

Tourists and Turtles: Searching for a Balance in Tortuguero, Costa Rica

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Abstract

Tourism is seen as an important part of the turtle conservation 'toolbox' that can be used to (1) raise awareness about sea turtles, (2) provide funding for conservation and management, and (3) create 'alternative livelihoods' and revenues for communities who engage(d) in direct consumption or sale of sea turtle products. With some exceptions, however, few studies of sea turtle tourism dedicate adequate attention to the wants, needs, and perceptions of tourists (exceptions include Wilson & Tisdell 2001; Smith 2002; Gray 2003; Meletis 2007; Ballantyne *et al.* 2009). In this paper, we focus on tourist perceptions of turtle tours in Tortuguero, Costa Rica, home to Tortuguero National Park (TNP; est. 1975) and among the oldest turtle tour systems in the world. In 2004, the tour system was changed to mitigate potential negative impacts of tourist activity on nesting turtles. Whereas tourists and their guides once walked the beach 'looking' for nesting turtles, they now wait behind the beach and are radioed by TNP-affiliated 'turtle spotters' when turtles are 'ready' to be viewed. Impact mitigation was the primary motivation for this alteration to the tour system; resulting changes in the nature of the tour were not central considerations. Are the tourists enjoying the new tour format? Do they like/dislike the more passive waiting? Do the tourists know about, and understand the new tour system? In this paper, we address questions such as these, using a sample of 147 tourist surveys collected in 2008. We designed our survey to (1) add to the existing data on tourism in Tortuguero, (2) collect data on tourist perceptions of the (new) tour system, and (3) gauge tourist awareness of the Turtle Spotter Program (TSP) and the reasons for the new turtle tour system. The main purpose of this study was to collect data requested by interested stakeholders, and to consider the results with respect to implications for the future of turtle tour management in the area.

Keywords: turtle tourism, turtle tour, ecotourism, ecotourist, Tortuguero, tourist perceptions, conservation, tourism, Costa Rica, survey

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INTRODUCTION

Sea turtle conservation organisations promote tourism as a way to 'save turtles', and reconcile conservation and development near nesting beaches. Examples include Save The Turtles of Parismina (ASTOP) and the Caribbean Conservation Corporation (CCC), in Costa Rica; Projeto TAMAR in Brazil; SEE Turtles and WIDECAS supporting tours in different countries; and the World Wildlife Fund's involvement in tourism-related conservation in turtle nesting areas around the world¹. Turtles can be 're-valued' as 'worth more alive than dead' through revenue-generating tourism activities (e.g., turtle

tours) that do not involve their direct extractive use (Troëng & Drews 2004). Tourism is also seen as a way to recruit and profit from conservation-minded consumers seeking to 'help' with their purchasing power. For example, SEE Turtles, a non-profit organisation designed to facilitate, coordinate and promote sea turtle tourism includes 'Take a SEE Turtles trip!' as the first item in their list of 'Ways you can protect sea turtles' (SEE Turtles 2007–2009). Turtles and tourism are now so inextricably linked in some places that potential turtle losses represent tourism revenue losses (BBC News 2004).

With sea turtle tourism more than 30 years old at some sites, turtle conservationists are aware of its potential negative

impacts. Coastal development, beach adjacent lighting, tourism infrastructure (e.g., chairs, umbrellas), tourist interference with nesting or emergence, and tourist flashlights and flash photography can all have detrimental impacts on turtles (Sutherland 1985; Margaritoulis 1990; Campbell 1994; Harrison *et al.* 2005; Margaritoulis 2005; Safina 2006; World Wildlife Fund 2008; Ballantyne *et al.* 2009; Conservation International & IUCN-SSC Marine Turtle Specialist Group no date). Another potential negative impact is tourism-related beach trampling (e.g., from turtle tours), and its possible effects on turtle nesting and clutch viability (Mascarenhas *et al.* 2003; Schlacherl *et al.* 2008; Ballantyne *et al.* 2009; Kudo *et al.* 2009).

In Tortuguero, Costa Rica, potential beach-traffic-related nesting disturbances led to a re-design of the turtle tour system, beginning with a pilot project (2004). We focus on recent changes to the turtle tour system, and tourist perceptions of tours. The survey data we present were collected by Meletis (and Te Koeti; an undergraduate research assistant) during the green turtle nesting season of 2008, as a favour to the members of the Turtle Spotter Program (TSP) Committee—including the CCC, Tortuguero National Park (TNP), and the Guide Association of Tortuguero. We raise questions about the nature of conservation-oriented tourism decisions and their potential impacts on tourist experiences and satisfaction. We discuss potential tensions between tourism and conservation in communities:

- (1) increasingly reliant on turtle tourism revenues for local livelihoods;
- (2) attempting to manage and minimise tourism's negative impacts on turtles; and
- (3) trying to promote a quality turtle tourism experience and maintain positive tourist word-of-mouth recommendations.

We highlight the variety of tourist responses, and common themes, comparing the data to Meletis' previous data (Meletis 2007; data collected in 2003/2004). We discuss how respondents and their answers fit or do not fit with existing literature. We summarise relevant literature on ecotourism², the ecotourist, turtle tourism, and Tortuguero. We contemplate potential implications of our data, in terms of applied and academic contributions, and we raise questions about future turtle research and management.

RELEVANT LITERATURE

Ecotourism versus mass tourism: Is there a difference?

Since the 1990s, ecotourism has become part of the tourism mainstream, especially in places like Costa Rica, where 'softer' ecotourism dominates. It is largely composed of nature-based tourism that includes some 'green' aspects but also offers easier tourist outings and more comforts of home (Weaver 1998; Evans 1999; Honey 1999; Campbell 2002b). While ecotourism, including ecotourism in Tortuguero, once attracted mostly 'harder' or more rugged and/or environmentally conscious tourists than most nature-based or wildlife-viewing

tourism (Place 1991), such distinctions are now less clear. Many current ecotourism offerings resemble conventional tourism, while more conventional forms of tourism try to 'go green' (Weaver 2001a; Weaver 2001b).

Sea turtles represent an appealing attraction in the form of 'charismatic megafauna': animals that provide unique wildlife experiences that many international tourists cannot experience at home (Campbell & Smith 2006; Safina 2006). While turtle-related tourism in more developed areas (e.g., some beaches in Greece, the coastal United States, and Australia) might be considered 'nature-based tourism' because of the focus on an animal in a relatively developed area (Margaritoulis 1990; Wilson & Tisdell 2003; Waayers & Newsome 2006), turtle tourism in more isolated beaches around the world is often marketed as ecotourism since it occurs in relatively pristine areas (less 'developed', less urban, less infrastructure) (Campbell 1999). Furthermore, while nature-based tourism was once seen by some (Orams 1995) as more passive than ecotourism, the terms have become more interchangeable or less obviously distinct. Accordingly, tourism offerings should be analysed in context in order to determine where they lie on the spectrum of possible tourism types, ranging from purely hedonistic mass-tourism to extremely 'hard' ecotourism.

The most cited ecotourism definition is Ceballos Lascurain's 'travelling to relatively undisturbed areas with the specific objective of studying, admiring, and enjoying the scenery and its wild plants and animals as well as any existing cultural manifestations (both past and present) found in these areas' (Boo 1990: pxiv). Recent critical scholarship has challenged whether or not ecotourism is that different from mass tourism. Participants in this debate point out that despite claims to difference, ecotourism is:

- a form of conspicuous consumption;
- primarily about pleasure-seeking;
- a source of unique bragging rights;
- an exclusive industry focused primarily on affluent tourists from the global North; and
- a form of 'tourism as colonialism' that does little to change larger systemic conservation and development issues, especially in isolated areas of the global South (Butcher 2003; Meletis & Campbell 2007; Campbell *et al.* 2008; Mowforth & Munt 2008).

This questioning includes investigating exaggerated claims about ecotourism, and interrogating assumptions made about ecotourists (Shepherd 2002; Butcher 2003; Grossberg *et al.* 2003). There is also a greater realisation that ecotourists are complex individuals who often defy tourist typologies, and have various motivations and interests, and are of different behaviour types (McMinn & Cater 1998).

Ecotourism has also been interpreted as occupying temporary phase(s) of the Tourist Area Life Cycle, a model encapsulating the various phases of a destination's tourism development trajectory (Butler 1980). In this scenario, ecotourism is seen as a harbinger of greater development and change, occupying earlier stages of tourism development characterised by a relative lack of infrastructure, services,

and accommodations. Ecotourism is seen as a fleeting stage in which the industry and ecotourists help to 'open up' areas to further tourism development and other economic, social, and environmental changes (McMinn & Cater 1998; Weaver 1998; Pleumarom 1999). Proponents of this view argue that exploration begins with harder ecotourists, willing to travel and stay in rudimentary conditions in order to experience greater degrees of 'pristine' nature, freedom, and unique travel. As ecotourism grows, and infrastructure and services are added, the destination becomes less attractive to harder ecotourists. Perceived crowding, for example, is likely to increase with greater growth and development. This would dilute the ecotourism experience for harder ecotourists, but softer ecotourists or mass tourists might not be (as) disturbed by it.

The elusive ecotourist

In the early 1990s, ecotourists were portrayed as alternative tourists looking for environmentally focused educational trips. They were theorised as seeking 'Edenic encounters', and profiled as willing to forgo comforts to have a 'real' encounter with exotic nature (Mowforth & Munt 1998). Academics and practitioners disagree about the types of wildlife interactions, and the levels of 'education', interpretation or other forms of information that tourists want on tours (Wight 1996; Hvenegaard & Dearden 1998; Orams 2002; Shepherd 2002; Luck 2003; McDonald & Wearing 2003; Wilson & Tisdell 2003). Scholars have written about the various types of ecotourists and wildlife tourists that exist, ranging from 'hard' to 'soft' ecotourists, suggesting that it is important to know your market and cater carefully to the tourist type(s) that dominate(s) (Orams 1995; Akama 1996; Boyd & Butler 1996; Weaver 1999; Weaver & Lawton 2002).

Research on ecotourists from the 1990s onward has offered up general ecotourist profiles in terms of demographics, motivations, and interests. Studies suggest that ecotourists tend to be older (with age groups over 40 years of age representing the bulk of the population and retirees forming an important sub-population), more educated (one university degree at minimum; graduate level degrees common) and from upper middle or higher classes (more affluent; more elite) (e.g., Wight 1996; Hvenegaard & Dearden 1998).

Whether they are comfort-seeking tourists or not, they are profiled as not wanting too many reminders of home (typically thought to be an urban metropolitan area) including other tourists and mundane elements of everyday life (Ryan *et al.* 2000; Hughes & Morrison-Saunders 2003; Nelson 2005). Ecotourists are contrasted with mass tourists, who are primarily concerned with hedonistic (pleasure-seeking) goals. Ecotourists are portrayed as wanting to do *more*; they are seen as wanting to learn and sometimes contribute to conservation both on and off-site (Hvenegaard & Dearden 1998). As more overtly normative tourists, they supposedly travel to places that fit with their environmental values. They are seen as weaving morality into their accounts and identities (McCabe & Stokoe 2004).

The primacy of tourist satisfaction

Despite debates about the nature of ecotourism and ecotourists, catering to tourists is critical for long-term tourism success (Akama & Kieti 2003; Hassan 2009). Understanding the (dynamic) balance being sought between aesthetic and experiential elements of a nature-related tour (e.g., seeing turtles on the beach), and the educational components of the tour (e.g., learning about turtle biology and conservation), is critical to tourist satisfaction. Tourist satisfaction and positive word-of-mouth recommendations have key influences on future visitation, and the long-term viability of the local tourism economy. Conservation financing might also be tied to this if the two are inextricably linked. For example, a recent study of wildlife tourists at five sites in Australia found that a clear majority of study respondents (75–80% or more) supported the inclusion of education in wildlife tourism experiences. Striving for a good match between tourist desires and the informational content of those wildlife tours is, therefore, important for continued on-site tourism success. Otherwise, tourists may leave unsatisfied and generate negative word-of-mouth recommendations about the lack of educational content (Ballantyne *et al.* 2009). Some scholars have also claimed that including information about the surrounding environment and related environmental issues can enhance tourist experiences (Luck 2003).

The 'ecotourist gaze'³—or the ways in which ecotourists look upon places, searching for sights and symbols in situ—is influenced by a place's reputation (e.g., marketing, media coverage, visitor word-of-mouth recommendations) (Ryan *et al.* 2000; Urry 2002). Tortuguero's main marketing image is that of a remote, near-pristine setting built on conservation, which carefully showcases animals like sea turtles (e.g., Nature Air 2001–2007). Therefore, the setting and turtles within it should be well explained to tourists, especially if there are aesthetic elements that might be interpreted as deviating from its image of 'isolated nature'. Otherwise, the gap between tourist expectations and tourist experiences could be great—an undesirable situation for any destination.

(Eco)tourism's promise for conservation

Ecotourism is seen as part of a 'mutually beneficial triumvirate', alongside conservation and biology, by many in the conservation world (Brightsmith *et al.* 2008). Some conservationists see tourism, especially ecotourism, as an important driver of conservation area development and maintenance (de Oliveira 2005; Ballantyne *et al.* 2009). Tourism also represents an especially important source of funding and social capital for conservation programmes in otherwise capital-restricted areas in developing countries; tourists provide free labour and funds that are otherwise hard to find (and keep) (Campbell & Smith 2005). While scholars may debate the details, ecotourism is theorised as having the potential to add to or improve conservation on-site and beyond (Orams 1995). It is seen as a tool that can be used

to instil greater mental/emotional connections to wildlife and ‘wild places’, including species-specific attachments, to increase recruitment to conservation activism and other longer term commitments, and to solicit financial commitments to conservation (Wilson & Tisdell 2003; Ballantyne *et al.* 2009). This is despite the fact that there is little evidence to ‘prove’ that long-term connections between tourists and conservation can be/are created through tourism (Ballantyne *et al.* 2009).

There is little research on how alternative tourism (including ecotourism) affects tourists on-site and in the longer run (McGehee 2002). For instance, little is known about how interpretation influences wildlife tourists’ satisfaction (Ballantyne *et al.* 2009). Thus, despite the powerful and pervasive rhetoric about its promise for conservation, alternative tourism remains a largely ‘underinvestigated means of recruitment and mobilisation’ for social movements, despite suggestions that tourism might have the power to ‘change people’ or promote global citizenship (McGehee 2002).

BACKGROUND ON TORTUGUERO, COSTA RICA

Tortuguero village, Tortuguero National Park and tourism

Tortuguero’s (Figure 1) nesting beach is used by green,

leatherback, hawksbill, and loggerhead sea turtles. Green turtles are the largest nesting group at the site; Tortuguero is a key nesting beach for greens in the Caribbean and much of its turtle tourism is linked to green turtle nesting (Troëng & Rankin 2005). Home to sea turtle monitoring and conservation for over 50 years, it is a turtle conservation ‘success story’, especially with respect to its nesting green turtle population (Hays 2004; Troëng & Rankin 2005). With the establishment of TNP in 1975, and the strengthening of conservation-promoting legislation since then, it has been a premier ecotourism destination since the late 1980s/early 1990s (Place 1991; Weaver 1999; Campbell 2002b; Meletis 2007), offering ‘jungle tours’ (rainforest; canals) and turtle tours.

TNP is operated by MINAET (the Ministry of Environment, Energy, and Telecommunications), and MINAET collaborates with the Caribbean Conservation Corporation (CCC), a sea turtle conservation organisation working in Tortuguero for over 50 years. Park entrance (ticket) sales to TNP represent a very conservative estimate of the phenomenal growth rate of tourism in Tortuguero in the last twenty years—they have grown from a few hundred tickets a year in the early 1990s (Lefever 1986; Place 1991), to over 134,000 tickets sold in 2008⁴ (see Table 1). This growth rate has allowed the village to become almost 100% reliant on tourism.

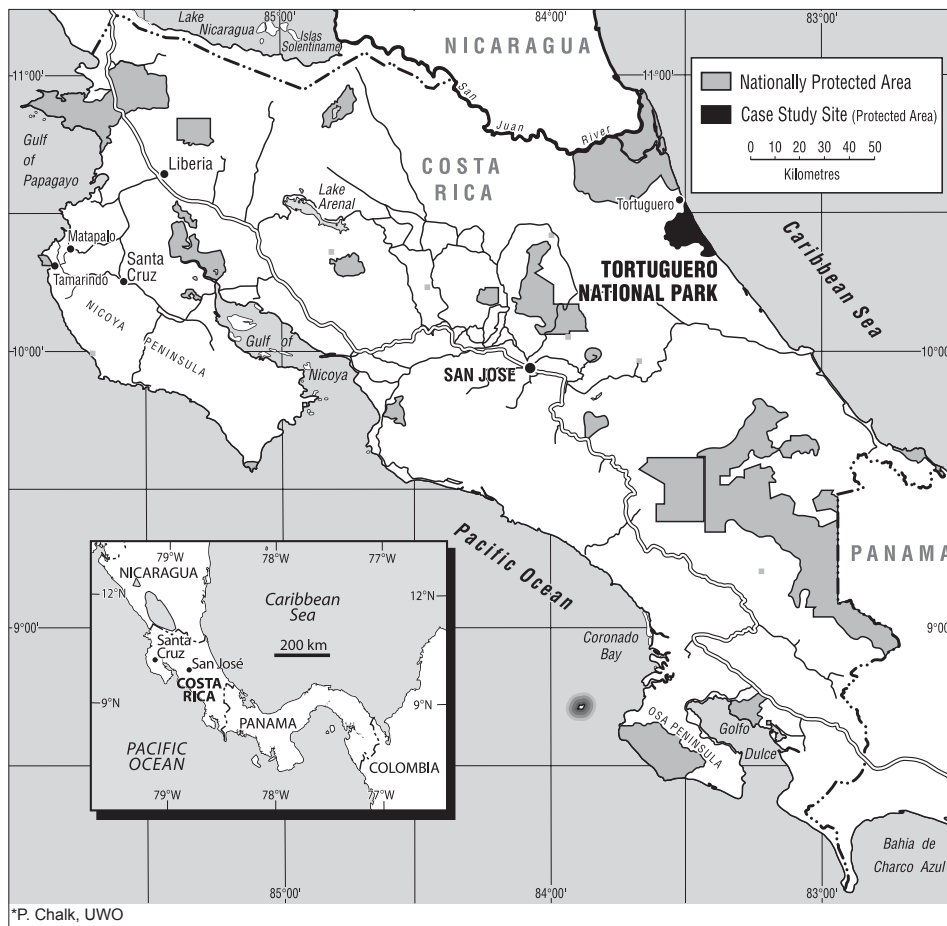


Figure 1
Map of Tortuguero

Table 1
The number of visitors to TNP (1999–2008)

Year	Number of visitors to TNP*	Number of tourists on turtle tours
1999	38,630	20,885
2000	41,897	20,824
2001	45,232	21,785
2002	50,339	26,292
2003	67,669	32,854
2004	81,457	31,655
2005	87,083	36,856
2006	101,344	35,662
2007	116,751	43,065
2008	134,690	47,510

*Data provided by MINAET to CCC for inclusion in the annual reports for the Green Turtle Program

Tortuguero: Image versus reality

Tortuguero represents exemplary ecotourism development because of its successes (e.g., its turtle conservation and monitoring programme; its ability to raise revenues from so-called ‘non-consumptive’ uses of turtles such as turtle tours) (Troëng & Drews 2004; Troëng & Rankin 2005). It is an important ageing ecotourism site; one of the oldest and most visited national parks in Costa Rica. It also seems to be facing negative environmental impacts linked to its popularity and the concomitant growth of both tourist and local populations over the last 20 years (Meletis 2007; Meletis & Campbell 2009). Calling present-day tourism in Tortuguero ‘ecotourism’ is problematic because of impact management challenges on multiple fronts (Camacho 2003; Meletis 2007; Meletis & Campbell 2009). Impact management in Tortuguero is complicated by the fact that the village and several entrances to TNP lie on an isolated, narrow land finger between the Atlantic Ocean and a lagoon/canal system, far from urban centres and many government resources (Meletis 2007; Meletis & Campbell 2009)

Despite these contradictions, its dominant marketing image remains one of relatively pristine nature including rainforest, beach, lagoons/canals, unique plants and animals, and related conservation efforts (Nature Air 2001–2007; Anon. undated). Consider the webpage of Costa Rica Exotica Natural Travel and Tour Agency, a company offering packages to 10 of the lodges in Tortuguero. Although it notes that ‘thousands of tourists’ visit every year and that TNP is one of ‘the most visited National Parks in Costa Rica’, it emphasises its ‘incredible biological variety’, and showcases conservation efforts: ‘Tortuguero, one of Costa Rica’s most popular ecotourism destinations, the canals, the rivers, beaches, and lagoons of Tortuguero National Park are a study of rainforest, freshwater and marine biology’ (Costa Rica Exotica Natural Travel and Tour Agency Undated). Thus, tourist expectations, their resulting tourist gazes, the preconceived notions that influence their perceptions of the area and their on-the-ground experiences, are infused with expectations of a conservation-oriented ‘natural’ environment. Elements that deviate from

this have the potential to ‘disrupt the tourist gaze’, and create negative tourist experiences, endangering positive word-of-mouth recommendations.

Turtle tours in Tortuguero: Time for a change

In Tortuguero, there are on-site efforts to address undesirable tourism-associated impacts. Tourist beach traffic is one concern; it is the term used to describe tourists walking on the beach for turtle tours and other activities. It can result in several negative impacts such as trampling, sand compaction and/or nest disturbances, all of which can be detrimental for nesting sea turtle populations (Mascarenhas, Zeppelini *et al.* 2003; Ballantyne *et al.* 2009; Kudo *et al.* 2009). Tourist traffic on the beach also has the potential to disturb turtles as they search for a place to nest, sending them back into the water without completing the nesting process.

Preliminary data suggested that the number of ‘false crawls’, the track left behind when a turtle emerges but does not successfully nest, was increasing on the section of the Tortuguero beach where tourism is allowed (Troëng 2004; de Haro & Tröeng 2006)⁵. In response to this, CCC, MINAET, and community representatives changed the tour system, in order to help alleviate potential disturbances to nesting turtles and to reduce any possible associated negative impacts⁶.

Under the old system, guided groups were assigned a time slot and a beach section: either ‘Park beach’ or ‘Public beach’. Each guided group had a maximum of two hours (during one of two nightly shifts: 8 p.m.–10 p.m., or 10 p.m.–12 a.m.) to find a nesting turtle that was ‘ready to be watched’⁷. The new system is designed to minimise tourist time on the beach. The beach has been divided into smaller sub-sections. Groups now wait in respective beach sections until a turtle is ‘spotted’ for them. The ‘Turtle Spotter Program’ (TSP) incorporates ‘turtle spotters’ who patrol the beach looking for turtles in the appropriate nesting phase (to be watched). Tour groups wait off the beach, and are later directed to turtles via spotters’ radioed instructions. Once a group has observed the turtle (typically after oviposition), their guide leads them directly off the beach, reducing group wanderings and total time on the beach.

Tourist roles in Tortuguero

Tourists play key roles in turtle conservation success in Tortuguero—they represent the demand for alternative livelihoods based on non-consumptive⁸ use of turtles. Tourists contribute revenues through purchasing accommodation, food, guiding and other services. They support conservation through payment of park entrance fees, which are redistributed in the national park system, and in other ways. The CCC, for example, collects 1 USD as entrance fee from tourists who visit the CCC visitor centre in Tortuguero⁹. The CCC also sells merchandise and turtle adoptions in its visitor centre shop; sales help to fund the organisation’s efforts including turtle conservation and monitoring in Tortuguero¹⁰. Therefore, a variety of actors make multiple attempts to capture and direct

tourist dollars towards turtle conservation and monitoring in Tortuguero.

As of 2007, tourists are also key potential direct revenue sources for the TSP. Tourists are encouraged to purchase new TSP 'brochure/sticker' packages in order to provide direct funding for programme operations. The 4 USD packages are designed to inform tourists about the programme. Tourists are supposed to show support by detaching the TSP sticker and wearing it during their turtle tour¹¹. Guides are encouraged to increase their turtle tour price by 5 USD to cover the brochure cost and supplement their incomes. Tourist education and tourist support through related purchases¹² and donations have become central to the TSP¹³ (Harrison *et al.* 2008).

OUR STUDY: GUIDING QUESTIONS AND CONCERNS

Changing the tour format carries potential risks vis-à-vis the tourist experience. Switching from more active tours to the new more passive tours includes:

- *removing the 'exploration/discovery' element* of the tour once represented by the group's 'search' for a turtle;
- *requiring tourists to sit and wait*, a passive and potentially boring activity;
- *placing greater onus on guides* to provide a quality experience, since tourists are not distracted by the acts of walking, searching, and being on the beach;
- *reducing time for tourist–nature interactions* by keeping tourists off the beach until viewing, limiting their viewing, and then removing them expediently; and
- *making the tour experience more 'on the beaten path'* and mass tourism-like.

Along with turtle guides and TSP committee members, we were curious to learn about visiting ecotourists and their perceptions of the new system, one designed with turtles rather than tourists in mind. We wanted to know if tourists liked the tours and would recommend them. We were interested in tourist knowledge of and support for the TSP. We wanted to learn about the amount and quality of information tourists received on tours, and whether or not tourists see the tours as ecotourism. We were also interested in exploring patterns seen in earlier data (Meletis 2007).

METHODS

Approach and methodology

Qualitative analysis of tourist responses is increasingly common in tourism studies (Decrop 1999). Here, we combine quantitative and qualitative data to describe tourist perceptions, and our primary focus is on tourist perceptions as described *in their own words*. Our interest is in the range of tourist responses, rather than whether a particular response is representative of a larger group (Decrop 1999). We used thematic coding to track themes, and we present these themes using representative respondent quotes.

Survey design, sampling, and limitations

To collect tourist impressions of the new tour system, we used a short, self-administered, mixed-methods survey. Our survey consisted of open and closed questions about tourist demographics, motivations, interests, knowledge of the new system, and perceptions of guides, tour content, and turtle viewing. We also asked if the tours are ecotourism since we are interested in perceptions of the tours as a *type* of tourism.

Mixed-methods surveying is common in tourist perception studies; surveys typically include closed questions about demographics, and less structured questions about motivations, expectations and perceptions, related likes/dislikes and reasons for them (examples: Hvenegaard & Dearden 1998; Gnoth 1999; Farrell & Marion 2001; Hillery *et al.* 2001; da Silva 2002; Grossberg, Treves *et al.* 2003; Luck 2003; Kuvan & Akan 2005; Mohsin 2005).

To overcome sampling constraints (e.g., limited time and personnel; limited opportunities to encounter post-tour tourists), we used a non-random, convenience sample. We sampled tourists opportunistically (e.g., after turtle tours, and at lodges), taking care not to overly disrupt tourist schedules. We used purposive sampling to include a variety of respondents (age, gender, income levels, countries of origin, etc.). We included cabina tourists (lower end/budget tourists in the village), and lodge-staying tourists (higher-end tourists housed in nearby lodges). Meletis and Te Koeti surveyed approximately 170 tourists in June/July, producing a usable sample of 147 (23 incomplete or spoiled surveys were not analysed); surveys were available in English, Spanish, and French. The sample size (n) for individual survey questions varies based on the amount of questions answered incoherently or incompletely, or left unanswered; the maximum is 147, the total amount of usable surveys.

Due to the nature of our sample (small; seasonal; temporally-limited; non-random), we avoid definitive statements about the larger population of visiting tourists¹⁴. Despite the non-random nature of Meletis' surveys (2003/2004; 2008), and different sample sizes (2003/2004: 1,001 respondents; 2008: 147 respondents), some data are remarkably similar. Whenever relevant, data from 2003/2004 are introduced for comparison.

Additional methods and ethics approval process

Meletis and Te Koeti stayed in Tortuguero during the survey period; Harrison was also present during some of it. Meletis and Te Koeti also engaged in informal conversations with tourists, undertook tourist observations, and took several turtle and 'jungle tours' (boat-based tours of Park canals), using different guides. Limited participant observation from 2008 therefore informs the results. Meletis and Harrison's other participant observation and general observations are also drawn upon.

The 2008 data were collected under a project approved by the University of Northern British Columbia's *Research Ethics Board*, in accordance with University and Canadian *Tri Council*

policies on research with human subjects. Respondents under the age of 18 only participated if their parents agreed and were present. The survey included a detailed introduction about the project and data use, and guaranteed respondent confidentiality.

RESULTS

Respondent demographics and motivations

Our sample (n=147) consists of 59% lodge-staying tourists and 41% cabina-staying tourists; 84% of respondents were staying in Tortuguero for 2–3 days (n=147). It is composed (n=132) of 58% females, 33% males, and 9% fm couples (heterosexual couples composed of one female and one male who responded together as a couple; this category was suggested by 2003/2004 respondents). In 2003/2004 (n=997), the majority of respondents stayed for 2–3 days (66%), and the gender distribution (n=954) was: 56% female, 43.6% male, and 0.4% other (Meletis 2007). Table 2 shows the age distribution; most (70%) respondents in the 2008 sample were between 19–50 years old. The larger sample in 2003/2004 had a similar age range distribution (See Table 2); 78% of respondents were aged 19–50.

The 2008 sample is mostly European (54%) (especially Spanish, 22% of entire sample) and North American (40%), exhibiting a similar distribution to the 2003/2004 data, which includes 56% European respondents and 40% North Americans (Meletis 2007). The occupational profile (n=128) is also similar to Meletis (2007); consisting of 35% professionals, 29% students, 17% education-related occupations, and 19% ‘other’ occupations. The 2003/2004 sample has the following distribution (n=854): 42% professionals; 27% students; 18% education-related occupations, and 13% ‘other occupations. Household income data is presented in Table 3. Both samples present a bi-modal split between the lowest and highest income categories (<USD 20,000 & >USD 80,000). In 2008 (n=100), 44% earn more than USD 80,000 a year; in 2003/2004, 26% of respondents (n=759) belonged to the same income category (Meletis 2007).

Motivations for visiting also presented patterns similar to the Meletis (2007) data. For example, the most common responses to the multiple-choice question ‘*Why did you come to Tortuguero? (please circle the primary (one) reason/main purpose of visit)*’¹⁵ were similar in both samples (n=130 in 2008; n=949 in 2003/2004). For example, ‘To go on a turtle walk’: 35% in 2008, 38% in 2003/2004; ‘For a general visit’:

23% in 2008, 25% in 2003/2004; ‘To visit TNP’: 27% in 2008, 54% in 2003/2004. Turtles, the TNP, other animals, and the local environment were most popular (Meletis 2007); culture did not feature as important in either sample.

Respondents demonstrate low awareness of new tour system

The CCC requested that we add a question about brochure/sticker package purchases. Among our respondents (n=141):

- 35% purchased the brochure (or it was pre-included in their package, by their guide or accommodation provider),
- 24% had not purchased a brochure, and
- 40% replied that they did not know about the brochure.

A combined 64% did not know about the brochure/sticker or chose not to purchase it. Such problems were reflected in the paucity of tourists seen wearing stickers while on tours and by TSP sales difficulties in 2008 (participant observation 2008).

Respondents found the wait tolerable but not ideal

Respondents (n=107) were somewhat divided about the new wait; they generally provided more than one response (which is why the total exceeds 100%): Positive response components about the wait: Fine/good/short: 64%; and Good information provided: 6%. Negative response components about the wait: Too long/boring: 29% (13% specifically described the wait as boring); and Not enough activities and/or information: 4%.

A few respondents explained the wait as necessary: ‘I was excited, thinking of what we were going to see. Waiting time was okay... You can’t force nature but I hoped that we could have stayed longer in order to see the eggs until the next group would arrive...’ (E105, 2008). A handful of respondents commented on the inactive nature of the wait. One respondent wrote that they would rather be walking than waiting, and suggested that although the system might be better for the turtles, it’s a bit ‘lame/boring’ for tourists (E76, 2008). Comments about the wait being boring also surfaced in responses to other questions; 3 out of 124 respondents addressed the wait as a standalone topic (in other questions), and several others combined it with other comments: ‘Yes, but there were long periods of waiting where many people got bored/sleep. Overall, a good experience’ (E39, 2008). One respondent (E76, 2008) was satisfied ‘because we saw a turtle’ but added that ‘waiting so long sitting is stupid. I would rather

Table 2
Respondent age ranges (2003/2004 and 2008)

Age category	2003/2004 (n=990)	2008 (n=133)
Below 19	8%	9%
19–25	18%	21%
26–40	43%	36%
41–50	16%	23%
51–60	11%	7%
Above 60	3%	5%

Table 3
Respondent annual household income (2003/2004 and 2008)

Annual income (USD)	2003/2004 (n=990)	2008 (n=100)
Less than 20,000	20%	14%
20,000–29,000	12%	6%
30,000–39,000	13%	8%
40,000–49,000	10%	11%
50,000–59,000	6%	6%
60,000–69,000	6%	2%
70,000–79,000	7%	9%
More than 79,000	26%	44%

be walking' (E76, 2008). Another wrote: '... I would explain to them that there will be a lot of waiting and why there would be so much waiting...' (F37, 2008). Respondents suggested various ways to improve the wait; one wrote 'I think more activities would have been better to occupy the time—trivia game about the turtles' (E30, 2008), and another suggested the wait as a good time to teach tourists about the CCC work in Tortuguero (E22, 2008).

Respondents reported variable information provision

We asked about information received before, during, and after the active part(s) of the tour, and during wait times; e.g., *Were you satisfied with the amount of information that your guide gave you? If not, what would you have liked to know?* Of the 139 respondents who answered this question clearly: 77% were satisfied with the amount of information provided, 17% were not satisfied, and 6% wrote answers with both positive and negative comments. Some responses suggest appreciation for guides, and good levels of information provision. One respondent wrote that the guide provided 'a lot about turtles, conservation' and 'the sticker programme', while also telling the group about 'his background and how things used to be', and 'town life' (E124, 2008). Another wrote that their guide 'was excellent', provided 'lots of info', and was 'very personable' and 'great with kids' (E102, 2008).

Guide-associated dissatisfaction was typically about quantity and quality of information provided and/or the guide's ability to impart information. For example, one respondent wrote: 'Very little [information before the tour]... He gave us info about the natural history and conservation issues regarding turtles here but only after we engaged him with questions' (E16, 2008). Among the low numbers of respondents who did include shortcomings in their responses, language-related difficulties appeared as a type of complaint (6 out of 124 responses, i.e., 5%). Somewhat dissatisfied responses include: 'Yes [overall, the tourist was satisfied...], but the guide was not very approachable and had little knowledge or didn't share that knowledge with us' (S88, 2008); and 'I enjoyed it, I thought the guide was really nice. But it was difficult to understand all the Spanish because she spoke too fast' (E31, 2008). Overall, respondents were satisfied with their tours, and reported few inadequacies.

Respondents suggest overemphasis on 'the rules'

Many respondents provided examples of tour rules and instructions received, along with other information samples. One respondent wrote about 'what to do in order to not disturb the turtles, how to use the lights, that cameras are not allowed' and also about 'characteristics of the four turtle [species], stages of the nesting process, number of eggs per nest, incubation period, [hatching] birth and return to the sea, diet...' (S56, 2008). In fact, a possible *overemphasis* on the tour rules is suggested by the data. For example, in response to a question about information provision (n=124), 58 respondents, i.e.,

47%, wrote about rules *first* in their responses. Respondents also contrasted the amount of information about tour rules with the lack of other types of information. The following response, about whether or not the tours are ecotourism, reflects the emphasis on tour rules: 'No, we did not take pics [pictures] and [we] used red [flash]lights but nothing else about tour was sustainable or eco-friendly—[it] could be much more educational about life of turtle about impact of humans on turtle—trash, lights, global warming, etc.—so leave with a greater sense' (E61, 2008).

Respondents raised family-centered concerns

We received comments about families despite not having included any specific family-related questions. Approximately 3 respondents and several other individuals (participant observation) suggested a 'family price'. They found tour pricing prohibitive for families (e.g., tour price is calculated on a per person basis; it costs approximately 60–100 USD for a family of four). Others suggested that families with children be given priority access to the 8.00 p.m.–10.00 p.m. time-slot since it is difficult to keep children awake for the 10.00 p.m.–12.00 a.m. slot. Respondents commented that the wait can be particularly tough for children, especially if the guide does not provide adequate information or activities. On the other hand, a respondent who *did* get to walk during much of their tour (rather than sitting and waiting) wrote:

'I didn't like the walk because it was too long; more than 45 minutes of walking at a fast pace. We went with our little kids—5 and 8 years old—and we got the second shift so they were very tired. But yes, we did really like seeing the turtles' (S13, 2008).

General safety concerns also emerged, both in relation to family needs and as standalone remarks about sitting, waiting and walking in unlit areas. There were also some complaints about tour organisation.

Crowding (re)surfaces as a theme of concern

Since perceived crowding is a known theme in the literature on ecotourism and wildlife tours, and it surfaced during the previous study (Meletis 2007), we asked about the amount of tourism in Tortuguero. Respondent answers (n=135) were divided between those who wrote about the amount of tourists in Tortuguero as 'just right' (47%), and those who wrote about 'too many tourists' (45%); roughly 5% had no opinion or did not know, and 2% wrote that there were 'too few' tourists. Crowding-related concerns or dissatisfaction also appeared in answers to other questions. For example, respondents answered the question about tour satisfaction in a 'yes, but...' format, and crowding was a common complaint among those who forwarded complaints. One respondent explained their 'satisfaction with reservations' this way: 'Yes, however I felt that there were too many tourists on the beach at any one time' (E92, 2008). In Meletis (2007), comments about Tortuguero having 'too many tourists' comprised the most common

answer (written by 24% of respondents) to the question about perceptions of tourism in Tortuguero. Similar comments about 'too much tourism' were also the fifth most reported answer (9% of respondents; n=932) to the question *What did you like the least about Tortuguero?* (Meletis 2007).

Respondents were generally satisfied with the tours and particularly liked seeing turtles

To gauge satisfaction with turtle tours, we asked respondents if they enjoyed the tour, and would recommend it. Despite complaints and suggestions for improvements, they were generally satisfied. In response to the question about tour enjoyment (n=144), 86% wrote that they enjoyed the tour; 3% wrote they did not enjoy the tour; and 10% of responses contained both positive and negative elements about the tour (e.g., I liked the tour but...).

In terms of whether or not respondents would recommend the tour (n=132), 88% wrote that they would, 11% were unsure, and 2% wrote that they would not. Respondent satisfaction, as in Meletis' previous study (2007), seems primarily related to seeing turtles. Respondents able to see more of the nesting process and/or more than one turtle seemed among the most satisfied: 'Yes, I found it extremely interesting. I really liked how we got to see the different stages of females on the beach: turtle going back into ocean, turtle laying eggs, turtle covering nest' (E47, 2008). 'Yes, we were very lucky, we saw two nesting turtles and one heading towards the sea' (S58, 2008).

Common responses (n=144) included positive comments about seeing turtles (19%), and about witnessing nesting (3% specifically called it witnessing) as a good or special experience (11%). Combined, these three themes dominate responses. For example, in their answer to the question about whether or not he/she enjoyed the tour, one respondent wrote: 'Yes! It is a once-in-a-lifetime kind of opportunity. It is an amazing process that people need to understand and respect' (E42, 2008), another wrote: 'Yes, it was cool to see the turtle nest; straight out of National Geographic' (E58, 2008). Yet another wrote: 'Yes, it was outstanding! We saw a turtle nesting, one almost finish laying eggs—one on the way up but went back to see. We saw one laying eggs and covering the nest and finally one on the way out into the sea.' (E20, 2008). An example of an entirely negative response (very rare) about tour enjoyment is: 'Not so much, long wait, didn't see nesting. Turtle turned around. Got no information.' (E75, 2008).

Most respondents see tours as ecotourism; some offer objections

Given the contradictions between its marketed image(s) and the reality of tourism in Tortuguero, we asked respondents if they consider the turtle tours to be ecotourism¹⁶ (n=118). Most (74%) responded that the turtle tours are ecotourism. For example, respondent E122 wrote 'Yes, they educate tourists while trying to minimise harmful impact on wildlife and communities' (2008). Another 18% were undecided, and

only 8% of respondents wrote that they would *not* consider the tours to be ecotourism. Respondent F32 (2008), for example, wrote 'no, it's more business than ecotourism'. Objections included: 'If ecotourism is defined as tourism of nature, then yes, it is. However, if it is defined as a way to see nature in a nature friendly way, I would say no' (E43, 2008), and 'NO, way too many people—10—around ONE turtle. This is eco mass tourism. Rip off.' (E8, 2008).

Respondents question whether tours are helping or hurting turtles

Like Meletis (2007), this study included a small number of respondents concerned about whether the tours are 'helping' or 'hurting' turtles. This concern takes two main forms: (1) concerns regarding tour impacts on turtles (e.g., potential impacts on nesting process), (2) concerns about the general appropriateness of turtle watching (e.g., contemplating turtle watching as an invasive activity and/or suggesting that watching, by nature, might be disruptive). Concerned about the appropriateness of touching sea turtles, a respondent wrote the following about observed CCC monitoring activities: '... The only cons were the amount of people, the loudness they were talking—especially the guides—and the fact that they were touching the turtle all the time without need' (E53, 2008).

This quote reflects tourist confusion on two levels: (1) the 'they' being referred to as 'touching the turtle' was actually a group of CCC volunteers, and not guides, and (2) CCC staff and volunteers *must* touch turtles in order to collect their data and do their work. They have Park permission to do so and they use standard monitoring and measuring techniques. Thus, at least according to the National Park system and the greater turtle conservation world, their work is not considered to 'disturb' turtles.

The debate over whether the tours—regardless of how they are managed—are invasive, inappropriate, or not, is reflected in these responses¹⁷: 'Yes, I liked it—especially the respect and the sustainability of the tours' (S75, 2008). 'Yes. Didn't feel TOO intrusive' (E25, 2008). 'Yes! But I felt like I was watching something the mother turtle wouldn't want people to watch. Like I was intruding' (E112, 2008). 'Yes, it was amazing. I was only a little bit scared of scaring the turtles' (E124, 2008).

Some respondents wrote about the tours as ecologically sound and/or unobtrusive: 'I don't know all the angles but it seems to offer a non-intrusive way to enjoy the turtles, and creating a demand for turtles will help public opinion to want to save beaches for them' (E38, 2008); 'Yes, the guides and Park [TNP] workers were well organised and knew how to minimise disturbing the turtles' (S56, 2008). Some responses mirror the literature on how turtle tourism can create connections between humans and turtles: 'Yes. It heightens awareness of the concern for turtle survival and there were no motorised vehicles involved in our tour' (E63, 2008).

Others reveal worries about tourism's interactions with turtles and suggest that elements of the tours might not be respectful of turtles and/or their habitat, with some respondents

worrying about nesting trajectories being interrupted. Responses also combine perceived crowding with concerns about its potential impacts. One respondent phrased it this way: ‘some groups seemed too large and uncontrolled but the restrictions go a long way to protecting the nests’ (E90, 2008), and another described their experience as: ‘Yes, amazing but too many people. Felt like Disneyworld. Felt disrespectful’ (E61, 2008).

Again, even CCC monitoring activities are sometimes perceived as disturbing turtles: ‘While I enjoyed seeing the turtles laying their eggs, I was very bothered by the means in which it was achieved. It seemed VERY unnatural and I can’t help but think that this has to have some negative effect on the turtles. For example, two turtles tried to enter the beach and had to leave because the beach was full of people. In addition, I felt that even the biologists/volunteers were too invasive due to their own desire to be closer to the turtles. It seemed that the method of touching the turtles, measuring them, using a white light around them, brushing off the shells was a little much. I understand the need to research and increase awareness, but something needs to be done to make this as non-invasive as possible’ (E43, 2008).

Concerns about disturbing or negatively impacting turtles also featured in response to the question about ecotourism. One respondent wrote: ‘Yes, people get to witness a major process in the lifetime of the turtle. However, I wonder if all these people will negatively effect the turtle population’ (E22, 2009). Another respondent answered this way: ‘Yes’, it is ecotourism ‘because of the awareness-raising about protecting fauna and flora. No because it is voyeurism; I am not ok with watching the egg laying’ (F43, 2008).

DISCUSSION AND IMPLICATIONS

Here, we focus primarily on applied contributions since this study was driven by an applied data need. The data presented act as reminders of the utility of periodically ‘checking in’ with one of the most central components to long-term tourism success: the tourists! They offer insights into the heterogeneous and dynamic nature of tourists, and complex tourist perceptions of turtle tourism.

The ecotourist in Tortuguero is difficult to define: Soft and dynamic

The demographics presented here and in Meletis (2007) challenge typical ecotourist profiles; some elements fit, others do not. For example, both data sets suggest that older tourists (over 60 years old) are not a significant tourist demographic during the green turtle nesting season in Tortuguero. There are reasons this makes sense (e.g., Tortuguero’s relative isolation and distance from medical facilities; the more remote and wet nature of the environment; the green season attracting a different demographic) but it does challenge ‘typical ecotourist profiles’ which claim retirees as an important sub-demographic (e.g., Hvenegaard & Dearden 1998). The bi-modal income split

is also interesting; it suggests that most tourists to Tortuguero either fall into very low (household income of <USD 20,000) or very high income brackets (household income of >USD 80,000). This fits well with some theorising about ecotourism (e.g., ecotourism as including hyper-elite offerings, while also appealing to a more frugal and adventurous demographics) (Mowforth & Munt 1998), and reflects the two main types of accommodations offerings in Tortuguero: basic cabinas and more luxurious lodges. If Tortuguero is switching from a harder ecotourism destination to softer, more package-oriented ecotourism as we suggest, it raises interesting questions about who stays where (lodges versus cabinas), and why. Does Tortuguero simultaneously cater to very exclusive ecotourists while retaining a more adventurous budget-conscious set, and an emerging softer mass ecotourist market, satisfying all three groups at once? Both this study and Meletis (2007) suggest this, but only further detailed research on these questions can provide definitive answers.

Participant observation and ‘family oriented responses’ in 2008 suggest that families may be becoming a more important tourist demographic in Tortuguero. The survey data (both sets) also seem to corroborate local anecdotal musings about the rise of European tourists, particularly Spanish tourists, as an important group, particularly at certain lodges. Again, only further investigation can determine how and why such shifts are occurring, and how they are being accommodated (or not) in Tortuguero.

The qualitative responses suggest that culture does not figure prominently in respondent expectations of Tortuguero. The foci in both data sets are turtles and ‘jungle tours’, and seeing the local environment as showcased through tours of TNP and turtle tours. Therefore, according to these two studies, the focus is primarily on SEEING animals, plants, and other sights in Tortuguero rather than learning about them. While respondents in both samples do comment on information provision, such comments appear in a small fraction of surveys and do not dominate tourist responses—contributing to the view of Tortuguero’s turtles as charismatic lures for ‘sight seeking’ ecotourists, again suggesting ‘softer ecotourists’ and adding to the debate about how much ‘ecotourists’ really want to be educated while on wildlife tours (Ryan *et al.* 2000; Grossberg, Treves *et al.* 2003; Luck 2003; Wilson & Tisdell 2003). How well and how often respondents *see* turtles seems to be a primary determinant of overall satisfaction, although more research would be needed to determine exactly what role it plays in post-visit word-of-mouth recommendations (of particular importance for the TNP, the CCC and the ecotourism industry).

Evidence of more contemplative and/or ‘harder’ ecotourists also exists. There are respondents who write about concerns regarding the environment (e.g., litter, deforestation, water pollution) and turtle well-being (e.g., debate over tours ‘helping’ or ‘hurting’ turtles). There are also comments on the active/passive nature of the tour, and levels of information provision. Response themes such as these fit better with some of the original thinking about ecotourists as more

informed, interested, and adventure-seeking, in contrast with more passive and sight-seeking mass tourists. The variety of perceptions of Tortuguero, its tours, and tourism practices reveal the heterogeneous nature of tourists to Tortuguero, suggesting a diverse group of tourists who are not easy to categorise (or perhaps cater to). Responses sometimes include contemplative elements and banal, more conventional tourist complaints and concerns (e.g., regarding: climate and lack of air conditioning; the presence of unwanted pests like mosquitoes; the lack of food options at lodges), further complicating the 'Tortuguero tourist' and emphasising the multiple identities or roles that one tourist can adopt while on site (Meletis 2007). Respondents make little to no connections between themselves and potential negative impacts of tourism in Tortuguero (Meletis 2007). This challenges assumptions about ecotourists as being more impact-aware or self-aware, and provides greater rationale for explaining acceptable tourist conduct, the tour system, and potential impacts clearly to tourists, since they might not be thinking about such things on their own.

Respondent knowledge of the TSP is low: Are alternative promotion, sales, and education strategies needed?

Park staff members now collect data on brochure sales when turtle guides sign up nightly; they record the number of guides taking tours each night, the lodge/cabina that each works for (or if they are working independently), the number of tourists in their group, and if they purchase brochure/stickers. In 2007, overall support for the brochure/sticker was measured as being 70.6%; the percentage of guide tours that had brochures associated with them (del Aguila *et al.* 2008). While they record which guides are working for lodges and which guides are 'local', this is not an easy task. There are guides with permits from elsewhere who work in Tortuguero, and there are 'local guides' who are not local (e.g., expatriates who live in the village; people who work in Tortuguero during turtle season but live/work elsewhere some of the year; guides who sometimes work for lodges and sometimes work independently)¹⁸. Regardless, the TNP claims that in 2008, 80% of the lodge-guide associated tours included brochure purchases, whereas only 19% of 'local guide' tours did (de Haro 2008). These data suggest that support for the TSP is good (well over 50%) and that support is greater among lodge-affiliated guides (typically as the result of lodge policies), and that independent guides are less likely to purchase the brochures¹⁹ (de Haro 2008).

Our sample suggests something different. Respondent knowledge of the new TSP and the rationale for it was low. Furthermore, 59% of the sample (n=147) is composed of lodge-staying tourists. The majority of the lodges are supposed to be supporting the new tour system and promoting the brochure packages to tourists, and including the brochure/sticker in their overall packages (based on verbal agreements with the TSP committee). In our sample (n=147), lodge promotion and inclusion of the TSP brochure packages is not as uniform

as was originally suggested²⁰. Considering MINAET (Park) recorded brochure sales, our survey period and/or our sampled respondents may represent a 'mini slump' in brochure promotion and sales. This was also reflected in the paucity of tourists seen wearing stickers on tours, and concerns of TSP administrators that sales were not moving as expected during those weeks (participant observation 2008).

Our respondents remained largely unaware of the brochure/sticker packages. This lack of tourist familiarity with the TSP packages is worrisome for the programme's longevity; the brochure/sticker packages are designed to be its main funding source. If they are not making it into tourists' hands, they are not contributing funding. The brochures also include information about the tour format. Such dips/lows in brochure sales over time are worrisome because lodge and local guide support and participation is seen as critical to selling the brochure packages, transferring key information to tourists through brochure content, and creating a stable revenue stream for the TSP. After their experiences with sales ebbs and flows in 2007 and 2008, the TSP committee set up a sales kiosk in the village to facilitate brochure/sticker package purchases. Our (limited) data suggest that, in order to ensure more regular and steady brochure sales, the TSP committee might need to re-think their brochure/sticker sales strategy (e.g., maybe direct sales to tourists should be considered an option, forgoing the 'middlemen' of guides and/or lodges). This has already been addressed to a certain degree, through the new kiosk. Furthermore, the TNP is currently considering making brochure purchases mandatory.

Since most of our respondents were unaware of the brochures, it is not surprising that they included questions and requests for information that would have been answered by the brochures. This corroborates related claims in the literature. Ballantyne *et al.*'s (2009) study of tourist perceptions of turtle nesting tours in Mon Repos (Australia), for instance, highlights the importance of conveying the rationale for tour design, tour components and rules to tourists. Gaps or inconsistencies in information provision have the potential to confuse, upset, or alienate tourists, and can detract from tourist experiences and place future visitation at risk (Ballantyne *et al.* 2009). Turtle guides and other actors in Tortuguero should therefore consider collaborating to ensure better information transmission to tourists via the brochures and the turtle tours, in order to avoid confusion and misunderstandings about the tours and their impacts. This should include more effective specific information about the TSP and its underlying rationale. Guides should explain rules, but also elaborate on the reasons for: the wait; tourists' removal from the beach; groups sharing turtles if only a few are spotted; and tourists having to exit the beach immediately after viewing the turtle.

Dealing with variable tour quality: Considering what the data suggest

Our survey and participant observation Meletis (2007)

suggest that turtle tours in Tortuguero continue to be a variable tourism product. A diverse guide population with different backgrounds, personal philosophies, linguistic capabilities, and so forth, offer unique combinations of entertainment and education via their tours—some more successfully than others. Uniqueness is often not a focus on turtle tours, however. Many programmes operate with the goal of offering standardised tours based on tour rules, ‘best practices’ or guidelines, and some form of shared training (examples include: Turtle Conservation Project (TCP) Sri Lanka no date; Wider Caribbean Sea Turtle Conservation Network (WIDECAST) no date). Standardised guide training exists to a certain degree in Tortuguero, as well. Despite this, and the idea that tour standardisation is a noble goal with respect to providing high quality turtle-related information, complete tour standardisation is unlikely in a place like Tortuguero, for a variety of reasons.

Given the diversity of the ecotourist as a tourist type (as reflected in our data and other studies), the dynamic diversity of tourists to Tortuguero (which now includes backpackers of various ages and budgets, higher-end ecotourists with varying agendas, ‘softer ecotourists’, families on vacation, longer and shorter-term package tourists from Europe and North America, and ‘harder’ more science-oriented nature tourists, among others) (Meletis 2007), and the different guiding profiles and personalities that exist in Tortuguero, a more realistic option might be to better match tourist needs with individual guiding styles and strengths, including linguistic capabilities. A ‘matching system’ could pair tourists looking for an ‘authentic local guide’ with older, English-speaking (a language more native to the village than Spanish) guides, and refer tourists seeking current and accurate scientific information in their own languages to guides with advanced training in ecology or biology. This might be challenging, but tailored tour matching could better pair tourist needs and guide strengths, without placing an unfair burden on either actor. In some respects, such a system would require less re-orientating of the current guiding system. It would also ensure that Tortuguero continues to offer a range of ‘authentic’ local tours led by individuals with their own personalities and approaches (despite shared basic training), thus preserving some of its appeal as a unique destination.

Crowding, information gaps and other perceived tour shortcomings

Despite shortcomings mentioned in responses, the majority of respondents liked and would recommend the tours. While there is an encouraging level of satisfaction, both data sets suggest that perceived crowding is an issue that should be addressed to prevent it from becoming a greater concern. If groups cannot be further spread out or otherwise separated from each other on the beach during tours, it would be wise to consider Ballantyne *et al.*'s (2009) suggestions and to better explain the current tour format (and its potential crowding) to tourists, emphasising the conservation rationale behind having

X number of tourists crowded around one turtle and how this is actually better or less invasive than tourists might imagine, despite appearances (i.e., too crowded).

According to our preliminary survey, two other themes to examine further are (1) the types of information gaps identified, and (2) respondent emphasis on the need for family-specific tour accommodations in Tortuguero. One way to improve information provision (especially during waits) would be to conduct a guide workshop and/or develop a handout on common tourist questions²¹; these could be added as guide training supplements or refreshers. This would provide guides with additional resources to better accommodate across the board, regardless of individual guides’ levels of training, education, or familiarity with biology/ecology. It could improve tourist satisfaction, contribute to positive tourist word-of-mouth recommendations, and/or increased tip revenue for guides—all desirable outcomes for a highly tourism-dependent village. Workshops in various languages (e.g., English, Spanish) could also offer guides unique (and potentially cost-reduced or free) opportunities to learn how to answer tourist questions in various languages, and/or greater exposure to key terms in their second or third languages²², helping to address language-related challenges identified by respondents.

Potential risks to Tortuguero’s reputation, and possible responses to these

From a tourist’s perspective, the ecotourism reputation of Tortuguero could be at risk. Despite high tourist satisfaction levels, the same worrisome elements surface here as did in Meletis (2007), suggesting that persistent elements are disturbing tourist gazes during turtle tours and beyond. Even respondents who enjoyed the tours occasionally raised questions about the nature of ecotourism in Tortuguero, and noting gaps or problems in conservation and management, and/or the local landscape (e.g., litter on the beach) (Meletis 2007).

Left unaddressed, tourist concerns could threaten long-term tourism success in Tortuguero through negative word-of-mouth recommendations. For one, respondents voiced concerns about crowding, about tourism impacts in general, and with respect to turtle tours as potentially ‘disturbing’ or violating the nesting process. Potential risks also exist in not addressing respondent debates over whether the tours are ecotourism or not (2008 data; Meletis 2007). This debate is not contained to responses about the tours; respondents in both samples also discuss Tortuguero’s ‘eco reputation’ and its relationship to crowding: ‘ECOTOURISM? Tbd [to be determined]. Uncertain. Some groups seemed too large and uncontrolled but the restrictions go a long way to protecting the turtles’ (E90, 2008).

Such comments suggest that some respondents are not convinced that the tours are ecotourism and/or that Tortuguero is an ecotourism destination. Action should therefore be taken to either re-define Tortuguero’s marketing image to better represent its tourism realities (e.g., the increased presence of package tourists; the new TSP tour system) and/or to better manage on-site experiences so that they more closely meet

tourist expectations (Meletis & Campbell 2007; Campbell *et al.* 2008). Similarly, respondent suggestions about tours disturbing turtles indicate that information is necessary to counter such perceptions. Confusion about the new tour system has now been ‘added to the mix’; some tourists see these new trails as adding to degradation, rather than helping to prevent it: ‘First of all, I didn’t really like it [the turtle tour] because of the destruction of the vegetation and the ecosystems [didn’t like something about trails]. And secondly, there should be less trails because that would mean less destruction’ (S19, 2008).

More pervasive and complete explanations of the TSP and new tour format could help reassure tourists that the tours have been (re)designed to *reduce potential disturbances of the nesting process*. Tourists should also be informed that turtles are only viewed during phases of the nesting process when the risk of disturbance is believed to be minimal.

Participant observation (Meletis in 2003; 2004; 2008) and some survey answers suggest another potential source of confusion or disappointment. Tourists occasionally assume that the turtle tours directly fund turtle conservation efforts. Respondents exhibited confusion regarding what the tours fund: ‘I wasn’t a fan of the large groups crowding the turtles, but if their money [funds] conservation of the turtles...’ (E070 2004). A 2008 respondent wrote about the 30 USD tour fee as expensive because ‘We thought that the money went to a fund for turtle research but we realised that all the money goes to the guide????’ (S80, 2008). Other than the possible inclusion of a Park entrance fee in turtle tours taking place on the ‘Park section’ of the beach, there is no direct funding of local conservation efforts through the purchase of a turtle tour (unless it includes a brochure/sticker package, which funds the TSP). Tour pricing practices and what is/is not included in the price should be clarified to reduce tourist confusion. Currently, some respondents (incorrectly) assume that they are ‘helping’ turtles in the area with direct revenues through tour ticket purchases, which is typically not true.

A centralised explanation of tour basics (e.g., through the new kiosk) would standardise important responses and afford some transparency to the turtle tour system. It could also help to inform more realistic ecotourism expectations about what tours do and *do not* support—without placing any additional onus on individual tour guides to explain detailed (e.g., financial) aspects of the TSP.

What the data suggest about the nature of ‘ecotourists’ in Tortuguero

That respondents remain largely satisfied with Tortuguero’s turtle tours *despite* identified tour shortcomings, a new (potentially boring) wait, the presence of increasing numbers of tourists, some perceived crowding, and a lack of information provided by some guides raises important questions about Tortuguero’s tourists.

Both the data presented here and in Meletis (2007) suggest that the primacy of seeing turtles dominates the tour experience. Therefore, as long as most tourists still

see turtles, most will leave satisfied, despite shortcomings. Responses tend to focus on the act of seeing and/or a described ‘encounter’, and being in awe of seeing this animal/nesting process—this is in and of itself enough to satisfy most respondents because it continues to provide a unique attraction that most tourists cannot experience at home. This was also true in 2003/2004; despite the village’s waste management crisis, represented by litter and bagged garbage on the beach and in the village, respondents remained largely satisfied, and wrote mainly about ‘seeing turtles’. Even among respondents who did discuss the garbage/litter or other environmental impacts, virtually none made connections between themselves or tourism in general and undesirable environmental impacts (Meletis 2007).

Challenging assumptions about ecotourists wanting information and education, few respondents in either data set discuss learning, education, or any other theoretical component of ecotourism as part of their satisfaction (e.g., comments about culture are extremely rare); most responses relate to what respondents saw and experienced. A parallel exists among the least satisfied respondents; their responses are also mainly about what they saw or did not see, rather than what they learned or did not learn: ‘Yes, but I was surprised that we see only one turtle and we (had to go all the way to the airport for that), so that was a whole trip. Maybe I expect to see more turtles and see the whole process—because you see this on National Geographic TV’ (E108, 2008).

Several respondents wrote about having to take multiple tours in order to try and see turtles, since they were not successful at first. ‘Seeing’ was so central that some even suggested flexible pricing to accommodate what tourists see or do not see²³: ‘I really liked it and the people were very nice. However, it seems to me that if someone doesn’t get to see anything, they should be given the opportunity to try again before paying. This wasn’t what happened to us, it’s only a suggestion!’ (S87, 2008).

This focus on the visual, along with other response patterns (see Meletis 2007) suggests that being close to ‘charismatic megafauna’ dominates as primary motivator for taking a turtle tour. This fits with Tortuguero’s apparent recent shift to ‘softer’ ecotourism. This shift is reflected in its exponential growth (suggesting a larger market than ‘hard’ ecotourists represent), its increased infrastructure and service bases (e.g., improved transportation networks; expanding lodges), and the rise of slightly cheaper lodge-based package tours. Furthermore, the tourist demographics presented here and in Meletis (2007) suggest that Tortuguero’s days of primarily catering to ‘harder’ scientific or birding tourists and elite fishermen are truly over (Place 1991; Jacobson & Robles 1992; Lee & Snepenger 1992; Lefever 1992); it is now a mainstream ‘eco mass tourism’ destination (Weaver 2001a). Evidence of the enormous popularity of the lodges that recruit and cater to such tourists is reflected on the landscape through packed boats, oversold rooms, and large turtle tour groups of tourists with diverse ages and interests (Meletis 2007; Meletis participant observation 2002–2005, 2008).

CONCLUSION

In the literature documenting the rise of turtle tourism in Tortuguero (examples include: Place 1991; Jacobson & Robles 1992; Lefever 1992; Bjorndal 1998; Bjorndal *et al.* 1999; Campbell 1999; Campbell 2002a; Campbell 2002b; Campbell 2002c; Barrera 2003; Campbell 2003; Troëng 2004; Troëng & Drews 2004; Troëng & Rankin 2005; Meletis 2007; Meletis & Campbell 2009), tourists are generally neglected as central actors (Meletis 2007). The data presented here therefore represent a tourist-focused contribution to the literature, as well as a resource for stakeholders with applied data needs.

Tourist responses offer new insights into questions that we, the TNP staff, the CCC, the TSP, and the turtle guides have about tourists to Tortuguero, acting as effective examples of why tourist-directed research should be an integral part of ongoing management efforts at turtle tourism sites. For one, tourists forwarded suggestions about how to improve pricing, safety, flow, and tour design and content. Sound management should therefore view tourists not only as central to the entire enterprise (i.e., a turtle tourism destination cannot survive without tourists), but also as an untapped resource. Seeing tourists as providing useful inputs for 'tourism and conservation' management might help to make tourism research more appealing to conservationists and site managers, re-positioning this work as a more obvious and necessary component of adaptive management.

Recognising the importance of tourist opinions and perceptions pushes us to re-think what makes sense for tourism 'in practice' in places like Tortuguero. Whereas a lot of time and effort has been dedicated to turtle tourism standardisation efforts in regions around the world, the variety of responses collected in only 147 surveys remind us that in reality, there is no such thing as a 'standard turtle tourist'. This calls into question whether tour standardisation, and whatever tourist-related assumptions each such effort includes, is the only way to run turtle tourism sites, or just one option among many—just as offering an array of tailored turtle tour types (e.g., some with greater emphasis on local understandings of turtles; others with a Western biology/ecology focus) in one place could also be.

The data also make suggestions about the changing nature of tourism and tourists to Tortuguero. According to our 2008 data and the data collected by Meletis in 2003 and 2004 (Meletis 2007), tourism in Tortuguero seems to have largely shifted away from harder more independent ecotourists, to being primarily composed of softer ecotourists, who are more similar to mass tourists. All of these suggestions raise interesting questions about our assumptions in promoting turtle tourism, and the roles we play in generating tourism growth as the result of these promotional efforts. For example, are turtle conservationists partly responsible for the exponential growth of tourism in Tortuguero and the host of related impacts (good and bad) that the village, Park and CCC are now struggling to deal with? Are we also responsible for Tortuguero's apparent transition to a more 'mass ecotourism' type destination, catering to 'softer' ecotourists in larger numbers?

We hope that this paper has provided convincing evidence of the need to consider turtle tours as *tourism products* and *tourist experiences*. Such considerations should not be regarded as tangential undertakings but rather as central to the long-term viability of turtle tourism, locally and globally. Understanding who turtle tourists are, why they travel to such sites, why they take turtle tours, what they think about their tour experience and the nature such experiences in general, should *always* be part of the management agenda. This case study (2008; Meletis 2007) reveals that even in a well-established and successful turtle tourism destination, tourists can offer valuable insights. Tourist survey data captures examples of multilayered tourist experiences and their perceptions of these, and can be used to test existing assumptions, and to identify tour strengths, weaknesses, variability, and potential improvements. The apparent emerging 'family tourism' market in Tortuguero, for example, should be carefully considered and planned for *now* as part of adaptive 'conservation and tourism' management, rather than waiting for related problems to emerge, forcing reactive management. This might include adjustments to tour pricing, tour scheduling, and tour content (especially during wait times). The more central tourism becomes in the turtle conservationists' toolbox, the more central tourist and tourism industry-related considerations should become.

Reliable data on resource characteristics, impacts, use patterns, and user characteristics is required to manage biophysical impacts as well as visitors (Hammit and Cole 1989, Buckley and Pannell 1990, Cole 1993, Worboys and others 2001). Hence, understanding visitor attitudes is of value to resource managers (Stankey and Lucas 1982, Stankey and Scheyer 1986, Vaske and others 1995, White and others 1985, Graefe and others 1990, Newsome and others 2002b). Tourist perception studies can be useful for formulating tourism plans and policies, visitor management frameworks, and tourist education strategies (Cofer-Shabica *et al.* 1990, and Morgan *et al.* 1993 cited in Priskin 2003: 189).

The debates within the data (and Meletis 2007) about turtle tourism as ecotourism, and respondent questions about tourism 'helping or hurting' turtles suggest that decision-making driven by turtle conservation alone is no longer enough. Altering tourism offerings based on conservation-driven rationales alone is risky business. Luckily, in the case of Tortuguero, an apparent shift in tourism demand (to softer ecotourism) has accompanied the switch to the new tour system, and thus tourist satisfaction seems to persist. But left unaddressed, respondent concerns about crowding and 'disturbing' turtles could threaten continued success.

Tortuguero and other sites like it are now extremely dependent on tourism. Conservation efforts are also co-dependently intertwined with tourism. As such, the applied relevance of research into tourist perceptions in 'conservation and tourism' sites becomes obvious: community livelihoods, turtle conservation, and destination success are ultimately dependent upon maintaining tourist satisfaction and related positive word-of-mouth recommendations, as they tend to be

mutually dependent and inseparable from one another (e.g., consider tourism as a financing mechanism for the TSP, and for the CCC). Consideration of tourism data also beg us to question the true priorities driving turtle tourism development, promotion, and management. In 2005, Troëng and Rankin wrote that 'The Tortuguero green turtle demonstrates that long-term conservation efforts can reverse nesting declines and offers hope that adequate management can result in recuperation of endangered sea turtle species' (Troëng and Rankin 2005: 115). The rationale for the new tour system and the creation of the TSP (changing the system to reduce potential negative impacts) emphasise the fact that 'adequate management' now requires learning about tourism's potential impacts on nesting turtles and their surrounding environment.

We have suggested that tourism in Tortuguero appears to have switched to a softer, more mass tourism-like form of 'ecotourism'. We must therefore also ask ourselves whether the same actors that responded to the CCC's data regarding the relationship between beach traffic and false crawls (the CCC, the TNP, the local tourism industry, the guides) are equipped to collect and respond to data about Tortuguero's dynamic tourist population... If they are not, what does this reveal about current and future planning, management, and monitoring of tourism in Tortuguero?

This paper began with the assertion that various kinds of actors from large international conservation non-governmental organisations like the World Wildlife Fund to smaller conservation NGOs like the CCC are now directly involved with tourism promotion as a way to prove that 'turtles are worth more alive than dead' and to fund conservation. With this in mind, we raise some final questions with respect to the 'turtle conservation world's' involvement in tourism development and promotion. For one, how often we seriously contemplate whether or not turtle tourism in some areas is getting too popular? Both the data here and Meletis (2007) suggest that it is time to start asking that question about Tortuguero, especially given that respondents are doing so. How much turtle tourism in an area *is* just the right amount? How much is too much? How do we determine the answers to such question, and how can we plan and manage for 'desirable' levels of tourism, without contributing to potentially uncontrollable growth (a development of particular concern in the often fragile coastal locations where sea turtles nest)?

Many among us continue to court and cultivate tourist interest in seeing turtles, tourist volunteer hours, and tourist dollars. We hope that intimate encounters with turtles through turtle tourism will lead to life-long connections between tourists and turtle conservation (Wilson and Tisdell 2003). Without critical attention to turtle tourism growth and related impacts, however, we might be *directly* contributing to the creation of undesirable secondary and tertiary impacts on the turtles, their surrounding environments and local communities via tourism, endangering the entire turtle conservation project on a greater scale. Studying tourists is therefore critical to the project of keeping turtle tourism appealing to tourists, without

letting tourism impacts erode turtle habitat *OR* the tourist experience. Striving for this delicate balance will not be easy, but gaining a better and *ongoing* understanding of tourist perceptions is integral to designing more sustainable or *less unsustainable* turtle tourism options for the future.

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Notes

1. For more information on their efforts, please see www.costarica.turtles.org; www.cccturtle.org; www.tamar.org; www.seeturtles.org; www.widecast.org; and www.wwf.worldwildlife.org, respectively.
2. The concept and 'idealised' practice of ecotourism arose in contrast to mass tourism, as an effort to reconcile conservation and development through 'more careful' tourism development (Boo 1990). Since then, scholars have argued that the lines between tourism categories are increasingly blurry; they have deconstructed and questioned ecotourism 'in theory' through the use of case studies (Weaver 1999; Butcher 2003; Mowforth & Munt 1998). Regarding Tortuguero, we use the term ecotourism because tourism in the area is marketed as such (we provide examples of this). We also use the term tourism because we suggest that ecotourism in Tortuguero is getting 'softer' or moving towards 'mass ecotourism' (Weaver 2001a; Weaver 2005).
3. The 'tourist gaze' is a term coined by sociologist John Urry (The Tourist Gaze, 1990) to label the way(s) in which tourists see the destinations that they visit. The tourist gaze can combine elements of the romantic, the spiritual, the environmental, and the spectatorial. Tourism industry actors try to create experiences that satisfy and do not 'disturb' the gaze through the presence of elements that are undesirable, mundane, and unwanted as part of tourist experiences (Urry 1990).
4. Emma C. Harrison in a 2009 email to Zoë A. Meletis confirming the number of TNP tickets sold in 2008 to be 134,255 (number from MINAE).
5. Several years later, nesting was recorded as having increased after the Turtle Spotter Program was in place (de Haro, A., S. Troëng, *et al.* 2006. *Evaluation of New Turtle-Tour Visitation System at Tortuguero, Costa Rica*. The International Sea Turtle Society's 27th Annual Symposium on Sea Turtle Biology and Conservation, Crete, Greece.).
6. Actors such as the CCC, the TNP, and turtle guides also hoped that the new system, which divides the beach into five sections, could better accommodate the increasing numbers of tourists. To date, it seems that the potential for perceived crowding might actually be worse under the new system, especially on nights when few turtles must be shared between many groups since some beach sections lack turtles.
7. Turtles can only be observed by tour group(s) when they are in or beyond

the oviposition (egg depositing) stage of the nesting process.

8. See Meletis & Campbell (2007). I do not believe that ecotourism is or should be called non-consumptive.
9. The visitor centre is designed to educate about turtles, the area's natural history, and sea turtle conservation challenges and tools.
10. Some tourists provide valuable volunteer labour and expertise for on-site sea turtle conservation efforts as well (Smith 2002; Gray 2003; Campbell & Smith 2005; Campbell & Smith 2006; Gray & Campbell 2007). Volunteer Research Assistants, Participants, and visiting student groups provide research and monitoring labour for the CCC, for example.
11. This was rarely observed by Meletis and Te Koeti while on turtle tours, and while conducting surveys.
12. For example, tourists can purchase T-shirts that directly fund the TSP.
13. Originally, the lodges in Tortuguero were supposed to fund the TSP program but after regular payments dropped, the brochure/sticker package was developed as an alternative financing mechanism.
14. A further limitation to assessing tourist perceptions of the new turtle tour system is that many of the tourists, with rare exceptions, have no 'tour baseline' with which to compare their experience as part of the new turtle tour system in Tortuguero.
15. Despite the instruction to circle only one reason, some respondents chose more than one option, which explains why the percentages do not add up to 100%.
16. We did not define 'ecotourism' in the survey because of ongoing debates over defining ecotourism (Wall 1996) and because we are primarily interested in tourist perceptions of ecotourism and Tortuguero, rather than testing their perceptions vis-à-vis popular definitions of ecotourism.
17. Most of these were in response to the question about whether or not the tours are ecotourism.
18. There are additional problems with the lodges acting as 'middlemen' by buying TSP brochures and including them in lodge packages. One lodge, for example, claims their numbers should be at 100% TSP support, but the TNP measures them as below that (Harrison, participant observation & personal communications with lodge management 2008).
19. Emma C. Harrison in a 2007 email update to Zoë A. Meletis on poaching of turtle eggs and meat as reported in the 2006 Green Turtle Report.
20. In 2007, several representatives from lodges in Tortuguero told the CCC and the TNP that they had begun including the brochures in their prices. Given the number of lodges and the number of packages they sell every season, this represents a critical funding source for the TSP.
21. Guides could easily consult related handouts or cue cards while running tours, especially during 'dead time', and use them to further engage with tourists.
22. Often, second language training opportunities in the village are too time-demanding or cost prohibitive for tourism workers, leaving few opportunities for formal language training.
23. Price-related guarantees are common in some mass tourism venues. 'Sunshine guarantees' are offered to tourists in some destinations in the Caribbean, for example. If tourists experience X number of rainy days while on their trip, they are entitled to a price reduction or other bonus. The difference here is that some tourists are applying the same mentality or expectation to turtles: animals within nature whose behaviour is not as predictable as the Caribbean sun. Also, whether tourists see turtles or not, the same expenses are incurred by lodges and guides running the tours. Interestingly, turtle tours being run out of Playa Grande, Costa Rica do offer this type of guarantee; if you do not see a turtle on your tour, you can return for free the following night and you are placed at the top of the list for second night viewing (i.e., you get first priority to view a turtle). The Matapalo association does not require payment until tourists have seen a turtle; the Tamarindo association only requires tourists to pay a portion of tour costs beforehand. In both cases, tourists can return for a 'second try' if they don't see a turtle (B. Wallace in a 2010 email to Zoë A. Meletis confirming that 'Playa Grande tour guides do offer a turtle guarantee').

REFERENCES

- Akama, J.S. 1996. Western environmental values and nature-based tourism in Kenya. *Tourism Management* 17(8): 567–574.
- Akama, J.S. and D.M. Kieti. 2003. Measuring tourist satisfaction with Kenya's wildlife safari: A case study of Tsavo National Park. *Tourism Management* 24(1): 73–81.
- Anon. Undated. 'Tortuga Lodge & Gardens'. Accessed on January 12, 2006.
- Ballantyne, R., J. Packer and K. Hughes. 2009. Tourists' support for conservation messages and sustainable management practices in wildlife tourism experiences. *Tourism Management* 30(5): 658–664.
- Barrera, L.M. 2003. Institutions and conservation: Exploring the effects of social difference. M.Sc. thesis. The University of Cambridge, UK.
- BBC News. 2004. Sea turtle decline 'costs millions'. Science and Environment. May 25, 2004. <http://news.bbc.co.uk/2/hi/science/nature/3744661.stm>. Accessed on March 31, 2006.
- Bjorndal, D.K. 1998. Encouraging trend found in the number of green turtle nests at Tortuguero, Costa Rica. *Velador* 2.
- Bjorndal, K.A., J.A. Wetherall, A.B. Bolten and J.A. Mortimer. 1999. Twenty-six years of green turtle nesting at Tortuguero, Costa Rica: An encouraging trend. *Conservation Biology* 13(1): 126–134.
- Boo, E. 1990. Ecotourism: The potentials and pitfalls. Vols. 1 and 2. Baltimore: World Wildlife Fund.
- Boyd, S.W. and R.W. Butler. 1996. Managing ecotourism: An opportunity spectrum approach. *Tourism Management* 17(8): 557–566.
- Brightsmith, D.J., A. Stronza and K. Holle. 2008. Ecotourism, conservation biology, and volunteer tourism: A mutually beneficial triumvirate. *Biological Conservation* 141(11): 2832–2842.
- Butcher, J. 2003. *The moralisation of tourism*. London; New York: Routledge.
- Butler, R.W. 1980. The concept of a tourist area life cycle of evolution: Implications for management of resources. *The Canadian Geographer* 24: 5–12.
- Camacho, M.A. 2003. Informe sobre la gestion de manejo desechos solidos en la comunidad de Tortuguero. San Jose, Costa Rica.
- Campbell, C.L. 1994. The effects of flash photography on nesting behavior of green turtles (*Chelonia mydas*) at Tortuguero, Costa Rica. *14th Annual Symposium on Sea Turtle Biology and Conservation*, Hilton Head Island, North Carolina. March 1994.
- Campbell, L.M. 1999. Ecotourism in rural developing communities. *Annals of Tourism Research* 26(3): 534–553.
- Campbell, L.M. 2002a. Conservation narratives and the received wisdom of ecotourism: Case studies from Costa Rica. *International Journal of Sustainable Development* 5(3): 300–325.
- Campbell, L.M. 2002b. Conservation narratives in Costa Rica: Conflict and co-existence. *Development and Change* 33(1): 29–56.
- Campbell, L.M. 2002c. Science and sustainable use: Views of marine turtle conservation experts. *Ecological Applications* 12(4): 1229–1246.
- Campbell, L.M. 2003. Contemporary culture, use, and conservation of sea turtles. In: *The biology of sea turtles* (eds. Lutz, P.L., J.A. Musick and J. Wyneken). Pp. 307–338. Boca Raton; London; New York; Washington, DC: CRC Press.
- Campbell, L.M., N.J. Gray and Z.A. Meletis (2008). Political ecology perspectives on ecotourism to parks and protected areas. In: *Transforming parks and protected areas: Policy and governance in a changing world* (eds. Hanna, K.S., D.A. Clark and D.S. Slocombe). Pp. 200–221. Abingdon, UK: Routledge and Taylor and Francis.
- Campbell, L.M. and C. Smith. 2005. Volunteering for sea turtles? Characteristics and motives of volunteers working with the Caribbean Conservation Corporation in Tortuguero, Costa Rica. *MAST* 3(4): 169–194.
- Campbell, L.M. and C. Smith. 2006. What makes them pay? Values of volunteers working with sea turtles. *Environmental Management* 38(1): 84–98.

- Conservation International and IUCN-SSC Marine Turtle Specialist Group. Undated. Sea Turtles: It's not too late to turn the tide. Washington, DC: Conservation International and the IUCN-SSC Marine Turtle Specialist Group.
- Costa Rica Exotica Natural Travel and Tour Agency. Undated. The Tortuguero National Park, Costa Rica. <http://www.tortugueroinfo.com>. Accessed on October 15, 2009.
- da Silva, C.P. 2002. Beach carrying capacity assessment: How important is it? *Journal of Coastal Research* 36 (Special Issue: ICS 2002 Proceedings): 190–197.
- de Haro, A. 2008. Informe Final Programa de Rastreadores. Unpublished report.
- de Haro, A., S. Tröeng, A. Abad, R. Becker, M. Contreras, V. Huertas, S. Kennealy, et al. 2006. Report on The 2005 Green Turtle Program at Tortuguero, Costa Rica. San Pedro, Costa Rica: Caribbean Conservation Corporation.
- de Haro, A., S. Tröeng, E. Harrison, R. Silman, D. Rodríguez and E. Obando. 2006. Evaluation of new turtle-tour visitation system at Tortuguero, Costa Rica. *The International Sea Turtle Society's 26th Annual Symposium on Sea Turtle Biology and Conservation*, Crete, Greece. April 2006.
- de Oliveira, J.A.P. 2005. Tourism as a force for establishing protected areas: The case of Bahia, Brazil. *Journal of Sustainable Tourism* 13(1): 24–49.
- Decrop, A. 1999. Qualitative research methods for the study of tourist behaviour. In: *Consumer behaviour in travel and tourism* (eds. Pizam, A. and Y. Mansfield). Pp. 335–365. New York; London; Oxford: The Haworth Hospitality Press.
- Evans, S. 1999. *The green republic. A conservation history of Costa Rica*. Austin: University of Texas Press.
- Farrell, T. A. and J. L. Marion. 2001. Identifying and assessing ecotourism visitor impacts at eight protected areas in Costa Rica and Belize. *Environmental Conservation* 28(3): 215–225.
- Gnoth, J. 1999. Tourism expectation formation: The case of camper-van tourists in New Zealand. In: *Consumer behaviour in travel and tourism* (eds. Pizam, A. and Y. Pizam). Pp. 245–266. New York; London; Oxford: The Haworth Hospitality Press.
- Gray, N. 2003. Global discourses, local views: Visions of volunteer ecotourism in Gandoca, Costa Rica. M.Sc. thesis. The University of Western Ontario, London, Canada.
- Gray, N. J. and L. M. Campbell. 2007. A decommodified experience? Exploring aesthetic, economic, and ethical values for volunteer ecotourism in Costa Rica. *Journal of Sustainable Tourism* 15(5): 463–482.
- Grossberg, R., A. Treves, and L. Naughton-Treves. 2003. The incidental ecotourist: Measuring visitor impacts on endangered howler monkeys at a Belizean archaeological site. *Environmental Conservation* 30(1): 40–51.
- Harrison, E., S. Tröeng, M. Abrego, M. Becker, R. Beker, G. Castillo, J. Fuentes de la Viuda, et al. 2005. Report on The 2004 Green Turtle Program at Tortuguero, Costa Rica. San Pedro, Costa Rica, Caribbean Conservation Corporation.
- Harrison, E., R.C. Silman, E. Chamorro, E. Obando and A. Sanchez. 2008. Creative new funding source aids turtle conservation activities and community projects in Tortuguero, Costa Rica. *The International Symposium on Sea Turtle Biology and Conservation*, Loreto, Mexico. January 2008.
- Hassan, S. H. 2009. Determinants of market competitiveness in an environmentally sustainable tourism industry. *Journal of Travel Research* 38(2): 239–245.
- Hays, G.C. 2004. Good news for sea turtles. *TRENDS in Ecology and Evolution* 19(7): 349–351.
- Hillery, M., B. Nancarrow, G. Griffin and J. Syme. 2001. Tourist perceptions of environmental impact. *Annals of Tourism Research* 28(4): 853–867.
- Honey, M. 1999. *Ecotourism and sustainable development. Who owns paradise?* Washington, DC; Covelo, CA: Island Press.
- Hughes, M. and A. Morrison-Saunders 2003. Visitor attitudes toward a modified natural attraction. *Society and Natural Resources* 16(3): 191–203.
- Hvenegaard, G.T. and P. Dearden. 1998. Ecotourism versus tourism in a Thai National Park. *Annals of Tourism Research* 25(3): 700–720.
- Jacobson, S. K. and R. Robles. 1992. Ecotourism, sustainable development, and conservation education: Development of a tour guide training program in Tortuguero, Costa Rica. *Environmental Management* 16(6): 701–713.
- Kudo, H., T. Kitagawa, S. Kimura and S. Watanabe. 2009. Humans trampling on the nests of Loggerhead turtle hatchlings affect emergence success on Yakushima Island, Japan. *Bulletin of Japanese Society of Fisheries Oceanography* 68(4): 225–231.
- Kuvan, Y. and P. Akan. 2005. Residents' attitudes toward general and forest-related impacts of tourism: The case of Belek, Antalya. *Tourism Management* 26(5): 691–706.
- Lee, D.N.B. and D.J. Snepenger. 1992. An ecotourism assessment of Tortuguero, Costa Rica. *Annals of Tourism Research* 19(2): 367–370.
- Lefever, H.G. 1986. Tortuguero: Another world. *The Tico Times* 873: 1, 10. San Jose, Costa Rica.
- Lefever, H.G. 1992. *Turtle Bogue. Afro-Caribbean life and culture in a Costa Rican village*. Selingsgrove; London; Toronto: Susquehanna University Press; Associated University Press.
- Luck, M. 2003. Education on marine mammal tours as agent for conservation - but do tourists want to be educated? *Ocean & Coastal Management* 46(9): 943–956.
- Margaritoulis, D. 1990. Successes and failures: Conservation and tourism on the nesting beaches of Laganas Bay, Zakynthos, Greece, 1989. *Marine Turtle Newsletter* 49: 13–14.
- Margaritoulis, D. 2005. Nesting activity and reproductive output of loggerhead sea turtles, *Caretta caretta*, over 19 seasons (1984–2002) at Laganas Bay, Zakynthos, Greece: The Largest rookery in the Mediterranean. *Chelonian Conservation and Biology* 4(4): 916–929.
- Mascarenhas, R., F. Zeppelini and V.S. Moreira. 2003. Observations on sea turtles in the state of Paraiba, Brazil. *Marine Turtle Newsletter* 101: 16–18.
- McCabe, S. and E.H. Stokoe. 2004. Place and identity in tourists' accounts. *Annals of Tourism Research* 31(3): 601–622.
- McDonald, M. and S. Wearing. 2003. Reconciling communities' expectations of ecotourism: Initiating a planning and education strategy for the Avoca Beach Rock Platform. In: *Marine ecotourism. issues and experiences*. (eds. Garrod, B. and J.C. Wilson). Pp. 155–170. Clevedon; Buffalo; Toronto; Sydney: Channel View Publications.
- McGehee, N.G. 2002. Alternative tourism and social movements. *Annals of Tourism Research* 29(1): 124–143.
- McMinn, S. and E. Cater 1998. Tourist typology. Observations from Belize. *Annals of Tourism Research* 23(3): 675–699.
- Meletis, Z.A. 2007. Wasted visits? Ecotourism in theory vs. practice, at Tortuguero, Costa Rica. Ph.D. Thesis. Duke University, Durham, USA.
- Meletis, Z.A. and L.M. Campbell. 2007. Call it consumption! (Re) conceptualizing ecotourism as consumption and consumptive. *Geography Compass* 1(4): 850–870.
- Meletis, Z.A. and L.M. Campbell. 2009. Benevolent and benign? Using environmental justice to investigate waste-related impacts of ecotourism in destination communities. *Antipode* 41(4): 741–780.
- Mohsin, A. 2005. Tourist attitudes and destination marketing - the case of Australia's Northern Territory and Malaysia. *Tourism Management* 26(5): 723–732.
- Mowforth, M. and I. Munt. 1998. *Tourism and Sustainability: New tourism in the Third World*. London and New York: Routledge.
- Mowforth, M. and I. Munt. 2008. *Tourism and sustainability: New tourism in the Third World*. New York and London: Routledge.
- Nature Air. 2001–2007. Destinations: Tortuguero, Costa Rica. http://www.natureair.com/destinations/tortuguero_costa_rica.html. Accessed on October 29, 2007.

- Nelson, V. 2005. Representation and images of people, place and nature in Grenada's tourism. *Geografiska Annaler* 87 B(2): 131–143.
- Nolasco del Aguila, D., X. Debade, E. Harrison, A. Alfaro Nuñez, C. Atkinson, K. Barrientos Munoz, A. Clevenger, *et al.* 2008. Report on the 2007 Green Turtle Program at Tortuguero, Costa Rica. San Pedro; Gainesville: Caribbean Conservation Corporation.
- Orams, M.B. 1995. Towards a more desirable form of ecotourism. *Tourism Management* 16(1): 3–8.
- Orams, M.B. 2002. Feeding wildlife as a tourism attraction: A review of issues and impacts. *Tourism Management* 23(3): 281–293.
- Place, S. 1991. Nature tourism and rural development in Tortuguero. *Annals of Tourism Research* 18(1): 186–201.
- Plummarom, A. 1999. The hidden costs of the 'new' tourism - A focus on biopiracy. Third World Network Briefing Paper for CSD7 No. 1. <http://www.twinside.org.sg/title/hidden.htm>. Accessed on March 27, 2007.
- Priskin, J. 2003. Tourist perceptions of degradation caused by coastal nature-based recreation. *Environmental Management* 32(2): 189–204.
- Ryan, C., K. Hughes and S. Chirgwin. 2000. The gaze, spectacle and ecotourism. *Annals of Tourism Research* 27(1): 148–163.
- Safina, C. 2006. *Voyage of the turtle. In pursuit of the Earth's last dinosaur*. New York: Henry Holt and Company.
- Schlacherl, T. A., D.S. Shoeman, J. Dugan, M. Lastra, A. Jones, F. Scapini and A. McLachlan. 2008. Sandy beach ecosystems: Key features, sampling issues, management challenges and climate change impacts. *Marine Ecology* 29(Suppl 1): 70–90.
- SEE Turtles. 2007–2009. Ways you can protect sea turtles <http://www.seeturtles.org/466/ways-you-can-protect-sea-turtles.html>. Accessed on June 10, 2009.
- Shepherd, N. 2002. How ecotourism can go wrong: The cases of SeaCanoe and Siam Safari, Thailand. *Current Issues in Tourism* 5(3&4): 309–318.
- Smith, C. 2002. Valuing and volunteering for wildlife conservation in Tortuguero, Costa Rica. M.Sc. thesis. The University of Western Ontario. London, Canada.
- Sutherland, J.M. 1985. Marine turtles in Greece and their conservation. *Marine Turtle Newsletter* 32: 6–8. <http://www.seaturtle.org/mtn/archives/mtn32/mtn32p6.shtml>. Accessed June 2, 2009.
- Troëng, S. 2004. Five decades of sea turtle conservation, monitoring and research at Tortuguero (presentation). Tortuga Lodge. Tortuguero, Costa Rica.
- Troëng, S. and C. Drews 2004. Money talks. Economic aspects of marine turtle use and conservation. Gland: WWF-International.
- Troëng, S. and E. Rankin 2005. Long-term conservation efforts contribute to positive green turtle *Chelonia mydas* nesting trend at Tortuguero, Costa Rica. *Biological Conservation* 121: 111–116.
- Turtle Conservation Project (TCP) Sri Lanka. Undated. Turtle tourist guide training programme. <http://www.tcpsrilanka.org>. Accessed on December 15, 2009.
- Urry, J. 2002. *The tourist gaze*. London; Thousand Oaks; New Delhi: SAGE Publications.
- Waayers, D. and D. Newsome. 2006. Observations of non-compliance behaviour by tourists to a voluntary code of conduct: A pilot study of turtle tourism in the Exmouth Region, Western Australia. *Journal of Ecotourism* 5(3): 211–222.
- Weaver, D.B. 1998. *Ecotourism in the less developed world*. Oxon; New York: CAB International.
- Weaver, D.B. 1999. Magnitude of ecotourism in Costa Rica and Kenya. *Annals of Tourism Research* 26(4): 792–816.
- Weaver, D.B. 2001a. Ecotourism as mass tourism: Contradiction or reality? *Cornell Hotel and Restaurant Administration Quarterly* 42(2): 104–112.
- Weaver, D.B. 2001b. Ecotourism in the context of other tourism types. In: *The encyclopedia of ecotourism* (ed. Weaver, D.B.). Pp. 73–83. Oxon; New York: CABI International.
- Weaver, D.B. and L.J. Lawton. 2002. Overnight ecotourist market segmentation in the gold coast hinterland of Australia. *Journal of Travel Research* 40(3): 270–280.
- Wider Caribbean Sea Turtle Conservation Network (WIDECAST). Undated. Why sea turtle eco-tourism? Accessed on December 15, 2009.
- Wight, P. 1996. North American ecotourism markets: Motivations, preferences, and destinations. *Journal of Travel Research* 35(1): 3–12.
- Wight, P.A. 1996. *North American ecotourists: Market profile and trip characteristics*. Thousand Oaks: SAGE Publications.
- Wilson, C. and C. Tisdell. 2001. Sea turtles as a non-consumptive tourism resource especially in Australia. *Tourism Management* 22(3): 279–288.
- Wilson, C. and C. Tisdell 2003. Conservation and economic benefits of wildlife-based marine tourism: Sea turtles and whales as case studies. *Human Dimensions of Wildlife* 8(1): 49–58.
- World Wildlife Fund. 2008. Coastal development problems: Tourism. http://www.panda.org/about_our_earth/blue_planet/problems/tourism/tourism_pressure/. Accessed on May 22, 2009.

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