different marine wildlife tourism activities in the same destination. It explores the specialization of divers and whale watchers in the Azores to study the applicability of the concept of Recreation Specialization Continuum to different kinds of marine wildlife tourism and its applicability to the Wildlife Tourism Model of Duffus and Dearden (1990).

Research questions associated with this objective are:

- Is tourist specialization evident in whale watching and diving in the Azores? If so, does tourist specialization coincide with previous experience, different motivations, and setting preferences?
- Is the specialization concept equally applicable to the different but related activities, including a progression to higher stages of involvement?
- Are there different levels of specialization for the activities among the five main islands Santa Maria, São Miguel, Graciosa, Pico and Faial?
- What conclusions can be drawn from levels of specialization for the classification of the islands according to the stages of Duffus and Dearden's (1990) Wildlife Tourism Model?
- What are the implications of these findings for theory and for management of the whale watching and diving tourist industries in the Azores?

1.2. Case study area

The Azores archipelago, situated on the mid-Atlantic ridge, consists of nine small islands. Coastal recreational activities are a major tourist attraction. Scuba diving and whale watching play an increasingly important role within the tourism sector, as the Azores offer good conditions for watching oceanic species close to the shoreline (Magalhães et al., 2002). Around twenty-five cetacean species can be observed in the waters of the Azores in close distance from the shore (Bentz, Dearden, & Calado, 2013). Of approximately 364,000 tourists in the Azores in 2012, 14.7% went whale watching (Regional Directorate for Tourism, 2014). In the whole archipelago 27 diving operators and 24 whale watching operators offer their services. Diving takes place in all Azorean islands whereas whale watching occurs only around the islands of São Miguel, Terceira, Graciosa, Pico and Faial. The case study islands Pico, Faial and São Miguel represent around 98% of the around 59,000 whale watchers in the Azores in 2013 with Pico and Faial island (which comprise one management zone) representing around 38% and São Miguel (another management zone) around 60% (Regional Directorate for Tourism, 2014) (Fig. 1).

Whale watching in the Azores is regulated by various law decrees and rulings which define the rules for the approach to cetaceans, minimum distances as well as direction and speed of boats and time spent near the animals. Distances vary with the situation but must not be less than 50 m. The approach is done from behind, leaving a free zone in front of the animals. A maximum of two boats may be in the vicinity, but not closer than 200 m. Each boat can stay a maximum 30 min with the same animal or group. No scuba diving is allowed with cetaceans, and snorkeling is allowed only with certain dolphins. Companies dedicated to whale watching must apply for a permit (Law Decree Number 9/99/A; Law Decree Number 10/2003/A; Ruling Number 5/2004).

Despite the fact that diving has become a major attraction for tourists in the Azores, there exists only limited data about the number of divers. Regional authorities estimate around 4000 divers in 2013. However, diving with blue sharks, an emerging subsector of the diving industry in the Azores, was calculated to involve approximately 7000 divers in 2011. These numbers suggest that the assessment of the diving industry made by the regional authorities might be underestimated (Regional Directorate for Air and Maritime Transport, 2013; Bentz, Dearden, Ritter, & Calado, 2014).

Previous research on marine wildlife tourism in the Azores has concentrated on habits, behavior and distribution of marine mammals and sharks (Doksæter, Olsen, Nøttestad, & Fernö, 2008; Oliveira da Cruz, 2008; Vieira & Brito, 2009), their conservation (Silva et al., 2012), impacts of tourism on cetaceans (Lusseau, 2004; Magalhães et al., 2002; Visser et al., 2011), and interactions with local communities and fisheries (Neves-Graça, 2006; Silva et al., 2011). Less emphasis has been placed on the management of the activities or the experience itself, such as expectations, satisfactions and specialization (Oliveira, 2005; Silva et al., 2012). This publication contributes to fill this gap. Assessing the specialization of the users is a valuable input towards assessing the current status of the industry and formulating optimal policy and management prescriptions for long-term sustainability.