

The Challenge of Managing and Interpreting Avifauna on Cultural Sites within the Timucuan Preserve

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Introduction

Many National Park Service (NPS) units face the challenge of balancing the management of natural and cultural resources. The present paper explores the challenges faced when managing birds on significant cultural sites within the Timucuan Preserve, located on the northeastern coast of Florida near Jacksonville. Resource education is a key aspect of preserve management and protection. Effective management of resources must include the diverse expectations and values of the visiting public.

Timucuan Preserve was authorized as an NPS unit in 1988. Other land owners include state and city parks, as well as over 300 private land and home owners. The multi-ownership nature of the preserve requires a management approach that relies greatly on outreach and partnerships.

The preserve contains diverse biological systems consisting primarily of estuarine ecosystems, including salt marshes, coastal dunes, and upland hardwood hammocks, as well as salt, fresh, and brackish waters that provide habitat to a variety of life, including resident and migratory birds. Within the boundaries are over 200 recorded archeological sites providing evidence of over 6,000 years of human habitation. There are numerous historic structures and sites, including those at Kingsley Plantation and Fort Caroline National Memorial. These are important cultural sites that focus on issues such as slavery, indigenous culture, land use, early American history, and cultural conflict. The prehistoric and historic events and associated issues are intimately linked with the natural environment. There are many natural resource management challenges within this context, but this paper will specifically focus on the management of birds and their habitats.

It is readily apparent that birds comprise a major segment of the vertebrate fauna of the 46,000-acre preserve, and as such, the birds likely interact at many levels with the estuarine ecosystem and the on-going management activities within the preserve. The preserve is within the lower breeding limit of many northern bird species and offers habitats for wintering and migrating birds. The preserve provides refuge for many birds that are increasingly threatened by land development and recreation along coastal areas. It is a challenge to communicate this and other important natural resource issues to visitors at the Kingsley Plantation and Fort Caroline, two important cultural sites with the preserve.

The Role of Education

The resource education division of the preserve provides opportunities for visitors to form their own intellectual and emotional connections with the cultural and natural resources that include birds and their habitat. Visitors to Kingsley Plantation and Fort Caroline come with diverse expectations. Often, expectations are immediately modified by the cultural landscape or by the striking natural beauty before there is any contact with any literature, waysides, rangers, or any other

interpretive media. This creates both challenges and opportunities for integrating many interpretive stories, including historical elements and natural history. One important goal of interpretation is resource protection. The apparent conflict between the cultural and natural resource meanings becomes an opportunity to provide relevance and multiple perspectives on important resource issues and protection.

A goal of interpretation is to provide opportunities for visitors to form their own connections with meanings inherent in the resources of a site. It is hoped that if visitors make connections, they will be more likely to find value and develop a caring attitude about the resources, resulting in active participation in resource protection. It follows that integrated and meaningful interpretation serves the visitor and the resource.

During their contacts with the public, rangers are able to share information and interpretation about bird resources and answer questions from visitors concerning the preserve's large bird population. Resource education staff obtain information from preliminary inventory and monitoring projects being conducted in the preserve (Eakes 1996; Tardona et. al. 1997; Tardona et. al. 1999). In addition to the benefit gained from the data gathered during the surveys, involvement of people from the local community strengthens and expands support for park goals. A preserve bird list (presently over 325 species) is provided to visitors along with other bird information guides. Information about birds is integrated into formal public programs. The preserve has been participating in a research project that has not only provided data about an important bird species, but also is providing opportunities to facilitate connections between the natural environment and cultural resources.

The Painted Bunting Project

Monitoring of bird species has implications not only for the preserve, but also broadly aids in data collection on migratory species for other agencies and bird observatories. Involving visitors through resource education

efforts provides enjoyment, understanding, and appreciation of bird natural history. As a result, however, visitors assist park management in communicating both natural and cultural resource protection needs. An important bird species that is being monitored in the preserve is the painted bunting. The preserve contains habitats for breeding and migratory painted buntings.

This bird is a species at special risk in the southeastern United States and has been declining at approximately 4% annually since 1966 based upon Breeding Bird Survey data (Hunter, Pashley et. al. 1993; Sauer et al. 1997). The cause or causes of this decline are not known but may be associated with fragmentation of eastern forest habitat into isolated patches (Robbins et. al. 1989), loss or significant alteration of optimum breeding habitat (Askins et. al. 1990; Askins 1993), or brood parasitism by the brown-headed cowbird (*Molothrus ater*) (Brittingham and Temple 1983; Trail and Baptista 1993). Other possibilities include increased predation by domestic cats, problems on wintering grounds (related to the cage bird trade in Cuba and possibly in southern Florida), or other undetermined causes. Survival rate of the southeastern coastal population of the painted bunting is unknown.

A six-year study of annual survival of the southeastern population of the painted bunting is currently in its fourth year, covering an area from near Wilmington, North Carolina, and extending along the immediate coast to the St. Johns River in northern Florida. The object of this study is to determine annual survival by age and sex using trapping/retrapping and sightings of banded painted buntings throughout the Atlantic Coast breeding range. Study sites are located along the coast from North Carolina to Florida. Timucuan Preserve participates by providing four study sites with two temporary baiting stations at each site (a total of eight baiting stations). Two baiting stations are located south of the St. Johns River at Fort Caroline National Memorial (one near the Fort Caroline fort exhibit and the other approximately 0.6 miles away at the Ribault

Monument). Six other baiting stations are located north of the St. Johns (two at Cedar Point, two on Fort George Island near the grounds of the Kingsley Plantation, and two on the grounds of Little Talbot Island, part of the Little Talbot Islands State Parks). This study is providing information for resource managers and is an essential vehicle for interpreting many critical cultural and natural resource management issues in the preserve.

Resource Integration in Management and Interpretation

Among the many factors to be considered in decisions regarding natural and cultural resources are interpretive opportunities. If interpretation is viewed as a valuable tool of resource management, then interpretive opportunities created or lost by management decisions must be considered. For example, one challenge the preserve faces is at Kingsley Plantation. During the plantation period, much of the island was cleared for the planting of cash crops such as Sea Island cotton, sugar cane, and indigo. One of the significant cultural resources at the site are the Kingsley family structures, tabby slave cabins, and the historic landscape. Much of the Kingsley family structures have been modified since the Kingsley era and the landscape has changed dramatically. One unresolved management question has been to what degree and at what time period should the landscape be “recreated.” Much of the landscape has been reclaimed by nature since the Kingsley era. Clearing of the landscape to a closer approximation of that era’s landscape will require sacrificing some important natural habitat of the painted bunting and other bird species. Considering the declining population of buntings and the still unclear reasons for their decline, how much of an impact would the landscape restoration have upon bunting habitat and overall population?

One possible scenario that may have interpretive value, but would compromise some of the “historic scene,” is clearing a small piece of land between the slave cabins and the main house. One alternative for discussion is the interpretive value of clearing and maintaining

only one-half of the site to its “historic” landscape condition, while leaving the other half to demonstrate the reclaimed area by nature and thereby minimizing potential habitat loss for painted buntings. Perhaps such a decision would offer greater opportunities for interpreting the challenges of managing natural and cultural resources. It would clearly demonstrate that history, including landscapes, is not static, and thereby would present multiple perspectives about the resources of the site. At the same time, opportunities may arise for interpreting natural resource conditions. Deciding how best to manage this area is not easy, and many other factors will need to be considered.

While the painted bunting study is being carried out, a temporary demonstration bait station has been set up on the grounds of the Kingsley Plantation, next to the interpretive garden. During the times when data are being collected at the research bait stations, visitors have the opportunity to observe the collection process at many of these stations. During data collection, mist nets are erected in succession surrounding the bait stations and monitored at each site in the early morning hours for half a day at each station. The study areas are systematically sampled to try to prevent any effect of time of year. Buntings captured in the mist nets are quickly leg-banded with uniquely colored bands. Birds are released at the net sites after data on banding, age, and sex are recorded. (For more details on project methodology see Sykes, Kendall, and Meyers 2002). Annual survival rates are calculated based on recaptures the following year and on re-sightings. Visitors are afforded the opportunity to observe from a distance and are provided with a short interpretive program at the site. Preliminary results of this study show a decreasing trend in captures of buntings in the preserve for the past four years.

Data collected from the research project, though preliminary, are easily and clearly communicated where and when appropriate to visitors to Kingsley Plantation and Fort Caroline. This information is integrated into resource education programs. For example, birds were important for the native people

occupying the region before European contact. Birds were a resource for food and materials such as feathers, and perhaps even assisted native people in fishing, hunting, and other activities as they observed their natural behavior. Birds have served in native spiritual and social endeavors. The bait station located near the Fort Caroline fort exhibit is interpreted to interested visitors by a roving ranger. The resource education staff is considering an unobtrusive temporary interpretive sign at the location. Birds are integrated into historical resource education programs. For example, one of the items presented to the French explorers at first contact with the Timucua (the native people who occupied the area at the time of European contact) were bird feathers. A brief discussion about birds and Timucua life is introduced and contrasted as part of a clash of cultures. This provides opportunities for interpretation of birds in the preserve today, including the painted bunting project. In addition, birds have been effective as a vehicle for interpreting many critical resource issues during orientation and informational programs.

At Kingsley Plantation on Fort George Island, birds are integrated into interpretive programs, as several species are readily apparent and sometimes “distracting” from the cultural theme of a program (e.g., the call of a pileated woodpecker or wood stork sailing overhead). These “distractions” are not ignored, but incorporated into the particular program theme. For example, birds and their habitat are employed as a tool in creating an image of everyday life of both owner and enslaved people during the plantation era. Ideas about birds and the slaves are presented as speculation and not as historical fact (there are few, if any, written records from the slaves themselves who lived at the Kingsley Plantation). For example, rhetorical questions are posed to visitors such as “Might the birds observed by slaves remind them of their homeland in Africa?” “Might the painted bunting have reminded them of a similar bird in parts of Africa and the folklore associated with it?” In many plantation sites, zooarcheological remains include birds and yield infor-

mation about the daily life of enslaved people and how they may have interacted with birds.

Interpretive themes include concepts of freedom reflected in some of the folktales created by enslaved African people. Interpretive programs explore how enslaved people combined memories and tales of their homeland in Africa with their experiences in the environment of their new world, including those associated with birds. Discussions revolve around not only plantation life, but if, or how, birds were viewed by planter and slaves. Some visitors even speculate whether the owners or slaves ever maintained any kind of bird feeder to attract birds (there is no historical record of this). The research project becomes a topic of discussion, as it relates to the natural resource elements of the historic site. In discussions about land use on the island, birds are interwoven into the stories about how the landscape changed from the native Timucua through the plantation era, when much of the island was cleared for planting crops. These examples provide opportunities to integrate meanings inherent in specific cultural and natural resources at the site. For example, during the country club era on the island, a 1930s brochure for the Fort George Club advertised “a bowling green, putting green, canoeing ... and walks through the bird sanctuary, where over eighty species have been seen, some of them rare.” During the 1940s, students and faculty from Rollins College used 150 acres on the south end of the island for scientific studies (*Florida Times-Union* 1950). Today, that same area is still known as the Rollins Bird and Plant Sanctuary. These are just a few examples of how an important natural resource can be integrated into the cultural themes within the preserve.

Conclusion

When two resources come into direct conflict, it is often difficult to make resource management and interpretive decisions about which takes priority. There are many examples beyond the scope of this paper that could be cited. Despite many guidelines, such as a park’s enabling legislation, the National Environmental Policy Act, the National

Historic Preservation Act, the Endangered Species Act, and others, there still exists no definitive equation to help resource managers decide what or what part of a specific resource takes priority. Many factors have to be weighed, including cumulative effects on a resource, impact of adjacent land management, local and national significance, sociopolitical factors, public sentiment, and interpretive value. This paper has been an attempt to present important resource management and interpretive issues facing an NPS site when a manager needs to balance cultural and natural resource values.

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