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An Examination of the Night HIking Experience in Parks and Protected Areas

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AN EXAMINATION OF THE NIGHT HIKING EXPERIENCE IN PARKS AND PROTECTED AREAS

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ABSTRACT

Many protected areas offer night programs for visitors; however, night hours have not been fully recognized as a potential resource in these areas. Night hours in protected areas could provide visitors with experiences unique to these times of the day. Also, typically low levels of visitation during night hours could provide visitors with additional or better suited opportunities to fulfill motivations and benefits sought during daytime activities. Furthermore, night hours could be used by managers to increase or temporally disperse use. The National Park Service's Natural Sounds and Natural Lightscapes programs provide a direction for the protection of this resource; however, very little attention has been given to the visitor experience during night hours. Therefore, a study was conducted to explore the social implications of night recreation in protected areas. Specifically, the study explored the motivations, benefits, visitor experience, and management activities associated with night hiking. Qualitative interviews were conducted with 31 participants of night hikes from both state and national protected areas, as well as four Interpretative Rangers. Results and implications are presented from a qualitative analysis of interview transcripts. Five major themes were identified to explain the night hiking experience.

This thesis is written in the format of a journal article to be submitted to *Leisure Sciences*. It is formatted in accordance with *Leisure Sciences* article submission guidelines and the American Psychological Association (APA) manuscript submission format. More data were collected than were used for the article. Complete interview questions are presented in the appendixes.

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AN EXAMINATION OF THE NIGHT HIKING EXPERIENCE IN PARKS AND PROTECTED AREAS

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Abstract

Many protected areas offer night programs for visitors; however, night hours have not been fully recognized as a potential resource. This study was conducted to explore the motivations, benefits, visitor experience, and management activities associated with night hiking to better understand the night experience and evaluate the utility of night as a resource. Phenomenological interviews were conducted with 31 participants of night hikes and four Interpretative Rangers. Themes identified from data were related to new/different experiences, night sky and sounds, solitude, perceived risk, and legality of night recreation. Night was found to be a valuable experiential resource to parks.

Keywords: Motivations, benefits, phenomenology, qualitative research, visitor experience, night sky, soundscapes, night recreation

AN EXAMINATION OF THE NIGHT HIKING EXPERIENCE IN PARKS AND PROTECTED AREAS

The current concept of resources in parks and protected areas is expanding. Park resources are traditionally thought of as tangible, physical assets including plants, water, wildlife, geologic features, and historical or cultural sites. However, parks also have intangible resources that have been widely recognized to include aesthetic beauty (Carlson & Lintott, 2008), solitude (Manning, 1999; Manning, Valliere, Wang, & Jacobi, 2001; Moyle & Croy, 2007), and naturalness (Cole, et al., 2008). As the field of park and protected area management has grown and evolved, managers and researchers have identified and begun to place increased attention on other intangible resources, such as natural soundscapes (Aasvang & Engdahl, 2003; Booth, 1999; Downing & Stunsick, 2000) and night sky (National Parks Service [NPS], 2007). Furthermore, we suggest that night itself may be a potential resource in natural areas.

Night in parks and protected areas differs from daytime hours in a number of ways. It is a time when different wildlife, the night sky, and nocturnal sounds are present. Similar to off-season periods, night also provides a period when visitation levels are likely lower. Protection of night as a potential resource, as with others resources, requires a full recognition and understanding of it and its uses by visitors. For example, it is possible that outdoor recreationist may begin to or have already begun to use the night hours to seek solitude from crowds or to increase challenge and risk while recreating. Also, some visitors may be drawn to sights, sounds, or experiences that occur or are intensified during the night. No statistics could be found that document the number of recreationist that participate in night activities. However, many protected areas (e.g., state and national parks) are beginning to offer night programs, including hiking. It should also be noted that night recreation may present additional or different

environmental impacts than day recreation. For example, a number of wildlife species hunt and gather food at night and large numbers of visitors at this time could negatively influence these behaviors (Hammitt & Cole, 1998).

Research into night outdoor recreation is largely absent, and therefore there is little understanding of the experiential aspects of this potential resource. This study has addressed this gap by exploring individual motivations and benefits of night hiking. This exploratory analysis seeks to find a baseline of motivations and benefits that may lay a foundation for later research into night outdoor recreation. We acknowledge that respondents in different outdoor recreation activities may have dissimilar motivations and realize somewhat different benefits. For example, both night hikers and kayakers may enjoy the extra challenge and risk, but kayakers may not experience a benefit in spotting nocturnal wildlife. While acknowledging these differences, this study limits the focus of investigation to night hiking. Specifically, this study uses an interpretive lens with phenomenological tools to understand the experience of guided night hiking programs within a framework of motivations and benefits. Also, this study will examine park managers' perceptions of the benefits, motivations for, and impacts of night hiking programs.

Literature Review

Individual Benefits and Motivations

The individual motivations and benefits of outdoor recreation have been extensively researched by social scientists (Manning, 1999). Furthermore, prior research has shown that outdoor recreation participants benefit in multiple ways from a single outdoor recreation activity (Decker, Brown, & Gutierrez, 1980; Hammitt, McDonald, & Noe, 1989), referred to as the 'multiple satisfaction approach' by Manning (1999). For example, Hammitt et al. (1989) found that hunters benefit from an experience in more ways than just in the harvesting of animals. In

fact, the study revealed that environmental (setting) and social factors (i.e., crowding and hunter behavior) where better predictors of the hunting experience, while deer contacts (i.e., viewing and bagging) where better predictors of a quality hunt.

More recent research continues to show that many outdoor recreationists receive multiple benefits from a single outdoor activity. Pohl, Borrie, and Patterson (2000) studied women users of wilderness and found that the essential characteristics of their experience were escape, challenge, new opportunities, connection with nature, and solitude. Holmen and McAvoy (2005) surveyed wilderness adventure program participants and reported that the main benefits of the experience included relationships with others, self-understanding, awareness and appreciation for wilderness and nature, trying something new, and developing skills. A similar study of Appalachian Trail hikers found comparable results, including benefits such as companionship, physical challenge, environmental awareness, self-reliance and self-fulfillment, fun and enjoyment of life, and solitude (Goldenberg, Hill, & Freidt, 2008). Goldenberg et al. (2008) went on to suggest that these benefits were the underling motivations for hiking.

Night activities offer an alternative to more traditional times of recreation that might provide different recreational benefits, as well as better satisfy benefits that have been documented to accompany traditional outdoor recreation activities. For example, limited visibility and decreased use levels may reduce encounters with others and increase opportunities for solitude. Melbin (1978) noted that humans have begun to use night hours as a means of exploration. Therefore, it is possible that visitors to parks and protected areas have already or will begin to use night hours as a mean of recreational exploration or to avoid crowds experienced in daytime recreation. The only documented study related to night recreation in protected areas reported that “in many cases use appeared to be primarily motivated by the desire

to be out in the evening" (Kuekes, 1989). Furthermore, it stated that nighttime use appeared to be "legitimate" recreation rather than vandalism and other depreciative acts. For more active recreation, greater difficulty with route-finding and physical tasks during may better fulfill motivations for risk or challenge-seeking. New experiences such as the opportunity to see or hear nocturnal animals (e.g., owls) may be offered during night recreation. Solitude, risk-taking, challenge-seeking, and experiencing new opportunities may be the main motivations and benefits for night recreation, but due to a lack of research these motivations and benefits can only be hypothesized.

Motivations and benefits have important implications for management of outdoor recreation (Manning, 1999). Studies that focus on motivations and benefits of outdoor recreation activities may help to enhance management of these activities for a higher quality visitor experience and greater satisfaction (Manning, 1999). 'Benefits-based management' (BBM, or benefits-based approach) is used frequently in outdoor recreation as a strategy for focusing management efforts on providing recreational benefits that respondents seek in certain activities or settings (Manning, 1999; Tarrant, 1996). Driver (1998) states that BBM can be applied to 1) recreation by strategically programming "to help prevent, resolve, or reduce the adverse impacts of a specific social problem or capture a targeted benefit," and 2) optimize an array of benefit opportunities. It must also be noted that Driver (2008) now refers to BBM as outcomes-focused management (OFM). The name change is used to reflect that BBM is focused on all outcomes, not just positive ones, and Driver (2008) notes that OFM "is identical to BBM." This article, in an attempt to limit confusion, will use the acronym OFM.

Bruns, Driver, Lee, Anderson, and Brown (1994) outline the main points of OFM. First, OFM focuses on individual benefits (both physical and psychology); second, OFM emphasizes

managing for participants' experience preferences; third, OFM is concerned with the whole experience (from planning to recollection of the experience). Prior research in OFM shows support for this management strategy (Tarrant, 1996; Tarrant, Manfredo, & Driver, 1994). OFM could be used as a framework for managing night hiking, or other night recreation, in a way to enhance the visitor experience. However, for night hiking to be managed within a OFM framework, the motivations and benefits of it must first be understood.

Recreation specialization

Recreation specialization may also provide a theoretical basis for understanding night recreation. Specialization is a "continuum of behavior from the general to the particular, reflected by equipment and skills used in a sport and activity setting preferences" (Bryan, 1977). As an individual becomes more experienced and specialized in an activity such as hiking they are likely to seek out different settings in which to participate in the activity. Night undoubtedly represents a different setting for hiking. Recreational specialization has been a useful tool in segmenting types of recreationalist in the same activity (Ditton, Loomis, & Choi, 1992; Kerins, Scott, & Shafer, 2007; McFarlane, 2001). This is typically done by placing recreationist on a specialization continuum based on how advanced and dedicated they are to a certain leisure activity. However, other studies have suggested that recreationalist may not be motivated to advance their place on this continuum, but rather may only want to be semi-specialized (Kerins, Scott, & Shafer, 2007). Also, Melbin's (1978) thesis that night is a frontier for exploration suggests that recreationalist may turn to night as a change in their recreation setting or to add a new dimension to their hiking experience.

Crowding

Increases in use have been a concern in outdoor recreation since 1930's (Manning, 1999), and Wagar (1964) later drew attention to the social carrying capacity of recreation. This, in part, laid the foundation for theoretical and empirical crowding research (Manning, 1999). Wagar (1964) suggested that the traditional values of the wilderness are lost when too many people visit the same area at the same time. Supporting these findings, Washburne and Cole (1983) found in a national survey of wilderness area managers that two-thirds of wilderness areas were considered beyond capacity at various times and places. Further identifying the problems caused by crowding, Shelby, Vaske, and Heberlein (1989) determined that outdoor recreationist in almost every outdoor activity (e.g., paddlers, hunters, hikers, sail boaters) have experienced crowding to some degree. Manning, Ballinger, Marion, and Roggenbuck (1996) further found that NPS backcountry managers considered maximum capacity exceeded "sometimes" or "usually." Crowding research has also reached to international parks, including those in Germany and Australia, where crowding has been found to negatively impact the visitor experience (Moyle & Croy, 2007; Kalisch & Klaphake, 2006).

Models have been developed which focus on the satisfaction-crowding relationship (Alldredge, 1973; Heberlein & Shelby, 1977). These models assume there is an inverse relationship between satisfaction and crowding, suggesting that less contact with other users is desirable. However, these models have received mixed empirical support (Manning, 1999). This may be explained by the confounding influence of other factors and mechanisms used by visitors to cope with crowding (Cohen, Sladen, & Bennet, 1975; Stokols, 1972).

A number of coping behaviors have been hypothesized to account for the mixed results of crowding-satisfaction models including: displacement, rationalization, and product shift

(Manning, 1999, Shelby & Heberlein, 1986). Displacement describes when recreationist change use patterns to other areas. Arnberger and Haider (2007) found that crowding was a crucial contributor to displacement in an urban forest. Rationalization is a cognitive change in recreationists' perception involving an increased focus on positive aspects of an experience and a minimization or explanation of negative aspects of an experience. Product shift is also another cognitive adaptation where outdoor recreationists change their definition of an opportunity to correspond with their experience. Miller and McCool (2003) found that the most frequent experiential detractor reported by visitors to Glacier National Park was the number of people and that coping behaviors used by visitors depended on the level of stress associated with detractors. Crowding research has examined off-season use as well, when visitor may be more perceptive of crowding. A study in Australia found that visitors felt slightly to moderately crowded even in the off-season (Moyle & Croy, 2007).

Melbin (1978) writes that both time and space can be occupied and as space is being filled (crowding), humans have begun to use the night hours as "the new frontier." This use of 'night as a frontier' represents one possible manifestation of coping with crowding in parks and protected areas. Outdoor recreationist shifting their patterns to night activities would be considered a form of temporal displacement. However, due to the lack of prior research on night recreation activities, it is uncertain if night hours are being used by visitors to cope with crowds and to find greater solitude.

Natural Lightscapes and Natural Sounds

Park resources are an integral part of a working ecosystem and an important component of the visitor experience. For example, night hours provide a time for many animals to forage, hunt, and mate while also providing a time for visitors to view the night sky and listen to night

sounds such as wolf howls, cicada chirps, and owl hoots. The NPS has initiated two programs pertinent to the visitors' night experience: The Night Sky and Natural Sounds Programs.

The NPS Night Sky Program Team has been charged with the protection and restoration of dark skies in national parks (NPS, 2007). Through various methods of measurement beyond the scope of this paper, the NPS has assessed the darkness of the night sky in many parks and assigned to them a Bortle Class ranking (1 being the darkest and 10 being the brightest). Development of both urban and rural areas has caused the loss of natural darkness in many areas including parks and protected areas. While the night sky is intuitively an important component of the night experience in parks and protected areas, no research has currently been conducted on what role the night sky plays in the visitor experience.

Soundscapes are another resource in parks that is important to the visitor experience. In fact, "72% of visitors say that one of the most important reasons for preserving national parks is to provide opportunities to experience natural peace and the sounds of nature" (NPS, n.d.). Research has shown that noise from aircraft and oversnow vehicles may negatively impact natural soundscapes and the visitor experience (Aasvang & Engdahl, 2003; Burson, 2005). Soundscapes and related impacts may be more important during night recreation because natural quiet at night exacerbates sounds that may not be audible during the day. Furthermore, because of limited visibility, visitors are required more so to use their sense of hearing to experience a park or protected area at night. Also, many animals, such as crickets, cicadas, frogs, owls, and wolves, are known for their night calls and provide a unique experience during night hours. Researchers have yet to assess the importance of the night sky and natural sounds to the night visitor experience.

Phenomenology

Night resources can be best protected and managed if researchers and managers understand the experience of visitors engaging in night recreation. Patternson, Watson, Williams, and Roggenbuck (1998) suggest that wilderness experiences vary based on individual and contextual factors. A visitor's experience in a protected area is highly personal, and traditional research methods may incompletely measure it (Davenport, Borrie, Freimund, & Manning, 2002; Hallo, Manning, & Stokowski, 2009). Schwandt (2000) suggests that to understand an activity the underlying motives, attitudes, and meanings associated with it must first be understood. A phenomenological approach presents a logical means to capture the underlying nature of participants' recreation experiences.

Phenomenology is a qualitative approach which focuses on capturing the lived experience and the meaning of this experience to an individual (Van Manen, 1990). Phenomenology is used to understand experiences that are highly personalized. Heidegger's stance on phenomenology as an interpretive approach instead of a descriptive approach makes it useful for understanding recreation participants' experiences and the important aspects of these experiences (Heidegger, 1977; Van Manen, 1990). It has been typically been used through in-depth interviews to better understand phenomena such as living with chronic illness (Fox & Chesla, 2008), intuition in nursing care (Lyneham, Parkinson, & Denholm, 2008), spiritual experiences and leisure experiences (Schmidt & Little, 2007). Phenomenology has also been used in focus group settings. One such study found that marginalized groups used leisure participation as a successful coping mechanism for stress (Iwasaki, Mackay, Mactavish, Ristock, & Bartlett, 2006). Phenomenology could also help researchers understand in greater depth the

recreation experiences often associated with parks and protected areas in order to provide a better overall experience.

This study used phenomenology as an approach to understand the experience of night hiking. This was done by using a comparison of night and day hiking and the concepts of motivations and benefits as the framework through which data and qualitative analyses were viewed. While this framework was the foundation of this study, our approach allowed us to look outside of these for a more complete understanding of the overall night hiking experience. A phenomenological approach was used since it encourages respondents to reflect on the whole experience of night hiking, what it means to them, and the important elements.

Methods

A qualitative research approach was used in this study to better understand the experience of night hiking, an activity of which little is known. Specifically, a phenomenological approach, employing interviews, was used to explore the individual experience of night hiking. Interviews were also used to understand the reasons for implementing night hiking programs and impacts associated with night hiking at parks and protected areas. Seidman's (1998) phenomenological interview structure was used, albeit modified. This three step interviewing process was used to funnel the discussion from 1) a focused life/recreation history, to 2) the details of the experience, and then to 3) reflections about the recreation experience. This structure is intended to lead the interviewee from the holistic and broad to their personal experience and the meanings they derived from it. While Seidman (1998) recommends three separate interviews for each step, this study combined all steps into one interview. The justification for this modification was simple: the night experience being researched in this study is only several hours in duration, thus conducting three separate interviews was unnecessary and too burdensome to participants.

Furthermore, interviews times with hikers were also shorter than most traditional phenomenological inquiries; this difference is also attributed to the shorter duration of the actual experience. Attempts to establish relationships and trust with respondents were accomplished by the lead researcher participating in the night hikes.

The interpretative perspective of phenomenology was also used to extrapolate the related experiences of night hiking to management implications. Many of the themes below were derived from the second interview step (details of the experience) and were interpreted as the more meaningful parts of the experience. A total of 31 night hikers and four park rangers were interviewed.

Hiker Component

Interviews with hikers from three different types of night hikes were conducted. These hikes included: a strenuous three mile night hike (3 hours) at Table Rock State Park, SC lead by a ranger; an easy "owl prowl" (2 hours) at Congaree National Park, SC led by a ranger; and a moderately difficult mile and half night hike (2 hours) at Pisgah National Forest, NC led by staff of Clemson University's Outdoor Recreation and Education Program (CORE).

The interpretive rangers of these programs stated that night programs were some of the most popular programs offered at these parks (F. Rametta, personal communication, October, 2008; S. Stegenga, personal communication, July, 2008). The "owl prowl" program offered by Congaree National Park is weekly and typically booked full in the Spring and Fall, and Table Rock State Park's night hike is only offered once a month during the summer and fall months and is typically full with a wait list.

At the beginning or end of each program (at the guides' discretion), all hikers over the age of 18 were invited to participate. No compensation was available to respondents. Night

hikers who agreed to participate were interviewed using a semi-structured format. All interviews were conducted off-site, between three and six days after the night hike. This provided two benefits: first, there was minimal disruption to the hikers' experience; second, hikers had time to reflect on their experience before being interviewed. Interviews were conducted both over the phone and face-to-face. All semi-structured interviews followed a script where the same questions were asked to all respondents. Each respondent was asked questions about their night hiking experience, specifically their enjoyment, motivations, experiences, benefits, drawbacks, and the differences between day and night hiking. However, the interviewer was permitted to ask additional exploratory or follow-up questions. Interviews lasted on average 17 minutes with a range from 9 to 39 minutes.

All hikers that participated in the Table Rock State Park hike (n=10) and the Pisgah National Forest hikes (n=10) experienced both a daytime and night condition on the same trails. This allowed visitors to compare the two experiences. The Congaree National Park hikers (n=11) only experienced the trail at night during their hike. However, only two of these visitors had not already experienced the same trail at Congaree National Park during daytime hours.

Park Staff Component

To fully understand the motivations, benefits, and impacts associated with offering night activities, interpretive rangers who lead night programs were interviewed from parks that currently offer these programs. Three sites were chosen: Table Rock State Park, Congaree National Park, and Acadia National Park (ME). (No guides from the hikes in Pisgah National Forest were interviewed, because they were not experienced interpreters.) These parks were chosen because of their diversity in location, history, funding, and visitors.

Semi-structured interviews were used to gather information from park staff on the night programs at their park. Four interpretive rangers were interviewed. Interviews lasted on average approximately 33 minutes with a range of 17 to 53 minutes. Each ranger was asked questions related to the motivations of and benefits to the park for establishing and conducting night programming, the constrains and difficulties of offering these programs, the environmental impacts of night programs, and perceived influences of night programs on the visitor experience.

Data Analysis

The semi-structured interviews were transcribed verbatim and then coded and analyzed according to procedures adapted from Miles and Huberman (1994). Both open (within question) and axial (between questions) coding was used (Strauss & Corbin, 1998). Coding was viewed as the process of segmenting data into simpler, general categories that could be used to expand and tease out new questions and levels of interpretation (Coffey & Atkinson, 1996). Semi-structured interview questions were used as an organizing tool for open coding. Once all interviews were coded, the first 4 interviews were re-coded to ensure that codes developed later in the coding process were represented in the first 4 interviews. Open codes were then organized into groups and then axial coding was used to identify themes from data. After the themes were identified they were examined through the framework of motivations and benefits. Overall, the coding process was used to identify, explore, and explain themes related to the experience of night hiking. The ranger interviews were used to compare and contrast the ranger and visitor perspective.

Several procedures for checking the validity of codes assigned and their interpretation were used. These included seeking triangulation with other research findings, checking for the meaning of outliers or extreme cases, and conducting checks of research findings with both

experts and informants (Miles & Huberman, 1994). As is used here, triangulation is a process that can be used to judge and enhance the reliability of research findings by seeking a convergence of results using multiple methods, investigators, data sources, or theoretical lenses (Denzin, 1970; Green et al., 1989; Tashakkori and Teddlie, 1998). Triangulation with other findings of individual motivations and benefits were used to validate study findings. For example, a respondent wanting a new or different experience is commonly reported as a motivation for participating in outdoor recreation. The ranger interviews were also used as a triangulation method in which findings were validated by comparisons with experienced staff. No outliers or extreme cases of personal experiences or situations were found. There were, however, two distinct groups based on night recreation experience levels: those with prior experience and those without. Only a handful of respondents had prior night recreation experiences, all of which had participated in night activities multiple times. Research findings were also validated by transcripts being reviewed by another experienced qualitative researcher, and no substantive differences were found in the codes assigned. Informant check procedures involved respondents giving feedback on a summary of the findings (Miles and Huberman, 1994). These respondents were asked if their experience was consistent with the findings. They were also encouraged to consider how others' experience may have differed from theirs at other locations. Informant checks revealed respondents found themes consistent with their experience.

Results

The number of females and males that chose to participate was nearly the same, 14 and 17 respectively. Other demographics revealed an average age of 38 and that respondents were highly educated including 25 with college or graduate degrees, four with some college, and two with high school degrees. All respondents reported their race as white/Caucasian.

Analysis of interview data identified five major themes. These themes resulted from patterns found in the hiker interviews and do not represent a frequency of comments. Ranger interviews were used as a method of triangulation and will also be discussed. Themes presented explain the night recreation experience in a manner that may be pertinent to both managers and researchers of outdoor recreation.

Night as a New or Different Experience

Respondents reported that they were motivated to participate in night hiking because it provides a new or different experience. There was a slight difference between a 'new' experience and a 'different' experience, but these two attributes were similar enough to be grouped together as one theme. For example, one respondent stated that she wanted "Just to see what hiking at night was like. I had never done it before. A new experience again." This response is an example of one focusing more on the 'new' attribute of the experience. Another respondent stated, "Because it was a different experience. It was neat to see how different things look. Or how the same hike looks during day and how it looks during the night," leaning toward the 'different' attribute of the experience.

Many respondents tried to describe what was different about the experience using words like quiet, peaceful, adventure, and mysterious. One typical response of this kind would be:

> I really like walking at night. It gives a whole different flavor, kind of a mystique. I guess just a way to enrich the adventure at the park. There is [sic] the day time activities, [but] the night activities are a special calling card that the parks offers and I certainly enjoy taking advantage of them.

Another response of this kind references the night wildlife:

> I mean the real difference to me is that at night, and that is most true if you are with a small group or a quiet group, is just the peacefulness of it, the spiritually aspect of just sitting there listening to millions of frogs and seeing millions of fire flies or seeing the stars.

Many of the following themes were derived from respondents' explanation of why night hiking was different than day hiking. Overall, respondents wanted a hiking experience that was special and non-typical.

Ranger interviews supported the idea that participants were motivated to participate in a new or different activity. When asked about visitor benefits one ranger stated, "I think for the visitors to step out of their comfort zone, do something new, experience nature at a whole different time when most people, like I said before, are not out experiencing nature." When asked the same question another ranger replied: "I think just to the see the resources here from a different aspect…It is just a chance to see the mountain at a different angle, so to speak. Just a different atmosphere."

Unique Soundscapes and Night Sky are Present

Visitors reported that night hiking was a different sensory experience than daytime hiking. The two main sensory differences reported were based on night soundscapes and the night sky. These attributes were fundamental to the night hiking experience. The importance of these two resources was drawn from questions throughout the entire interview. Respondents mentioned night sounds and night sky when asking about overall enjoyment, favorite aspects of the experience, motivations for and benefits of their participation, and if they would try night hiking again in the future.

Soundscapes have been shown to be an important part of the outdoor recreational experience (Aasvang & Engdahl, 2003; Burson, 2005). The results of this study suggest that soundscape are particularly important to the experience of night hiking and that night sounds provide a different auditory experience. The following quote typifies this finding:

> And then the sounds around you. Because those cicadas were just, I mean, they were going and going and going. And then when we were walking along the creek, I mean you couldn't see anything, but you could definitely hear it. I just thought that was fascinating that you could be able to hear the babbling brook next to you but you couldn't see a thing. So, just due to the different kind of sensory experience, I guess you could say.

The contrast between hearing and seeing in this quote outlines the difference between day and night hiking experiences. When asked about overall enjoyment, one respondent stated, "I like being out at night for the cacophony of night sounds. That unique symphony of all the different, you know, amphibians or insects and the occasional bird sounds and certainly the owls. The owls are really magical to hear." Another respondent answered the same question with "The different types of cicadas and you know, some of the night bugs are just, in some weird way very peaceful." When asked about the differences between night hiking and day hiking one respondent highlights how the soundscapes differ from day to night:

> You also hear different noises with animals. I know one time we heard, I don't know if it was a dog, he [the guide] didn't know if it was a dog or a coyote, but we heard them at night and we knew they were far away so it was not really scary, but you would not hear that during the day. And the bugs and stuff.

The stars and moon were also frequently pointed out as memorable parts of the experience. This result suggests that the night sky was equally as important to the experience of

night hiking as soundscapes. When asked about her motivation for participating in a night hike, one respondent stated,

> I was just really curious to see what it would be like at night, where I'm from you can't even see the stars in the sky because there is [sic] so many lights. So, to be able to see the stars and moon and everything is just something that I wanted to see.

Another respondent stated "You know you hope to get a clear night where you can see the stars and just hang out there." When asked about his best experience one respondent noted, "Probably just taking the occasional stop and just looking at the stars, and seeing how the moon actually travels across the sky." The stars and moon were mentioned repeatedly throughout the interviews. For example, "I love the stars and obviously you couldn't do too much astronomy any other times" and "It was quiet and it was a full moon. It was nice to be able to see the stars."

Rangers interviews also supported the idea that night soundscape and night sky are important to the night experience. Rangers overwhelming supported the protection of these resources and suggested the importance visitors attach to night sky and sounds. The following ranger quote communicates this importance and the unique opportunities night recreation present through soundscapes and night sky:

> We view the clear night skies as a resource. And, one of the reasons we do that is if you see a photograph of our planet at night, we have already affected the night sky, because you can see the eastern seaboard of the United States all lit up and those lights can be seen all the way out into space…Oh, it brings a new experience with their senses. A lot of times we are just looking, while our sense of hearing gets stronger and sometimes even our sense of smell. So some of those other senses you don't use as much during the daytime kind of take over and then we experience the whole forest in different ways with

> those different senses. And we hear night sounds. Some are mysterious and we don't know where they originate from. Other night sounds, we hear the owl calls and we hear the wind through the trees at night. We may hear other night animals, like maybe a bobcat or screech owls. And so these are things that you would not have the opportunity to hear or experience during the daytime.

Solitude at Night

A question about how the sense of solitude changes during a night hike was directly asked during the interview. Each night hike examined in this study ranged from 10 to 30 people and were comprised of different parties. Solitude seeking was not reported as a motivation for participating in the night hikes. However, solitude (in general) was reported to have increased for participants despite large night hiking group sizes. This suggests that solitude was an unexpected benefit of the night hiking experience. Respondents reported that solitude was experienced in both a group and individual context.

When reporting on their sense of solitude, respondents often used the term "we" rather than "I," indicating that they felt the group was alone.

> There was a bit more solitude for our group. Just because in the daylight hours we ran into a few other people, a few other groups, and I think the night brings with it a sense of solitude. Not many other people are going to be out doing that, we were actually the only ones out doing that.

This indicates that participants received some sense of solitude within the context of their hiking group. This sense of group solitude seemed to increase due to limited visibility, which reduced the ability to see other group members or other groups, and it being quieter at night. These two factors were cited repeatedly as one reason for increased solitude:

> It felt really quiet…people were whispering like they should be quiet…during the day you could really see people clearly off in the distance. So if there is a tent off in the distance you could see that tent. You could see the people camped under that little tree. You could see people hiking up on the ridge. And at night at one point we stopped and we were maybe 20-30 feet from a tent that I didn't even realize that there was a tent there until somebody told that me that someone was camped down there. So yeah it increases the solitude.

One respondent tried to explain why he felt a sense of solitude with so many other people around:

> There was a different level of solitude during the night, because during the day you know you are surrounded by people. During the night you still know you are surrounded by people but you also have that sense of quiet peace, if you will.

Some respondents also reported times they felt a sense of individual solitude. This is more similar to the traditional concept of solitude defined as one being away from other people or a sense of being alone. Again, limited visibility and the quietness of night play a key role in this increased sense of individual solitude:

> There were a lot more people out during the day. There were people camping and what not, and they were out of their tents walking around and there were other groups hiking as well. And I thought at night we were definitely the only ones out there. And then, I remember a couple of times we stopped and I kind of, not really wandered off, but walked off about you know 10 to 15 ft away from everybody and just kind of looked up at the stars and definitely felt more alone up there at night, because people were often quieter too and weren't talking as much.

This respondent indicated a sense of both group and individual solitude, and his strategy for creating a sense of individual solitude in a large group.

Solitude was not an experience that interpretative rangers expected visitors to have during a program that numbered between 10 and 30 people. This supports the finding that solitude seeking was not a motivation for participating in night hikes. When asked about solitude, one ranger stated:

> I don't think [solitude is being experienced] so going up because we have to stay so close together you can't spread out and you are pretty close to each other and so you see people and hear people as you go. Rest breaks, I think probably a little bit more solitude, because you are sitting and you are not moving and you are just being under a star lit sky…

Higher Perceived Risk Prior to than During the Experience

Respondents reported that their perceived risk prior to a night hike was higher than their perceived risk during the hike. Two quotes typified this theme: "I didn't feel, you know, maybe in anticipation I thought it was going to be riskier, but I didn't feel any. It really didn't bother me, it really wasn't that big of a deal" and "Well my perceived risk, before I went was that it was going to be higher…but [the ranger] took a slow enough pace that it was not that difficult."

Respondents frequently cited limited visibility as their main pre-hike concern, then reported that once the hike got started visibility was not as limited as they first thought.

> I was worried about my depth perception and all that, because in daylight everything is illuminated from all angles. I was worried about that to some degree, but it turned out it was easy. I did a few small trips, but it was nothing, I would trip anyways like that in the daylight hours so there was really no actual higher difficulty hiking up.

Risk was cited as a factor in participation in future night hiking. Some respondents indicated that they would now go again after realizing that the actual risks of night hiking were not as high as they had expected. The same respondent as quoted above said:

> Well I know what to expect now. I know that these perceived dangers from the light angles being weird is not there. That it is totally safe at the pace that [the ranger] does it at. At a 3 hour pace…So there is no danger. I would take anybody with me. I mean as long as they can hike Table Rock.

Other respondents, however, reported that they would still not night hike without some kind of guide. When asked if she would participate in a night hike again one respondent said:

> I would definitely hike again. I would definitely go with somebody who knew where they were going. But I don't think I would try and do it alone or with one of my friends or something, you know… Just because I wouldn't want to get lost. I guess I would be afraid to get lost.

Ranger interviews also indicated that risks as perceived by participants are sometimes higher than the actual risk during participation. Rangers also noted that visitors generally perceive risks of night hiking to be higher than that perceived by park staff. One ranger stated:

> I think they may perceive their risk as higher because it is dark and they are in a place they may not be comfortable with. Some people are not comfortable being in the woods even in the daytime, but I think it is more of a perceived risk from their point of view, but from the park's point of view it is not more risky.

Uncertain of the Legality of Night Hiking

Some respondents thought it was illegal or against the rules to hike at night. Some respondents felt the parks were closed at night. For example, one respondent said, "I mean I

never hiked in the dark before. I didn't realize they would even allow that up here, I thought that the danger was too great. I mean that was in my mind and my thoughts anyways." Another respondent said, "Yeah actually me and a couple of my buddies were surprised, we talked to the ranger and I was actually surprised, he said it was something that was allowed to do, you could do." Another respondent indicated that he thought the park was open for the night hiking program, but would normally be closed: "Yeah, it was fun to be able to see the park at a different time of the day…because generally it would be closed during that time."

Another respondent indicated confusion about the legality of night activities in protected areas in general.

> I know we did the Chattooga [paddling] one time and the ranger pulled up right as we were putting on and we all thought we were going to get in trouble putting on the Chattooga at you know, two o'clock in the morning, but all he did was ask where we were going and tell us to have fun and be safe.

This indicates that confusion about the legality of night recreation is not isolated to hiking or just parks. However, rangers indicated that hiking at night within the parks sampled in this study is not illegal as long as the rules are followed. One ranger mentioned night recreation was "shunned" but not actually against the rules, while rangers at a different park indicated they encourage visitors to walk the park at night.

> I usually suggest that they walk around the boardwalk [at night]. I see more wildlife during the evening and night when I am out there just on my own or with just one other person. So I usually recommend that, so I think some of the campers tell me they do it, so I do think they are out there. We do have reflectors on the trail from the campground to the boardwalk.

Discussion

It is not unexpected that respondents' motivation for participating in night hiking reflected its novelty. Lower use levels at night in parks and protected areas seem to indicate that for many visitors hiking at night would constitute a new experience. For many of the hikers in this study it was the first time they had experienced night hiking. These hikers chose to participate in an interpretive program or in the safety of a guide. The hiking program provided a gateway to experience this unique opportunity.

A few respondents had previously participated in night recreation outside of guided or interpretive programs. These people seemed to be seeking a different experience from what daytime hiking could provide. The concept of recreation specialization suggests that experienced night hikers' participation may be explained by setting preferences. Also, the finding that all but two respondents had previously hiked the same trail before participating in the night hike reinforces the idea that night hikers may be looking to specialize in their recreation by adding a new dimension to their experience. Specialization also accounts for an additional level of commitment required for night hiking; Night recreation by its very nature requires participants to be active at non-typical times of the day. For example, one night hiking program in this study required participants to begin at 2:00 a.m. However, additional research may be needed to more conclusively determine if motivations to participate in night recreation are related to a person's place on a continuum of recreation specialization.

Night hiking is inherently different from day hiking because of the lighting conditions. Based on this study that night sky is one of two central differences that defines the night hiking experience. Lighting conditions are important to the night hiking experience because it makes the night sky a viewable resource for visitors. This study suggested that night sky, particularly the

stars and moon, were an important experiential resource during night hiking. Interpretive rangers in this study encouraged hikers to keep their lights off (when possible) to improve night sky viewing. Also, red cellophane was sometimes used – to great effect – to cover flashlights. This further improved viewing night sky resources by protecting participant's night vision and decreasing light pollution.

Night soundscapes were the second defining characteristic of the night hiking experience. Specifically, night hikers in this study mentioned the importance of sounds such as owls, coyotes, cicadas, and crickets to their experience. These sounds are generally not heard during the day, so they represent an experiential resource for night hikers. (The importance of specific night sounds likely varies depending on animals or insects present in a hiking area.) Also, the importance of natural quiet experienced during the night was mentioned by several hikers. Night hours are typically a time when there is less human, noise-generating activity both within (e.g., other visitors or staff activities) and outside (e.g., traffic on nearby roads or planes flying overhead) of parks or protected areas. This creates, in general, greater periods of natural quiet during the night. Also, natural quiet reported by hikers is likely enhanced during the night because of changes in perceptions of noise created by darkness. Darkness caused hikers to rely more heavily on their sense of hearing, drawing greater attention to both night sounds and the lack of sounds (i.e., natural quiet). Certain sounds during the night such as motorized vehicles or human voices may seem out of place because of this increased focus on soundscapes. Most participants in this study acknowledged this and tried to protect natural quite at night by whispering when communicating during hikes.

While night sky and soundscapes were reported as being critical parts of the night hiking experience, solitude emerged from this study as an unintended benefit. Hall (2001) reports that

despite large amounts of research conducted on crowding, little is known about how visitors define and experience solitude. Night hikers in this study experienced solitude in both an individual and group context, which provided some insights into how they defined and experienced solitude. Most participants reported a sense of group solitude, indicated many times by the use of 'we' when describing their sense of solitude. This concept of solitude is shared by empirical studies (see Shelby & Heberlein, 1986 or Manning, 2007 for a listing of such studies), as evidenced by the use of encounters with other groups or number of other people seen, instead of number of people within one's own group, as a proxy for solitude. Also, Manning (1999) states "solitude in outdoor recreation may have more to do with interaction among group members free from disruptions than with physical isolation." The lack of other groups at night, or the ability to see these groups, contributed to respondents' sense of group solitude.

Some night hikers also reported a sense of individual solitude, which seems different from the concept of group solitude more generally examined in outdoor recreation research. Respondents who reported a sense of individual solitude reported that this feeling occurred while walking away from the group or when lights were turned off and their eyes had not adjust to the dark. Night hiking allows participants to more easily find individual solitude by turning off artificial light sources or isolating themselves by stepping a short distance away from their group into the cover of darkness. Furthermore, darkness and the natural quiet of night were also cited as factors that increased both individual and group solitude. These results imply that night hiking may provide greater opportunities for solitude than hiking during the day.

High levels of perceived risk at night may further influence the motivation for and benefits of participating in night hiking. Specifically, high perceived risks may act as a barrier for participation in night hiking. The guided hikes examined in this study seemed to provide an

avenue for people to participate in night hiking who might not have otherwise attempted it because of this risk. While participants later reported that the risk experienced was less than they anticipated, night recreation may indeed have higher levels of risk outside of carefully selected and controlled interpretative programs as compared to daytime activities. In some cases (likely outside of the context of a guided hike or interpretive program) this risk may be a motivating factor to participate in night recreation. Darkness and the need to adapt skills such as route-finding to nighttime conditions provide opportunities for those visitors seeking to increase challenge and risk. Again, this use of night for risk or challenge-seeking may be related to a recreation participant's degree of experience or specialization with an activity.

Perceptions about legality may also influence motivations for or benefits of participating in night hiking. If visitors are unsure of whether night recreation is allowed at parks and protected areas, visitor may chose to not participate. Many facilities or businesses in society are closed at night, so it might be assumed by visitors that parks or protected areas would be closed too. Also, confusion about the legality of night hiking report by respondents may, in part, be because gates to parking areas at two of the places sample in this study (Table Rock State Park and Congaree National Park) were closed at night. With parking lots closed, visitors who were interested in night hiking (outside of the interpretative programs) would need to camp overnight or park their vehicle in an undesignated area. This limited access confused some respondents about whether night hiking outside of interpretative programs is actually allowed. These results may imply that other visitors are unintentionally being kept from participating in night recreation experiences.

Findings from this study have several implications for the management of parks and protected areas. First, night hiking programs provide a safe, welcoming opportunity for visitors

to participate in a new or different activity. Therefore, parks or protected areas looking to expand the breadth of programming options should consider night programming as an avenue for enhancing the visitor experience. Night hiking programs (or other night recreational opportunities) should emphasize the unique night sky and night soundscape resources that are valued by participants. Second, the understanding that solitude is perceived at night as both an individual and group experience suggests the need for managers to consider both recreation group size and group numbers. Specifically, the finding that group solitude was reported more frequently indicated that group encounters may detract more from an overall sense of solitude than being part of a large group. Therefore, the experiential quality of night activities may be better protected by having large groups rather than a greater number of smaller groups that may encounter each other. Third, informing visitors about the actual risks – and guidelines for mitigating these risks – during night hiking recreation may facilitate greater, safer participation in night activities.

A fourth implication suggested by this study is that managers need to clarify the policies regarding night recreation within parks and protected areas. Night hiking programs offer a gateway for participation in the activity to visitors who may be intimated by night recreation, and it may provide an opportunity to clarify the legality of night recreation at a site. However, we recognize that ambiguity about the legality of night recreation may create a desirable management condition – in some circumstances – where either only select visitors (likely well-informed, more committed to the activity, and more responsible) participate in night recreation or where night recreation is allowed but discouraged due to safety, staffing, resource management, vandalism, or liability concerns. However, managers should consider the unique experiences and benefits that may come from night hiking, and perhaps other forms of nighttime

outdoor recreation, when deciding to allow or disallow and encourage or discourage night visitation.

A final set of management implications may be derived from the importance of night sky and related darkness to the night hiking experience. Specifically, management of artificial light may prove critical in providing for high quality night recreation experiences. Too much artificial light (either from the hikers themselves or from outside sources) detracts from a night experience because it creates difficulty in viewing night sky, makes visually encountering other groups easier and more likely, and may quiet nocturnal animals. Buildings and other built facilities (e.g., walkways and roads) in a park or protected area may also contribute light pollution that affects the night experience. In this case, light pollution could be minimized by having lights turned off or timed to come on only when in use, directed downward, focused only on an intended area, or adjusted to use only the necessary level of illumination (NPS, 2007). Light pollution in gateway communities and cities could also affect the experience; however, this is a much more difficult issue for managers to control or influence. It must also be noted that artificial light during night hiking, particularly during hikes occurring without moonlight, may be essential for safety. Therefore, when constructing night programs, managers must consider both safety and how artificial light will negatively affect the experience. The use of red cellophane light covers or limits on the numbers of lights used during a hike may present a compromise between these two competing interests.

Ranger interviews were used to examine park managers' perception of the benefits, motivations for, and impacts of implementing night programs. It was believed that night recreation may be used as a means of temporally distributing visitors or reducing crowding. However, interviews with rangers from Acadia National Park, Table Rock State Park, and

Congaree National Park indicated that crowding considerations did not influence their motivations for implementing night programs. Rather these programs are being used to either attract visitors or improve the visitor experience by diversifying programming and offering something unique. Result from both the ranger and visitor interviews indicate that parks may be better served by focusing on night recreation opportunities as a way to enhance the visitor experience and attract visitors. The question of whether night recreation could potentially be used to help alleviate crowding issues remains unanswered.

The methods used in this study also suggest the value of qualitative research in parks and protected areas. The qualitative approach applied in this study proved useful in bringing "forth unexpected findings" (Mann & Leahy, 2009). The theme 'Uncertain of the Legality of Night Hiking' is an example of how qualitative research may bring about unexpected findings that are relevant to both researchers and managers. This theme emerged from unsolicited comments to semi-structured questions pertaining to other topics, and it revealed an important barrier for night recreation. Furthermore, Mann & Leahy (2009) suggest that commonalities across leisure activities may be in part due to theoretical construct definitions (how a construct, such as motivations or benefits, is defined based on theory and prior research) and measurements through surveys. They call for qualitative approaches that may clarify constructs and provide a greater depth of understanding. The qualitative methods in this study were useful in gaining a better understanding of how solitude is experienced based on an individual versus group context, where despite large group size in some cases, participants reported a sense of solitude because they were the only group out at night. Phenomenology in particular was a useful approach because of the increased emphasis on an individual's experience and the meanings of that experience. However, the limitations of this study are inherent in its qualitative design; the

intrinsic subjectivity of coding, limited numbers of interviews/hikes, and non-systematic participant selection decreases the assurances of generalizability. However, triangulation (between participant and staff interview data, and previous literature on motivations and benefits) of these results provide some assurance that findings presented are transferable to similar experiences and park and protected area settings (Miles & Huberman, 1994). A need exists for a more quantitative approach to exploring the phenomena of night hiking and night recreation in general.

Conclusions

Findings from this study suggest that night hiking is a unique way to experience a park or protected area. Night hikers are provided with a new or different outdoor recreation experience. Specifically, the presence of night sky and night sounds provided this distinct experience. Some motivations and benefits traditionally sought during daytime recreation are enhanced while hiking at night. Decreased visibility, lower use levels, and natural quiet promoted a greater sense of solitude. Also, visitors motivated to seek additional risk or challenge in their outdoor recreation activities may benefit from night as a setting for their activities. However, this additional risk or challenge – along with questions about the legality of night recreation – may deter visitors from experiencing the benefits of night recreation.

These findings suggest that night hours are an experiential resource for visitors in parks and protected areas. Night recreation in general seems to offer experiences and opportunities that cannot be had during daytime hours. A number of unique opportunities during night recreation – viewing the night sky, hearing night sounds, an enhanced sense of solitude – combines to form a special ‘night experience’ for visitors. Initiatives, such as the NPS Natural Lightscapes (Night Sky Team) and Natural Sounds programs, and researchers are just now beginning to focus on

understanding, protecting or enhancing night resources. However, these efforts are yet to fully examine night recreation, the visitor experience at night, and how night resources (or impacts to them) should be managed for visitors.

OFM may be considered as a management approach for night hiking, and more generally night recreation. OFM emphasizes the intrinsic qualities that characterize and draw visitors to an activity or experience. It does this by attempting to focus management of parks and protected areas on providing for specific, intended benefits. Motivations and benefits related to night hiking include the new or different experience it provides, viewing the night sky, listening to night sounds, and experiencing a sense of solitude. Lighting conditions and low use levels facilitate these motivations and benefits. An OFM approach would aid in helping to manage night resources and experiential conditions to maximize benefits to visitors. While beyond the scope of this paper, OFM would also need to consider the 'cost' of night recreation's impacts to wildlife and other park resources.

This study represents a first step in understanding the night recreation experience. Findings presented here may help inform managers and future research about the night hiking experience, specifically what night resources are important, why visitors want to engage in this activity, and what visitors want to derive from it. This information can be used in policy decisions, program designs, and management decisions related to night hiking, and perhaps night recreation more generally. However, the experience of night hiking during guided or interpretative programs is only a small part of the larger context of night recreation in parks and protected areas.

Very little is known about the night hiking experience for visitors outside of guided or interpretive programs, for activities other than hiking (i.e., flat water kayaking, whitewater

kayaking, mountain biking), and in other environments such as desert or coastal areas. These settings, activities, and experiences must also be researched to fully understand the night recreation experience. While it can be assumed that the number of daytime visitors exceed night visitors, there are no studies identifying the amount of night recreation that occurs. This would be an important finding for two reasons: 1) it would give researchers and mangers a better idea of the levels of night recreation use and 2) it would set a baseline from which future studies could determine trends in night recreation participation. Night recreation could be found to be self-limiting if people do not feel confident enough to attempt it or do not have the desire, commitment or interest to participate in it. However, if night recreation increases managers may become concerned with issues of recreation conflicts, resource impacts, or wildlife impacts.

Overall, night presents a new frontier for park and protected area recreationists, managers, and researchers. As with all frontiers, night must be fully explored to be understood. This study attempts to draw attention to the need for further examining night recreation, and to lay the groundwork for future empirical studies. Night recreation is currently occurring within parks and protected areas, and the motivations for and benefits of night hiking found in this study seem to suggest that visitors will continue to value and utilize night resources through recreation.

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APPENDICES

Appendix A

Respondent Recruitment Script

Hi, my name is _____. I'm from Clemson University. I would like to invite you to participate in a study that I'm currently conducting to understand the use and experiences associated with night recreation. Your participation is voluntary and your responses will be completely confidential. Participation will require writing down your feelings and emotions throughout the experience of the night hike and an approximately 30 minute interview over the phone or face-to-face sometime next week at your convenience. Again participation is voluntary and you can quit at any time during the study. There will be no compensation for participation. I will hand out a dairy notebook and a pen for you to write down your experiences throughout the hike. I will also ask for your contact information so that I can contact you for the interview. All information that is given to me will be completely confidential. Would you be willing to help by participating?

If "no": OK. Thank you for your time so far. I hope you enjoy your hike.
If "yes": OK. Thank you for your participation. (Hand out dairies).

I would like you to use the diary by noting the details of the experience of night hiking, including what you like and do not like about the experience, how it feels personally to be out in the wild at night, and how it feels socially to be out at night. In addition, you are encouraged to include in your entries any information or details that might add to the understanding of your experience. You are also free to write about other events or experiences that might relate or give insight into the night hiking experience. Please be specific enough so that you can recall the experience in detail when discussing it with me during the interview next week.

Appendix B

Demographic Card

These questions are about you personally, and will help us compare results across different groups of people we interview. Your response is greatly appreciated!

1. Are you (circle one): Male Female
2. In what year were you born? 19_____
3. Where is your permanent residence?

   Town/City: _____ State: _____
4. What is your primary occupation? _____
5. What is the highest level of education you have completed (circle one):
   a. Some high school
   b. High school
   c. College (BA/BS)
   d. Graduate (MA/MS)
   e. Ph.D. or professional degree

6. In what ethnicity and race would you place yourself?
   Ethnicity: (Circle one number.):
   1. Hispanic or Latino
   2. Not Hispanic or Latino

   Race: (Circle all numbers that apply.)
   1. American Indian or Alaska Native
   2. Asian
   3. Black or African American
   4. Native Hawaiian or other Pacific Islander
   5. White

Could you please provide the following contact information? This information is for contact reasons alone. This information will not be given out and will be destroyed after the interview is complete.

Name_____ Phone_____

Email_____

Please provide a good time to contact you this coming week (day and time; 30 minutes
blocks)_____

Appendix C

Hiker Interviews of Night Recreation

Hi, my name is _____. I'm from Clemson University. Thank you for previously agreeing to participate in this interview. As explained before, I'm conducting a study to understand the use and experiences associated with night recreation. Your participation is voluntary and your responses will be completely confidential. The interview will take about thirty minutes. Could I ask you a few questions about the night hike you took last week and about night recreation in general?

[If yes] Also, I'll need to tape record our conversation so I can remember it later on. Is this OK?

[If no to either question above] Thank you for your time so far. Have a good day.

How often do you go hiking each year?

Have you participated in any other night recreation activities in the past? [If yes] What were they? What were your reasons or motivations for participating in these?

Overall, did you enjoy the night hike you went on at _____?

Could you describe the best single experience of the night hike?

Could you describe the worse single experience of the night hike?

What were your motivations for going on this night hike?

In general, how did the experience of hiking at night feel different than hiking during the day?

The trail you hiked at night, did you ever hike that same trail during the day? [If yes] Did you feel like you were hiking the same trail or a new trail when you hiked it at night? Why?

Did hiking at night change your sense of risk?

[If yes] Could you explain how it changed?

[If no] Why do you think you felt the same level of risk?

Did you feel hiking at night was more or less challenging than hiking during the day? Why?

Did you feel a different sense of solitude hiking at night than hiking during the day? How was it different or the same?

What were some of the major benefits for you of hiking at night versus hiking during the day?

What are the major drawbacks for you of hiking at night versus hiking during the day?

Do you think that night hiking affects the environment any differently than hiking during the day?

Did you learn anything new about yourself by hiking at night?

Would you try night hiking again in the future? Why?

Would you try other night activities in the future? Which activities are you considering?

Do you have a personal story to share about your own history with night activities?

That was my last question for you. Before we end, I wanted to make sure that you do not have anything you might like to add – anything I forgot to ask you about?

Well, that's it! Thank you very much for your time today!

Appendix D

Manager Interviews of Night Recreation

Hi, my name is _____. I'm from Clemson University. I am currently conducting a study on the use of night recreation in parks and protected areas. As I understand it, your park utilizes night activities and I was hoping you would allow me to interview you about your night programs. Your participation is voluntary and you responses will be completely confidential and you can quit at anytime during the study. The interview will take about 30 minutes and can be conducted at your convenience. Would you be willing to participate in this study?

If "no": OK. Thank you for your time so far. Have a good day.
If "yes": OK. Is now a good time to talk? If not I can call you back at another time. If now is good I would like to tape record our conversation so I can remember it later on. Is this OK with you?

What night activities do you offer to your visitors?

What were your motivations for starting a night hiking program?

What feedback have you received from visitors that participate in night hikes?

In general, how do you think the experience of hiking at night is different than hiking during the day for your visitors?

Do you think respondents hiking at night have a different sense of risk?

[If yes] Could you explain how it changes?

[If no] Why do you think it is the same level of risk?

Do think that your respondents feel hiking at night is more or less challenging than hiking during the day? Why?

Do you think that your respondents feel a different sense of solitude hiking at night than hiking during the day? How is it different or the same?

What are the major benefits to respondents of night hiking programs compared to day time programs?

What are the major drawbacks to respondents of night hiking programs compared to day hiking programs?

What are the major benefits to your organization associated with offering night hiking programs compared to day time programs?

What are the major drawbacks to your organization associated with offering night hiking programs compared to day hiking programs?

Do you think that night hiking affects the environment any differently than hiking during the day?

Do you have a desire to increase the amount of night activities in the future? Why?

Would you try offering other night programs in the future? Which activities are you considering?

What kind of barriers do you face when trying to implement the night hiking program?

How do operational influences, such as staff or budgets, factor into planning and implementing night programs?

What were the special legal or risk management issues, if any, that were considered in planning and implementing night programs?

Do you believe that visitors are doing night hikes outside the programs offered by the park? If so, how prevalent is this night hiking?

Did you learn anything new in general about the visitors to your park by offering night hiking programs?

Do you have a personal story to share about your own history with night activities?

That was my last question for you. Before we end, I wanted to make sure that you do not have anything you might like to add – anything I forgot to ask you about?

Well, that's it! Thank you very much for your time today!

Appendix E

Research Note

Of the diaries provided to participants, only 6 of the 31 participants chose to use the diary. Many declined to use the diary, others thought they might have trouble keeping up with the diary, while still others took the diary but wrote nothing in it. While the diaries were found to be useful for the visitors that chose to use them, there was no indication that the interviews without a diary were of a lower quality or standard. This may be used as evidence that the diary method may not be suited for park or outdoor recreation research.