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POTENTIAL CONSERVATION BENEFITS OF WILDLIFE FESTIVALS

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Wildlife festivals promote a variety of social, educational, economic, recreational, and community development goals. As ecotourism activities, wildlife festivals should also promote conservation goals. This article examines five potential conservation benefits of wildlife festivals which can be generated by providing: 1) incentives to establish protected areas; 2) revenue for wildlife and habitat management; 3) economic impact to nearby areas, encouraging residents to conserve wildlife; 4) alternatives to other uses that cause more environmental damage; and 5) support for conservation by educating local and nonlocal participants. The discussion includes wildlife festival examples, along with research and management needs.

Key words: Wildlife festivals; Benefits; Objectives; Conservation; Economic impact

Introduction

Wildlife festivals are short-term celebrations of local natural wildlife features. They attract mostly local and regional visitors, and offer a variety of social, recreational, and educational activities. Organizers host festivals for many reasons: to enhance a community image (Janiskee & Drews, 1998), generate local economic impacts (Walo, Bull, & Breen, 1996), provide recreational opportunities (Mayfield & Crompton, 1995), develop a local sense of community (Derrett, 2003), and help protect the natural environment (Getz, 1991; Hvenegaard & Manaloor, 2004; Lawton, 2008).

In addition to these reasons, wildlife festivals should promote the conservation of local wildlife (Jenner, 2003; Polson, 1993; Romero & Stangel, 1996), which would be consistent with objectives for ecotourism in general (Fennell, 2001; Weaver, 2005). Despite some debate about the definition of ecotourism (Diamantis, 1999; Rahemtulla & Wellstead, 2001), most experts agree that the core criteria of ecotourism are a focus on nature-based activities, environmental education, and sustainability (Fennell, 2001; Stronza, 2007; Weaver, 2001, 2005). Thus, ecotourism is characterized by nature appreciation and learning in natural settings, with management following sustainability practices for economic, sociocultural, and economic systems (Ross & Wall, 1999; Weaver & Lawton, 2007). Typical

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ecotourism activities include bird watching, whale watching, and nature study (Hvenegaard & Manaloor, 2007; Weaver, 2001).

Wildlife festivals are considered to be a subset of ecotourism (Slotkin, 2003), given their similar activities and similar goals (Lawton 2008). Indeed, wildlife festivals participate in a wide variety of general sustainability practices, such as reusing signage, recycling, and energy conservation, but mostly within a "minimalist" ecotourism model (Lawton & Weaver, 2009). The minimalist model includes superficial learning opportunities about charismatic mega fauna, with only modest sustainability objectives (site-specific and status quo). By contrast, the "comprehensive" model is more holistic in terms of environmental education, understanding, transformation of behavior, and improvements to the environment (Weaver, 2005). From the limited research, most wildlife festival participants are focused on learning and entertainment, but some are also very knowledgeable about, and engaged in, a variety of conservation efforts (Singh, Slotkin, & Vamosi, 2007).

In this article, wildlife festivals refer to any wildlife, birding, or nature-related festivals. While there is no agreed-upon definition, wildlife festivals have distinctive characteristics that should be noted in the context of potential positive and negative conservation impacts. From a spatial perspective, while wildlife festivals occur around the world, there is a growing number in North America (Lawton, 2008). Wildlife festivals are fewer in number in less developed regions (Slotkin, 2003). Also, wildlife festivals are found near natural habitats that support significant wildlife populations, most often in public protected areas (Slotkin, 2005). The festival activities are usually spatially concentrated in outdoor, natural settings around a central venue (Lawton & Weaver, 2010) that facilitates the experience (e.g., accommodation, education, and other services).

From a temporal perspective, wildlife festivals are growing rapidly. In North America, only 10 wildlife festivals were offered in 1992, but by 2002, over 240 were offered (Decray, Green, & Payne, 1998; DiGregorio, 2002; Lawton, 2009; National Fish and Wildlife Federation, 1999). This growth is indicative of greater public interest in wildlife recreation activities (United States Fish and Wildlife Service [USFWS], 2006) and the potential for local communities to enhance economic and social benefits (Lawton, 2009). Given the concentration of festivals in temperate and subtropical North America, most of these are offered during key natural history events that occur in the northern hemisphere's spring, summer, and fall, such as shorebird migration, waterfowl nesting, and wildflower blooming. Festivals are usually offered over a short time period (e.g., 1–4 days; Lawton & Weaver, 2010). From a structural perspective, wildlife festivals involve volunteers and paid staff from community groups, conservation organizations, and/or tourism agencies. From an organizational perspective, wildlife festivals are open to the public (Lawton & Weaver, 2010) and usually offer activities such as guided walks, presentations, birding competitions, wildlife carving competitions, children's crafts, and trade shows (Hartley, 2005). Most wildlife festivals attract a few hundred visitors, although attendance can range from a few dozen to several thousand.

In theory, ecotourism activities, such as wildlife festivals, have the potential to help conserve local natural features (Tisdell, 1995). However, ecotourism theory has not translated into practice on a regular basis (Gössling, 1999; Higham & Bejder, 2008; Ross & Wall 1999; Stem, Lassoie, Lee, Deshler, & Schelhas, 2003). Furthermore, little research has been conducted on the potential or actual benefits of wildlife festivals on wildlife conservation itself, as opposed to broader sustainability goals. More research is needed to understand how a localized reciprocal relationship between ecotourism and conservation (Giannecchini, 1993) can be conceptualized and implemented. The goal of this article is to examine the potential and realized wildlife conservation benefits from wildlife festivals, by examining the theory, evidence, and management options from the ecotourism and wildlife festivals literature.

Background

A growing body of theoretical and experimental research documents the negative impacts of recreation on wildlife. Even though there is little research that documents impacts directly from wildlife festivals, much of this is still relevant. Using Knight and Cole's (1991) conceptual framework,

wildlife recreation may cause modification to critical habitats (Butler & Fenton, 1987), pollution to the natural environment (Hvenegaard & Dearden, 1998), or disturbance to individuals and populations (Goss-Custard, Triplet, Sueur, & West, 2005). Short-term impacts on individuals include behavioral changes (e.g., bird watchers flushing birds from feeding) or death (bird nestlings succumbing to cold when parent birds are flushed; Burger & Gochfeld, 1998). Long-term impacts on individuals include altered behavior (e.g., a bird avoiding areas visited by bird watchers; Curry, Moore, Bauer, Cosgriff, & Lipscombe, 2001), altered vigor (e.g., poor development in young bird chicks; McClung, Seddon, Massaro, & Setiawan, 2004), altered productivity (e.g., smaller clutch size of nesting species; Johnson, Bjorndal, & Bolten, 1996), or delayed death (e.g., lack of access to food resources; Hand, 1980). Long-term impacts on populations include changes in abundance (Garber & Burger, 1995), distribution (e.g., avoiding areas with potential impacts; Lott & McCoy, 1995), or demographics (e.g., gender ratio of nestlings; Jacobson & Lopez, 1994). Long-term impacts on communities include changes to species composition and subsequent interactions (Fernandez-Juricic, 2000).

Valentine (1993) and Singh et al. (2007) describe ecotourism's potential in promoting enhancive sustainability (providing a net environmental benefit) versus steady-state sustainability (does not erode the environment, but does not improve environmental capital). On one hand, wildlife festivals can promote steady-state sustainability by reducing the types of negative impacts just described. On the other hand, claims about the positive impacts of wildlife tourism, that is, toward enhancive sustainability, have considerably less research support and fairly weak links (Kiss, 2004). To ensure long-term sustainability of wildlife festivals, wildlife conservation should be central to the operation of these festivals, but is it?

The fields of event tourism and ecotourism are in an early stage of development (Getz, 2008; Weaver & Lawton, 2007). However, there is some theory on which to build conceptual frameworks of the ecotourism–conservation interface. Building on work by Duffus and Dearden (1990) and Fennell and Eagles (1990), Hvenegaard (1994) proposed an integrated framework to examine the impacts of ecotourism, with relevance for wildlife festivals. Ecotourism occurs at the junction of four key components. First, the historical relationship between local wildlife and ecotourists serves as a background to the current interactions. Second, ecotourists select target species of wildlife and habitats, based on predictable occurrences within a fairly small spatial area, with some resource management influences (e.g., habitat modification, habituation). Third, ecotourists engage in a wildlife tourism experience, with their behaviors modified by visitor management efforts (e.g., fees, education, facilities). Fourth, ecotourism activities take place near communities that host ecotourism activities. Any impacts from these four areas are interpreted through visitor, community, or resource lenses. Weaver and Lawton (2007) take a similar approach in their framework of ecotourism, which considers impacts at the center of interactions among ecotourism supply (venues, industry), demand (ecotourists), institutions, and external environments.

Within these frameworks, wildlife festival research has concentrated on tourists and host communities. First, wildlife festival tourists are generally older, more educated, and more affluent (Hvenegaard, Jenner, & Manaloor, 2005) than general tourists. They also have proenvironmental concerns, attitudes, and behaviors (Singh et al., 2007), and a wide range of wildlife skills and interests (Hvenegaard & Manaloor, 2007) that can be represented along a continuum from hard (small scale) to soft (large scale) ecotourism. According to Duffus and Dearden (1990), among the new participants to wildlife festivals (i.e., soft ecotourism), there will be more generalists than specialists. This has been shown in several wildlife festivals (Chambliss, Slotkin, & Vamosi, 2009; Fermata, Inc., 2001; Hvenegaard & Manaloor, 2007). Second, research has demonstrated considerable economic impact on local communities (Chambliss et al., 2005; Fermata, Inc., 2001; Kim, Scott, Thigpen, & Kim, 1998) and economic value of wildlife festivals (Eubanks & Stoll, 1999; Fermata, Inc., 2001). New research has identified characteristics of the festivals and communities that influence the level of local expenditures (Hvenegaard & Manaloor, 2007).

Several organizations have called for more research on the interactions between tourism and conservation. The 2003 World Parks Congress rec-

ommended that tourism make tangible contributions to conservation and that research be conducted to understand those links (International Union for Conservation of Nature [IUCN], 2005). The Quebec Declaration on Ecotourism calls for academic institutions to conduct research on the actual impacts of ecotourism activities on wildlife species and habitats (World Ecotourism Summit, 2002). Other researchers call for further research in this area (Getz, 2008; Higginbottom & Tribe, 2004; Hvenegaard & Dearden, 1998; Reynolds & Braithwaite, 2001; Sekercioglu, 2002) so that mechanisms for wildlife tourism to support conservation can be developed and evaluated. It is especially important to research those mechanisms from the perspectives of social sciences and natural sciences (Newsome, Dowling, & Moore, 2005; Rodger & Moore, 2004).

Economic Assessments of Wildlife Festivals

Because there is an economic connection to most conservation benefits from wildlife festivals, it is useful to review a few economic concepts. The first way to consider economic issues of wildlife festivals is in terms of *economic value*, or the benefit gained by visitors, measured by what they would be willing to spend beyond their expenditures for an experience, such as watching rare birds (Wells, 1997). This is often referred to as *consumer surplus*. According to Bergstrom, Stoll, Titre, and Wright (1990), this economic value may include *direct use value* (e.g., willingness to pay to watch rare birds), *indirect use value* (e.g., willingness to pay to have birds as an essential part of the ecosystem), *option value* (e.g., willingness to pay for the possibility of seeing rare birds in the future, above expected consumer surplus), and *existence value* (e.g., willingness to pay for the knowledge that rare birds will continue to exist). Considerable literature exists that conceptualizes and measures these values in the context of wildlife.

The second and most common way to consider economic issues is in terms of *economic impact*, or new expenditures generated by visitors within a given area. Economic impacts can be viewed both positively and negatively. Most attention is given to the *positive side*, when economic benefits accrue to the tourists, businesses, operators, local residents, and governments, in the form of revenue, taxes, and enjoyment. Less attention is given to the *negative side*, when, for example, tourism raises the rate of inflation, results in inequitable revenue distribution, or causes instability (e.g., due to seasonality, political sensitivity, conditions at tourist source region, or competing attractions).

Local economic impacts can be categorized in three ways (Lindberg, 1998). First, *direct impacts* result from tourists who spend money at local businesses, such as tours, hotels, restaurants, and craft shops. Second, *indirect impacts* result from those businesses respending that money locally by purchasing various goods and services to run their operations. Finally, *induced impacts* result from employees of those businesses spending their wages locally.

Economic multipliers, the number of times that money is spent over again in the local area, are important in determining overall economic impact in that area (Bergstrom, Stoll, Titre, & Wright, 1990). Multipliers can be calculated for employment and income, based on a designated region for analysis. However, in many cases, there is considerable *leakage*, caused by importing various goods and services, including materials, labor, capital, consumables, insurance, and advertising. When expenditures leave the local region, the multiplier is reduced.

There are several types of costs incurred to establish and maintain tourism sites (Dixon & Sherman, 1990). First, *direct costs* are those incurred by local or national governments to acquire land, develop facilities, and prepare and implement management plans. Second, *indirect costs* occur as a result of maintaining an ecotourism site, such as wildlife eating neighboring crops or harming people. Third, *opportunity costs* refer to the benefits lost to protecting a site (e.g., foregone harvesting rights, alternative land uses). In addition, some economic issues are not quantifiable or have social dimensions. For example, economic benefits may not accrue to those bearing the costs of providing ecotourism opportunities (Groom, Podolsky, & Munn, 1991; Weber, 1993). As well, benefits from festivals are concentrated during only a few days or weeks each year. Finally, economic impacts must be judged in the context of baseline data, contextual information, and qualitative analyses (Kiss, 2004).

Most studies on wildlife festivals report on direct economic impacts. There is much controversy about measuring those impacts which relate to consistency and size of region considered, methods of measurement, and perception of those impacts. Criticisms aside, the common economic benefits from ecotourism include local employment, industry stimulation, economic diversification, and infrastructure improvements (McNeely, Thorsell, & Ceballos-Lascurain, 1991).

Table 1 summarizes economic impact results from several studies of mostly North American wildlife festivals. Significant drivers of local economic impact include; the number of participants, their need to stay overnight (and pay for local accommodation; Chhabra, Sills, & Cubbage, 2003), the length of stay, affluence of participants, types of activities, and the ability of local communities to meet visitor needs (Hvenegaard & Manaloor, 2004). Clearly, there can be significant local economic impact from wildlife festivals.

A few wildlife festival studies have expanded economic analyses. In addition to the direct impacts, and based on an economic multiplier of 2.28, the Hummer/Bird Celebration in Rockport, TX produced an additional US$1.4 million in indirect and induced expenditures in the county (Kim et al., 1998). Similar analyses were conducted for other Florida wildlife festivals (Chambliss et al., 2009; Lynch & Harrington, 2003; Lynch, Harrington, Chambliss, Slotkin, & Vamosi, 2003). Even though few estimates have been conducted for wildlife festivals, leakage estimates for other forms of wildlife tourism range widely from 11% to 98% (Kinnaird & O'Brien, 1996; Wells, 1997).

Only a few studies have examined economic value, or consumer surplus, related to wildlife festivals. For visitors to the Rio Grande Valley Birding Festival, the consumer surplus for direct use value of their most recent birding trip averaged US$205.09 per visitor (Eubanks & Stoll, 1999). For participants at the American River Salmon Festival and the Kern Valley Bioregions Festival, this value was US$44.78 and US$149.18, respectively (Fermata, Inc., 2001). This indicates how much more visitors would have been willing to pay before deciding not to take the trip. Indirect use values have been estimated for general wildlife tourism situations, but not for wildlife festivals.

Links Between Wildlife Festivals and Conservation

Researchers have identified five potential benefits to the conservation of wildlife species and their habitats from ecotourism (Brandon, 1996; Higginbottom & Tribe, 2004; Weaver, 2001). These benefits can be generated by providing (Diamantis, 1999; Higginbottom, Tribe, & Booth, 2003; Ross & Wall, 1999; Sekercioglu, 2002): 1) incentives to establish protected areas; 2) revenue for wildlife and habitat management; 3) economic impact to nearby communities, encouraging residents to conserve wildlife; 4) alternatives to other uses that cause more environmental damage; and 5) support for conservation by educating local and nonlocal participants. This section examines evidence for these benefits arising from wildlife festivals or, if research on wildlife festivals is lacking, from the broader wildlife tourism and ecotourism situations. The potential benefits to conservation from wildlife festivals can be represented by the variables indicated in Figure 1.

First, the real or potential economic benefits from wildlife festivals may encourage decision-makers to establish local protected areas (Dabrowski, 1994), since properly managed protected areas can provide a reliable supply of wildlife viewing opportunities (Fennell & Weaver, 2005) and resulting economic benefits. For example, the Whooping Crane Festival and the Great Texas Coastal Birding Trail have boosted local businesses in Port Aransas, TX, so that the local community is planning to designate a new park with wildlife observation posts (Robbins, 2003). In some cases, protecting natural habitat requires little financial input, but produces large financial output in local areas through wildlife tourism (Romero & Stangel, 1996). More research is needed to determine the level and kind of influence of wildlife festivals on protected area establishment. Of course, protected area managers should not rely only on these kinds of arguments since improperly managed festivals can result in substantial negative impacts and some areas worthy of ecosystem protection may remain unprotected if they are not celebrated with a festival or receive too few visitors (McNeely et al., 1991).

Second, given suitable mechanisms, wildlife festivals may increase revenue for managers of pro-

Table 1
Local Expenditures Resulting From Wildlife Festivals

Festival Name	Location (Year)	Days	No. of Visitors	Local Expenditures per Person per Visit[a]	Total Local Expenditures[a]	Demographics: Male/ Female (%)	Demographics: With Grad Degree (%)	Reference
Snow Goose Festival	Tofield, AB (2000)	2	5,000	CAD$22.48	CAD$98,050	39/61	7	Hvenegaard & Manaloor (2004)
Brant Wildlife Festival	Parksville-Qualicum, BC (2003)	3	3,430	CAD$155.73	CAD$534,188	52/48	12	Jenner (2003)
British Birdwatching Fair	Rutland, UK (2003)	3	16,000	—	US$640,000	—	—	Green (2003)
Hummer/Bird Celebration	Rockport, TX (1995)	4	4,500	US$283.70	US$1.27 million	23/77	20	Kim et al. (1998)
Rio Grande Valley Bird Festival	Harlingen, TX (1998)	5	—	US$761.15	—	—	—	Eubanks & Stoll (1999)
American River Salmon Festival	Rancho Cardova, CA (1999)	2	16,000	US$33.80	—	48/52	—	Fermata, Inc. (2001)
Kern Valley Bioregions Festival	Kern County, CA (1999)	2	1,000–1,500	US$184.15	—	42/58	—	Fermata, Inc.(2001)
Great Sale Lake Bird Festival	Davis County, UT (1999)	3	—	US$27.93	—	—	—	Brunson (2002)
Waterfowl Festival	Talbot County, MD (2000)	3	19,000	US$139.45	US$5.0 million	55/45	—	Maryland Business Research Partnership (2001)
Florida Panhandle Birding & Wildflower Festival	Bay, Gulf, & Franklin Counties, FL (2002)	4	232	US$43.00	US$52,098	—	37	Lynch et al. (2003)
Florida Wakulla Springs Birding and Wildlife Festival	Wakulla County, FL (2003)	2	258	US$14.15	US$22,528	—	40	Lynch & Harrington (2003)
Pelican Island Wildlife Festival	Indian River County, FL (2003)	2	3,000	US$557.54 for nonresidents	US$650,000	—	—	Chambliss et al. (2003)
Potholes and Prairie Birding Festival	Jamestown, ND (2004)	4		US$161.91	US$13,045	50/50	50	Hodur et al. (2005)
Hummingbird Migration Celebration	Strawberry Plains Audubon Center, Holly Springs, MS (2006)	4	7,970	US$7.95	US$97,654	—	—	Measells & Grado (2008)
Stork and Cork Festival	TARA Wildlife; Vicksburg, MS (2006)	3	145	US$44.69	US$10,031	—	—	Measells & Grado (2008)
Wild Wing River and Nature Festival	Jackson and George Counties, MS (2007)	10	3,677	US$52.83	US$47,320	54/46	57	Chang (2007)
Space Coast Birding & Wildlife Festival	Brevard County, FL (2009)	5	3,651	US$433 for nonresidents	US$506,573	40/69	48	Chambliss et al. (2009)

[a]Numbers are reported for all visitors since many studies did not differentiate expenditures between local and nonlocal visitors. Economic impact studies should more properly report new expenditures by nonlocal visitors.

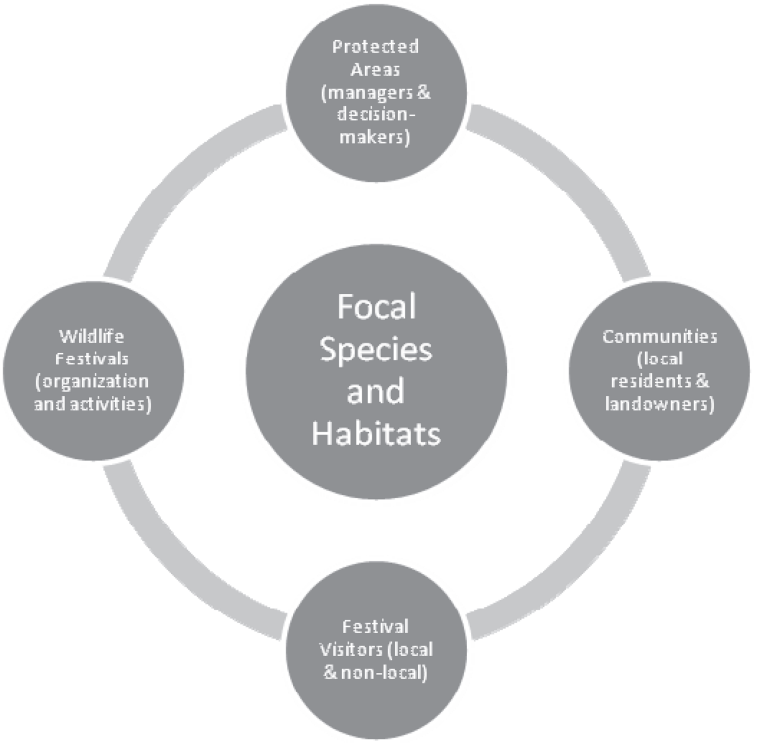

Figure 1. Conceptual framework to analyze potential conservation benefits of wildlife festivals.

tected areas that support wildlife. Among the many mechanisms, the most common are entrance or user fees for the festival or protected area. While there are arguments for and against, such fees can accomplish many objectives, including cost recovery, profit generation, visitor management, and provision of learning opportunities (Lindberg, 1998). Choosing an appropriate fee structure depends on the management objectives, types of users attracted, and interaction with the tourist industry. Lindberg (1998) offers the following recommendations regarding fee policies: fee systems should be flexible, supplement existing budgets, be well explained, and be monitored for effectiveness. Participants at the British Birdwatching Fair in 2007 raised £225,000 to support bird conservation causes (Green 2003). In Pinellas County, FL, the Florida Birding Festival raised US$20,000 to purchase privately owned portions of Shell Key, which is critical nesting habitat for declining shorebird populations (Florida Birding Festival and Nature Expo [FBFNE], 2000). Festival visitors can be encouraged to donate to local environmental projects, as has been found in general ecotourism settings (e.g., Barnes & Eagles, 2004; Hvenegaard & Dearden, 1998; Kangas, Shave, & Shave, 1995).

Third, wildlife festivals can generate considerable direct, indirect, and induced economic impacts in local communities. For example, in California, wildlife festival visitors spent up to US$150 per person per day in local communities (Fermata, Inc., 2001). In Texas, bird festival visitors produced US$1.27 million in direct economic impacts, plus US$1.4 million in indirect and induced impacts, and 73 full-time and/or part-time jobs in the local county (Kim et al., 1998). Local economic impact can be improved by increasing economic participation by local residents (Kruger, 2005; Stronza & Pegas, 2008; Wunder, 2000).

Theoretically, since wildlife festivals provide benefits to local residents, they should support initiatives to conserve wildlife and their habitats, the

festivals' core resources (Romero & Stangel, 1996; Wunder, 2000). There is little research on community support for wildlife festivals. However, in general ecotourism situations, people receiving economic benefits have more positive attitudes toward wildlife protection (Gordillo Jordan, Hunt, & Stronza, 2008; Hartup, 1994; Weber, 1987). Furthermore, some residents living near ecotourism operations want to protect habitat so that ecotourism can benefit local economies (Alexander, 1999; Hartup, 1994; Stem et al., 2003; Stronza & Pegas, 2008; Weber, 1987). From the local resident perspective, income from wildlife festivals can provide incentives to promote conservation. Wildlife festivals have the potential to show local residents and officials how important protected habitat is to local economies (Romero & Stangel, 1996). In fact, one goal of the Brant Wildlife Festival in Parksville, BC is to demonstrate the value of conserving ecosystems (Jenner, 2003).

On the other hand, benefits from conventional ecotourism do not always generate local support (Jacobson & Robles, 1992; Vincent & Thompson, 2002). The same may be true for wildlife festivals. For example, since benefits are temporally and spatially concentrated, there may be inequities between those gaining benefits versus those bearing the costs of ecotourism activities (Bookbinder, Dinerstein, Rijal, Cauley, & Fajouria, 1998; Groom et al., 1991; Kiss, 2004; Nepal, 1997; Weber, 1993). As well, Kiss (2004) cautions that if ecotourism is sufficiently profitable, outsiders may participate, thus diluting the potential benefits. Further, ecotourism may not generate enough economic benefits to create conservation incentives or to discourage environmentally damaging activities (de Vasconcellos Pegas & Stronza, 2008). More research is needed to evaluate the factors that affect support of wildlife conservation from wildlife festivals.

Fourth, wildlife festivals can promote environmental management that favors wildlife protection. For example, a wildlife festival can be a preferred financial alternative over land uses that cause more environmental damage. For example, during the 1980s, the Swallow Festival at Pembroke, Ontario attracted over 10,000 people per year, producing over CAD$200,000 in expenditures. Based on a benefit–cost analysis of the swallow roost, city officials turned down a CAD$50 million proposal for urban development that would have eliminated the swallow roost (Clark, 1987; Kingsmill, 1988). More broadly, birding ecotourism (involving several wildlife festivals) in the lower Rio Grande Valley of Texas contributed US$59 million in annual direct expenditures to the local economy, compared to US$105.9 million from farm earnings (Mathis & Matisoff, 2004). Similar studies have shown that ecotourism generates more economic benefits to landowners than harvesting for a variety of wildlife species including macaws (Munn, 1992), gorillas (Harcourt, 1986), lions (Thresher, 1981a, 1981b), and elephants (Western & Henry, 1979).

Fifth, education about local wildlife issues, combined with knowledge of how wildlife festival tourism assists visitors and local residents, may increase their support for conservation (Beaumont, 2001; Zeppel & Muloin, 2008). For visitors and residents, involvement in festival activities may raise awareness and concern about local natural resources, potential threats, and management solutions. Motivations of festival visitors provide some insight into this connection. For example, 17% of the visitors to the Kern Valley Bioregions Festival rated "to improve wildlife viewing skills" and 20% rated "to see as many wildlife species as possible" as important (Fermata, Inc., 2001). Among visitors to the Brant Wildlife Festival, 14% and 19% chose "to improve wildlife viewing skills" and "to learn more about Brant Geese," respectively, as the primary reason for attending the festival (Jenner, 2003). Similar results were found for the Snow Goose Festival (Hvenegaard & Manaloor, 2004). Singh et al. (2007) indicates that wildlife festival participants tend to be knowledgeable about the environment and are actively engaged in efforts to preserve the environment. Thus, these participants may be more likely to engage in conservation efforts relevant to the local wildlife festival. However, it is possible that educational efforts might reinforce, rather than increase, visitors' already favorable conservation attitudes and behavior (Hill, Woodland, & Gough, 2007). More research is needed to determine how those motivations translate into awareness, knowledge, understanding, appreciation, and action (Beaumont, 2001; Canadian Environmental Advisory Council, 1991).

Managing Wildlife Festivals to Promote Conservation

One could conclude that maximizing the economic impacts of wildlife festivals would best promote wildlife conservation. That would be hasty for a few reasons. First, some links are speculative and need further research. Second, the links vary from situation to situation, depending on many variables. Third, maximizing economic impact can promote some conservation objectives at the expense of other objectives. Fourth, some impacts can be perceived as positive or negative, depending on one's position (Lindberg, 2001). Finally, other considerations of economic value are ignored.

It would be better for wildlife festival proponents and host communities to carefully define their objectives, and then thoroughly assess the positive and negative impacts of any current or proposed festival (Harwood, 2008). Lawton (2009) has clustered festivals according to their primary objectives. These clusters include, for example, recruitment, fund-raising, economic stimulation, and environmental awareness. It is important to document the economic, social, and environmental benefits and costs, before and after initiating a wildlife festival. Such knowledge will allow for effective decision making and planning regarding future limits or growth. This knowledge will also allow for suitable arguments to be made about conserving local ecosystems. It is possible that a poorly planned wildlife festival that loses money could create negative attitudes or divert money away from other more important wildlife conservation activities.

Nevertheless, there are many methods to increase the local economic impact from wildlife festivals (Hvenegaard & Manaloor, 2004). Organizers can increase the number of visitors, but the number must remain within the ecological and social carrying capacities of local sites and facilities. For example, organizers should be concerned about the level of disturbance to wildlife and ecosystems, additional demands on the organizers, volunteers, and facilities, or potential impact on the satisfaction of festival visitors. Another basic method is to charge higher registration fees (Lindberg, 1998), but many festival organizers prefer to keeps fees low to minimize the financial barriers for visitors attending the festival.

Alternatively, economic impact can increase if visitors are encouraged to: 1) increase spending per visitor; 2) increase the length of stay; 3) increase the proportion of local spending to total spending; and 4) visit during other parts of the year. First, research has shown that visitors would have purchased many products and services in the local area had they been available and known about (Hvenegaard, Butler, & Krystofiak, 1989). At Alberta's Snow Goose Festival and British Columbia's Brant Wildlife Festival, commonly desired products and services included books, souvenirs, birding equipment, food, and drinks (Hvenegaard & Manaloor, 2004; Jenner, 2003).

Second, a longer stay increases local economic impacts, especially if overnight stays are involved. The low expenditures per person per visit in Table 1 for the Snow Goose Festival, Florida Panhandle Birding Festival, and Florida Wakulla Springs Birding Festival indicate mostly day trippers, while the other festivals with higher per day expenditures involved overnight visitors. Visitors can be encouraged to stay longer if local attractions are broadened to include other significant natural history, cultural, or recreational opportunities in the area. As well, if participants were drawn from a farther distance, they would be more likely to stay overnight and make use of local accommodation and restaurants.

Third, festival visitors can be encouraged to spend a greater proportion of their expenditures in the local area. Overnight stays would raise the proportion of local spending for food and accommodation. Marketing of the festival can encourage participants to stay longer by taking in other attractions or events during the festival. In addition, marketing can make participants aware of local businesses that provide desired products and services.

Finally, festival organizers can encourage visitors to come back at other times of the year. Already, 57% of visitors to the Snow Goose Festival and 87% of visitors to the Brant Wildlife Festival indicated an interest in returning to the local area within 1–3 years (Hvenegaard & Manaloor, 2004; Jenner, 2003). To this end, organizers should provide information to visitors about local natural his-

tory, cultural, and recreational events during the rest of the year.

In general, local economic impact from ecotourism activities can also be improved when there is increased economic participation by local residents (Wunder, 2000). Locals can supply handicrafts and souvenirs, guiding services, packaged wildlife viewing tours, and accommodations. This would serve to reduce leakage and increase the economic multiplier.

Conclusions

Wildlife festivals are growing in popularity, and have the potential to promote nature conservation. Already, wildlife festivals are innovative in practicing sustainability and can serve as role models to other sections of the tourism industry (Lawton & Weaver, 2010). However, festival activities can also cause negative ecosystem impacts. Organizers, officials, and visitors must be vigilant in minimizing these negative impacts and maximizing long-term conservation benefits. Festival activities can enhance conservation through economic, social, and political means. Organizers must ensure careful planning, management, communication, and evaluation to realize these benefits (Millar, 2003). However, all benefits depend on the sustainability of the focus animals and their habitats; these should not be sacrificed for any other objective.

The economic aspects of wildlife festival tourism pervade many critical social, environmental, political, and ecological decisions involved in conservation benefits. However, economic issues should not be the only consideration; many other assessments should be integrated into effective decision-making and management (Gössling, 1999). These include education (e.g., rigorous codes of conduct; Forsyth, Dwyer, & Clarke, 1995), communication, regulations, enforcement, taxes, and incentives.

In order to understand more about the potential conservation benefits of wildlife festivals, more research is needed on several topics. First, more documentation is needed to evaluate the economic impact and value of wildlife festivals. Does economic impact correspond consistently with economic value? How can leakage be efficiently reduced to improve local benefits? How can revenues and costs be equitably shared among affected stakeholders? Which mechanisms to raise funds for management are most effective? Do local people recognize the connection between economic benefits and festival resources? Answers to these questions will enhance organizers' abilities to strengthen the connection between festivals and conservation.

Second, knowing the demographic and travel characteristics of festival participants helps organizers manage visitors and benefit from them accordingly (Kerlinger, 1993). Festival participants tend to be older, more educated, and have a greater proportion of females than average (Table 1). Is this consistent among festivals? Why do some festivals attract tourists, while others attract more local residents? What levels and types of activities do festival visitors prefer? How are festival visitors different in terms of motivations, satisfactions, specialization, and related characteristics? Are some visitor types more supportive of wildlife conservation issues? Which educational mechanisms best promote wildlife conservation amongst tourists and local residents? Does educating visitors about wildlife and their habitats at the festivals translate into environmentally friendly behavior, and what are the mediating factors?

Third, research is needed on the planning and organization of wildlife festivals. What are the objectives of the festivals? How are these objectives determined, advertised, and planned for? What mechanisms are employed to link wildlife festivals to conservation outcomes? Why do people participate in planning and organizing wildlife festivals? Are festival evaluations conducted and what are the results? How are volunteers utilized? How is burnout of organizers and volunteers managed? How can a wildlife festival's conservation benefits be compared fairly with its negative environmental impacts?

Fourth, research is needed on the desired and actual conservation benefits of the wildlife festivals. How much money was contributed to local conservation efforts? How much land was protected? How influential was the festival in those efforts? How has the status of the wildlife populations and ecosystems changed since starting the festivals? To what extent do festival activities disturb wildlife? Which community-based variables promote festival organizers to follow through on the festivals' conservation goals?

Answers to these research questions and others will assist festival organizers to minimize the negative impacts, and maximize the positive impacts, in support of the many goals of wildlife festivals, including those of enhanced nature conservation.

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References

Alexander, S. E. (1999). The role of Belize residents in the struggle to define ecotourism opportunities in monkey sanctuaries. *Cultural Survival Quarterly,* 21–23.

Barnes, M. L., & Eagles, P. (2004). Examining the relationship between ecotourists and philanthropic behaviour. *Tourism Recreation Research, 29*(3), 35–38.

Beaumont, N. (2001). Ecotourism and the conservation ethic: Recruiting the uninitiated or preaching to the converted? *Journal of Sustainable Tourism, 9*(4), 317–341.

Bergstrom, J. C., Stoll, J. R., Titre, J. P., & Wright, V. L. (1990). Economic value of wetlands-based recreation. *Ecological Economics, 2*(2), 129–147.

Bookbinder, M. P., Dinerstein, E., Rijal, A., Cauley, H., & Fajouria, A. (1998). Ecotourism's support of biodiversity conservation. *Conservation Biology, 12*(6), 1399–1404.

Brandon, K. (1996). *Ecotourism and conservation: A Review of key issues* (Environmental Department Paper #33). Washington, DC: World Bank.

Brunson, M. W. (2002). Evaluating a special nature-based tourism event. Retrieved May 7, 2010, from http://www.agmrc.org/media/cms/rf10_6EFE7AB486EC1.pdf

Burger, J., & Gochfeld, M. (1998). Effects of ecotourists on bird behaviour at Loxahatchee National Wildlife Refuge, Florida. *Environmental Conservation, 25*(1), 13–21.

Butler, J. R., & Fenton, G. D. (1987). Bird watchers of Point Pelee National Park, Canada: Their characteristics and activities with special consideration to their social and resource impacts. *Alberta Naturalist*, *17*(3), 135–146.

Canadian Environmental Advisory Council. (1991). *A protected areas vision for Canada*. Cat. No. EN 92-14/1991E. Ottawa, ON: Minister of Supply and Services Canada.

Chambliss, K., Slotkin, M. H., & Vamosi, A. R. (2005). *The economic impact of the Centennial Celebration and Pelican Island Wildlife Festival*. Melbourne, FL: Florida Institute of Technology.

Chambliss, K., Slotkin, M. H., & Vamosi, A. R. (2009). *The Space Coast Birding & Wildlife Festival 2009: Economic impact report & demographic profile*. Palm Bay, FL: PRÆCIPIO EFS, Inc.

Chang, S. (2007). *Economic impact of the 2007 Wild Wing Festival on the Jackson and George counties of Mississippi*. Mobile, AL: University of South Alabama.

Chhabra, D., Sills, E., & Cubbage, F. W. (2003). The significance of festivals to rural economies: Estimating the economic impacts of Scottish Highland Games in North Carolina. *Journal of Travel Research, 41*(4), 421–427.

Clark, W. R. (1987). Economics and marketing of 'Canada's Capistrano.' In A. W. Diamond & F. L. Filion (Eds.), *The value of birds* (ICBP Tech. Pub. No. 6, pp. 31–48). Cambridge, UK: International Council for Bird Preservation.

Curry, B., Moore, W., Bauer, J., Cosgriff, K., & Lipscombe, N. (2001). Modelling impacts of wildlife tourism on animal communities: A case study from Royal Chitwan National Park, Nepal. *Journal of Sustainable Tourism, 9*(6), 514–529.

Dabrowski, P. (1994). Tourism for conservation, conservation for tourism. *Unasylva, 45*, 42–44.

Decray, S., Green, P., & Payne, R. H. (1998). The birding festival: An opportunity waiting. *Birding*, 525–526.

Derrett, R. (2003). Making sense of how festivals demonstrate a community's sense of place. *Event Management, 8*(1), 49–58.

de Vasconcellos Pegas, F., & Stronza, A. (2008). Ecotourism equations: Do economic benefits equal conservation? In A. Stronza & W. H. Durham (Eds.), *Ecotourism and conservation in the Americas* (pp. 163–176). Cambridge, MA: CAB International.

Diamantis, D. (1999). The concept of ecotourism: Evolution and trends. *Current Issues in Tourism, 2*(2&3), 93–122.

DiGregorio, L. (2002). Birding festivals beckon. *Birding, 34*(1), 77.

Dixon, J. A., & Sherman, P. B. (1990). *Economics of protected areas: A new look at benefits and costs*. Washington, DC: Island Press.

Duffus, D. A., & Dearden, P. (1990). Non-consumptive wildlife-oriented recreation: A conceptual framework. *Biological Conservation, 53*, 213–231.

Eubanks. T., & Stoll, J. R. (1999). *Avitourism in Texas*. Retrieved September 23, 2008, from http://www.fermatainc.com/basic/eco_avitourism.html

Fennell, D. A. (2001). A content analysis of ecotourism definitions. *Current Issues in Tourism, 4*(5), 403–421.

Fennell, D. A., & Eagles, P. F. J. (1990). Ecotourism in Costa Rica: A conceptual framework. *Journal of Park and Recreation Administration, 8*(1), 23–34.

Fennell, D. A., & Weaver, D. (2005). The ecotourism concept and tourism-conservation symbiosis. *Journal of Sustainable Tourism, 13*(4), 373–390.

Fermata, Inc. (2001). *A survey of two California nature festivals*. Austin, TX: Author.

Fernandez-Juricic, E. (2000). Local and regional effects of pedestrians on forest birds in a fragmented landscape. *Condor, 102*, 247–255.

Florida Birding Festival and Nature Expo. (2000). Birds of a feather boost county's economy. *American City & County, 115*(4), 76.

Forsyth, P., Dwyer, L., & Clarke, H. (1995). Problems in use of economic instruments to reduce adverse environmental impacts of tourism. *Tourism Economics 1*(3), 265–282.

Garber, S. D., & Burger, J. (1995). A 20-yr study documenting the relationship between turtle decline and human recreation. *Ecological Applications, 5*(4), 1151–1162.

Getz, D. (1991). *Festivals, special events, and tourism*. New York: Van Nostrand Reinhold.

Getz, D. (2008). Event tourism: Definition, evolution, and research. *Tourism Management, 29*(3), 403–428.

Giannecchini, J. (1993). Ecotourism: New partners, new relationships. *Conservation Biology, 7*(2), 429–432.

Gordillo Jordan, J. F., Hunt, C., & Stronza, A. (2008). An ecotourism partnership in the Peruvian Amazon: The case of Posada Amazonas. In A. Stronza & W. H. Durham (Eds.), *Ecotourism and conservation in the Americas* (pp. 30–48). Cambridge, MA: CAB International.

Goss-Custard, J. D., Triplet, P., Sueur, F., & West A. D. (2005). Critical thresholds of disturbance by people and raptors in foraging wading birds. *Biological Conservation, 127*(1), 88–97.

Gössling, S. (1999). Ecotourism: A means to safeguard biodiversity and ecosystem functions? *Ecological Economics, 29*(2), 303–320.

Green, P. (2003, November). The economics of birding. *Winging It*. Retrieved January 1, 2004, from http://www.americanbirding.org/programs/conseconf1.htm

Groom, M. J., Podolsky, R. D., & Munn, C. A. (1991). Tourism as a sustained use of wildlife: A case study of Madre de Dios, Southeastern Peru. In J. G. Robinson, & K. H. Redford (Eds.), *Neotropical wildlife use and conservation* (pp. 393–412). Chicago, IL: University of Chicago Press.

Hand, J. L. (1980). Human disturbance in Western Gull *Larus occidentalis livens* colonies and possible amplification by intraspecific predation. *Biological Conservation, 18*(1), 59–63.

Harcourt, A. H. (1986). Gorilla conservation: Anatomy of a campaign. In K. Benirschke (Ed.), *Primates: The road to self-sustaining populations* (pp. 31–46). New York: Springer-Verlag.

Hartley, D. (2005). Birding festivals. *Birding, 37*(1), 34–37.

Hartup, B. K. (1994). Community conservation in Belize: Demography, resource uses, and attitudes of participating landowners. *Biological Conservation, 69*(3), 234–241.

Harwood, S. (2008). Planning and development of community based tourism: Bird watching destinations. *Conference for Australian University Tourism and Hospitality Education*. Gold Coast, Australia, February 11–14. Retrieved May 7, 2010, from http://www.griffith.edu.au/conference/cauthe2008/refereed-papers/RP060.pdf

Hill, J., Woodland, W., & Gough, G. (2007). Can visitor satisfaction and knowledge about tropical rainforests be enhanced through biodiversity interpretation, and does this promote a positive attitude towards ecosystem conservation? *Journal of Ecotourism*, *6*(1), 75–85.

Higginbottom, K., & Tribe, A. (2004). Contributions of wildlife tourism to conservation. In K. Higginbottom (Ed.), *Wildlife tourism: Impacts, management and planning* (pp. 99–123). Altona, Australia: Common Ground Publishing.

Higginbottom, K., Tribe, A., & Booth, R. (2003). Contributions of non-consumptive wildlife tourism to conservation. In R. Buckley, C. Pickering, & D. B. Weaver (Eds.), *Nature-based tourism, environment and land management* (pp. 181–195). Oxon, UK: CAB International.

Higham, J. E. S., & Bejder, L. (2008). Managing wildlife-based tourism: Edging slowly towards sustainability? *Current Issues in Tourism*, *11*(1), 75–83.

Hodur, N. M., Leistritz, F. L., & Wolfe, K. (2005). Assessing the economic development potential of nature tourism. *Great Plains Research, 15*(Fall), 279–276.

Hvenegaard, G. T. (1994). Ecotourism: A status report and conceptual framework. *The Journal of Tourism Studies, 5*(2), 24–35.

Hvenegaard, G. T., Butler, J. R., & Krystofiak, D. K. (1989). The economic values of bird watching at Point Pelee National Park, Ontario. *Wildlife Society Bulletin, 17,* 526–531.

Hvenegaard, G. T., & Dearden, P. (1998). Linking ecotourism and biodiversity conservation: A case study of Doi Inthanon National Park, Thailand. *Singapore Journal of Tropical Geography, 19*(2), 193–211.

Hvenegaard, G. T., Jenner, M. L., & Manaloor, V. (2005). A comparison of local expenditures resulting from two community wildlife festivals. In T. Delamere, C. Randall, & D. Robinson (Eds.), *Book of Abstracts of 11th Canadian Congress of Leisure Research* (pp. 277–281). Nanaimo, BC: Malaspina University College.

Hvenegaard, G. T., & Manaloor, V. (2004). Current and potential expenditure patterns of birding festival participants. *Recent Advances and Research Updates, 5*(1), 47–60.

Hvenegaard, G. T., & Manaloor, V. (2007). A comparative approach to analyzing local expenditures and visitor profiles of two wildlife festivals. *Event Management*, *10*(4), 231–239.

International Union for Conservation of Nature. (2005). Benefits beyond boundaries. *Proceedings of the Vth IUCN World Parks Congress*. Gland, Switzerland and Cambridge, UK: Author.

Jacobson, S. K., & Lopez, A. F. (1994). Biological impacts of ecotourism: Tourists and nesting turtles in Tortuguero National Park, Costa Rica. *Wildlife Society Bulletin, 22*(3), 414–419.

Jacobson, S., & Robles, R. (1992). Ecotourism, sustainable development, and conservation education: Development of a tour guide training program in Tortuguero, Costa Rica. *Environmental Management, 16*(6), 701–713.

Janiskee, R. L., & Drews, P. L. (1998). Rural festivals and community reimaging. In R. Butler, C. M. Hall, & J. Jenkins (Eds.), *Tourism and recreation in rural areas* (pp. 157–175). West Sussex, UK: John Wiley & Sons Ltd.

Jenner, M. L. (2003). *Brant wildlife festival visitor survey*

analysis. Unpublished report. Nanaimo, BC: Matt Jenner & Associates.

Johnson, S. A., Bjorndal, K. A., & Bolten, A. B. (1996). Effects of organized turtle watches on Loggerhead (*Caretta caretta*) nesting behaviour and hatchling production in Florida. *Conservation Biology, 19*(2), 570–577.

Kangas, P., Shave, M., & Shave, P. (1995). Economics of an ecotourism operation in Belize. *Environmental Management, 19*(5), 669–673.

Kerlinger, P. (1993). Birding economics and birder demographics studies as conservation tools. In D. Finch & P. Stangel (Eds.), *Status and management of neotropical migratory birds* (Tech. Rpt. RM-229, pp. 32–38). Fort Collins, CO: USDA Forest Service.

Kim, C., Scott, D., Thigpen, J. F., & Kim, S.-S. (1998). Economic impact of a birding festival. *Festival Management & Event Tourism, 5*, 51–58.

Kingsmill, S. (1988). Swallowtown: Pembroke, Ontario, the San Juan Capistrano of the North. *Birder's World, 2*(1), 10–13.

Kinnaird, M. F., & O'Brien, T. G. (1996). Ecotourism in the Tangkoko DuaSudara Nature Reserve: Opening Pandora's Box? *Oryx 30*(1), 65–73.

Kiss, A. (2004). Is community-based ecotourism a good use of biodiversity conservation funds? *Trends in Ecology and Evolution*, *19*(5), 231–237.

Knight, R. L., & Cole, D. N. (1991). Effects of recreational activity on wildlife in wildlands. *Transactions of the North American Wildlife & Natural Resources Conference, 56*, 238–247.

Kruger, O. (2005). The role of ecotourism in conservation: Panacea or Pandora's box? *Biodiversity and Conservation*, *14*(3), 579–600.

Lawton, L. J. (2008). Are US-based birding festivals a form of ecotourism? *Conference for Australian University Tourism and Hospitality Education*. Gold Coast, Australia. February 11–14. Retrieved May 7, 2010 from http://www.griffith.edu.au/conference/cauthe2008/working-papers/WP057.pdf

Lawton, L. J. (2009). Birding festivals, sustainability and ecotourism: An ambiguous relationship. *Journal of Travel Research, 48*(2)*,* 259–267.

Lawton, L. J., & Weaver, D. B. (2009). *Normative and innovative sustainability practices of US birding festivals*. Paper presented at the International Conference on Festivals and Events Research, January 18–21, Orlando, FL.

Lawton, L. J., & Weaver, D. B. (2010). Normative and innovative sustainable resource management at birding festivals. *Tourism Management, 31*(4), 527–536.

Lindberg, K. (1998). Economic aspects of ecotourism. In K. Lindberg & M. E. Wood (Eds.), *Ecotourism: A guide for planners and managers*. (Vol. 2, pp. 87–117). North Bennington, VT: The Ecotourism Society.

Lindberg, K. (2001). Economic impacts. In D. B. Weaver (Ed.), *The encyclopedia of ecotourism* (pp. 363–377). Oxon, UK: CAB International.

Lott, D. F., & McCoy, M. (1995). Asian rhinos R*hinoceros unicornis* on the run? Impact of tourist visits on one population. *Biological Conservation, 73*(1), 23–26.

Lynch, T., & Harrington, J. (2003). *The economic impact of the Florida Wakulla Springs Birding and Wildflower Festival*. Tallahassee, FL: Center for Economic Forecasting and Analysis.

Lynch, T., Harrington, J., Chambliss, K., Slotkin, M. H., & Vamosi, A. R. (2003). *The economic impact of the 2nd annual Florida Panhandle Birding and Wildflower Festival*. Tallahassee, FL: Center for Economic Forecasting and Analysis.

Maryland Business Research Partnership. (2001). *30th Annual Waterfowl Festival: Economic impact and visitor profile study*. Baltimore, MD: University of Baltimore (The Jacob France Center).

Mathis, M., & Matisoff, D. (2004). *Valuing nature in Texas: A characterization of ecotourism in the Texas Lower Rio Grande Valley* (Discussion Paper VNT-04-01). Houston, TX: Houston Advanced Research Center.

Mayfield, T. L., & Crompton, J. L. (1995). Development of an instrument for identifying community reasons for staging a festival. *Journal of Travel Research, 33*(3), 37–44.

McClung, M. R., Seddon, P. J., Massaro, M., & Setiawan, A. N. (2004). Nature-based tourism impacts on yellow-eyed penguins *Megadyptes antipodes*: Does unregulated visitor access affect fledging weight and juvenile survival? *Biological Conservation, 119*(2), 279–285.

McNeely, J. A., Thorsell, J. W., & Ceballos-Lascurain, H. (Eds.) (1991). *Guidelines for development of terrestrial and marine national parks and protected areas for tourism*. Gland, Switzerland: International Union for Conservation of Nature and Natural Resources.

Measells, M. K., & Grado, S. C. (2008). Economic impacts of two birding festivals in Mississippi. In J. Gan (Ed.), *Proceedings of the Southern Forest Economics Workshop 2007: Global change and forestry: Economic and policy implications* (pp. 142–149). San Antonio, TX: Southern Forests Economic Workers.

Millar, N. S. (2003). *How to organize a birding or nature festival*. Colorado Springs, CO: American Birding Association.

Munn, C. A. (1992). Macaw biology and ecotourism, or "when a bird in the bush is worth two in the hand". In S. R. Beissinger & N. F. R. Snyder (Eds.), *New world parrots in crisis: Solutions from conservation biology* (pp. 47–72). Washington, DC: Smithsonian Institution Press.

National Fish and Wildlife Foundation. (1999). *1999 directory of birding and nature festivals*. Washington, DC: Author.

Nepal, S. K. (1997). Sustainable tourism, protected and livelihood needs of local communities in developing countries. *International Journal of Sustainable Development and World Ecology, 4*(2), 123–135.

Newsome, D., Dowling, R. K., & Moore, S. (2005). *Wildlife tourism* (Aspects of Tourism Series No. 24). Clevedon, UK: Channel View Publications.

Polson, J. (1993). Flocking effect: Small towns learn to love

birders who descend on "hot-spots". *American Birds, 47*(5), 1062–1070.

Rahemtulla, T. G., & Wellstead, A. M. (2001). *Ecotourism: Understanding the competing expert and academic definitions*. Inf. Rep. NOR-X-380. Edmonton and Hinton, AB: Canadian Forestry Service and Foothills Model Forest.

Reynolds, P. C. & Braithwaite, D. (2001). Towards a conceptual framework for wildlife tourism. *Tourism Management, 22*(1), 31–42.

Robbins, E. (2003). Driving them wild. *Planning, 69*, 18–21.

Rodger, K., & Moore, S. A. (2004). Bringing science to wildlife tourism: The influence of managers' and scientists' perceptions. *Journal of Ecotourism, 3*(1), 1–19.

Romero, A., & Stangel, P. (1996, January). Festival birding. *Wildbird,* , 34–39.

Ross, S., & Wall, G. (1999). Ecotourism: Towards congruence between theory and practice. *Tourism Management, 20*(2), 123–132.

Sekercioglu, C. H. (2002). Impacts of birdwatching on human and avian communities. *Environmental Conservation, 29*(3), 282–289.

Singh, T., Slotkin, M. H., & Vamosi, A. R. (2007). Attitude towards ecotourism and environmental advocacy: Profiling the dimensions of sustainability. *Journal of Vacation Marketing, 13*(2), 119–134.

Slotkin, M. H. (2003). Ecotourism in practice: Birding & wildlife festivals. In G. Nelson & I. Hronszky (Eds.), *How science can support environmental protection?* (pp. 57–69). Budapest, Hungary: Arisztotelesz Publishing.

Slotkin, M. H. (2005). Educational partnerships, sustainability, and ecotourism project development. In G. Nelson & I. Hronszky (Eds.), *Environmental studies: Implications for sustainability?* (pp. 81-89). Budapest, Hungary: Arisztotelesz Publishing.

Stem, C. J., Lassoie, J. P., Lee, D. R., Deshler, D. D., & Schelhas, J. W. (2003). Community participation in ecotourism benefits: The link to conservation practices and perspectives. *Society and Natural Resources, 16*(5), 387–413.

Stronza, A. (2007). The economic promise of ecotourism for conservation. *Journal of Ecotourism, 6*(3), 210–230.

Stronza, A., & Pegas, F. (2008). Ecotourism and conservation: Two cases from Brazil and Peru. *Human Dimensions of Wildlife, 13*(3), 263–279.

Thresher, P. (1981a). The present value of an Amboseli ion. *World Animal Review, 40*, 30–33.

Thresher, P. (1981b). The economics of a lion. *Unasylva, 33*(4), 34–35.

Tisdell, C. (1995). Investment in ecotourism: Assessing its economics. *Tourism Economics 1*(4), 375–387.

United States Fish and Wildlife Service (2006). *2006 National survey of fishing, hunting, and wildlife-associated recreation*. Retrieved May 6, 2010, from http://wsfrprograms.fws.gov/Subpages/NationalSurvey/nat_survey2006_final.pdf

Valentine, P. S. (1993). Ecotourism and nature conservation: A definition with some recent developments in Micronesia. *Tourism Management, 14*(2), 107–115.

Vincent, V. C., & Thompson, W. (2002). Assessing community support and sustainability for ecotourism development. *Journal of Travel Research, 41*(2), 153–160.

Walo, M., Bull, A., & Breen, H. (1996). Achieving economic benefits at local events: A case study of a local sports event. *Festival Management & Event Tourism, 4*(3/4), 95–106.

Weaver, D. (2001). *Ecotourism*. Milton, Australia: John Wiley & Sons Australia, Ltd.

Weaver, D. B. (2005). Comprehensive and minimalist dimensions of ecotourism. *Annals of Tourism Research, 32*(2), 439–455.

Weaver, D. B., & Lawton, L. J. (2007). Twenty years on: The state of contemporary ecotourism research. *Tourism Management, 28*(5), 1168–1179.

Weber, W. (1987). *Ruhengeri and its resources: An environmental profile of the Ruhengeri Prefecture, Rwanda*. Kigali, Rwanda: Ruhengeri Resource Analysis and Management Project.

Weber, W. (1993). Primate conservation and ecotourism in Africa. In C. S. Potter, J. I. Cohen, & D. Janczewski (Eds.), *Perspectives on biodiversity: Case studies of genetic resource conservation and development* (pp. 129–150). Washington, D.C.: American Association for the Advancement of Science.

Wells, M. P. (1997). *Economic perspectives on nature tourism, conservation and development* (Environment Department Paper No. 55). Washington, DC: World Bank.

Western, D., & Henry, W. (1979). Economics and conservation in third world national parks. *BioScience, 29*(7), 414–418.

World Ecotourism Summit (2002). *Quebec declaration on ecotourism*. Retrieved May 7, 2010, from http://www.world-tourism.org/sustainable/IYE/quebec/anglais/declaration.html

Wunder, S. (2000). Ecotourism and economic incentives - an empirical approach. *Ecological Economics, 32*(3), 465–479.

Zeppel, H., & Muloin, S. (2008). Conservation benefits of interpretation on marine wildlife tours. *Human Dimensions of Wildlife*, *13*(4), 280–294.