



Managing the Impacts of Dogs on Beach Wildlife

Summary

Florida's coastal ecosystems provide habitat essential to the survival of many species of wildlife, some of which are endangered or threatened. Dogs are instinctively inclined to chase animals and dig for prey. On beaches, these traits can result in predation and harm to imperiled species such as shorebirds, sea turtles, and beach mice. The presence of dogs can result in shorebirds flushing, which leaves their nests unprotected and diminishes energy necessary for survival, reproduction, and/or migration; depredation of sea turtle eggs and hatchlings; and degradation of beach mouse habitat. Therefore, the FWC is recommending that:

- Existing ordinances regarding dogs on beaches be consistently enforced;
- Enforcement be supplemented by education, especially in areas with high potential for sensitive wildlife disturbance;
- Local municipalities establish dog-designated areas in appropriate locations; and
- Dogs be prohibited from beaches with sensitive wildlife species or habitat, especially during critical periods (e.g., nesting/reproductive seasons).

Introduction

Florida's coastal ecosystems are inhabited by a broad range of animals, many of which rely on these habitats for all or part of their lives. Beaches are home to numerous species and are an important link between marine and terrestrial environments. In Florida, 17 coastal wildlife species are federally or state-listed as endangered or threatened, including species of shorebirds, sea turtles, and beach mice.

Over 30 species of shorebirds and seabirds (collectively referred to as shorebirds) utilize Florida's coastline throughout the year for nesting, roosting, and foraging. Many species nest on sandy beaches from February to September (four state-listed as threatened) or use coastal habitats as wintering grounds (one federally threatened). In addition, some species (one federally threatened) make life-sustaining stopovers in Florida during long-distance migrations. For these birds, safe foraging and roosting grounds are critical for recovery and preparation for the next breeding season.

Five sea turtle species, all of which are federally listed as endangered or threatened, use Florida's sandy beaches as nesting sites. In fact, Florida is home to the largest nesting population of loggerhead sea turtles in the Western Atlantic. From March to November, sea turtles depend on Florida's beaches where eggs are either being deposited, incubating, or hatching.

Beach mice inhabit coastal systems in the Panhandle and along the Atlantic coast and are dependent on beach dunes for their entire life cycle. Five of the six subspecies of beach mice found in Florida are federally listed as endangered or threatened. Beach mice rely exclusively on coastal dunes for foraging and construct underground burrows throughout the dune landscape.

Issue Statement

The impact dogs have on coastal wildlife depends, in part, on whether they are leashed or unleashed. In Florida, dogs are often found on beaches accompanying their owners during beach recreation and may be leashed. However, many wildlife species perceive dogs, even on leash, as

predators and react accordingly. Studies have shown that the presence of dogs on leash or under voice and sight control can alter wildlife behavior, which has multiple negative impacts to native species (Faillace and Smith 2016, Lafferty 2000, Lenth et al. 2006). Further, compliance with leash laws is often low (Maguire et al. 2019, Williams et al. 2009), and enforcement can be challenging, as owners can leash dogs quickly if law enforcement is observed approaching. A focus on leash use enforcement (rather than solely outreach) may be necessary to change behavior in situations where compliance rates are low (Bowes et al. 2017).

Unleashed dogs can depredate sea turtle eggs and hatchlings by digging up the eggs or eating hatchlings as they crawl to the water (Tripathy and Rajasekhar, 2009 Tomillo et. al., 2010; Ruiz-Izaguirre et. al., 2014). Fowler (1979) documented high rates of predation by dogs on all developmental stages of green sea turtles at Tortuguero, Costa Rica. Toland (1999) documented direct predation of American oystercatchers by domestic dogs on spoil islands in Brevard County, Florida. Contrary to the idea of public lands as protected preserves for Florida's wildlife, domestic dogs have been shown to be present on most public lands as humans bring their pets to the beach, particularly near campgrounds and other high-use areas (Florida Parks Service 1994, Hardin 1994).

Several studies have verified that the presence of dogs in natural areas can alter behavior, abundance, and diversity of wildlife populations (Lafferty 2001 Banks and Bryant 2007, Lenth et al. 2008). Shorebirds are less abundant when dogs are present, and those shorebirds that are present exhibit a more alert state relative to resting (Hunt et al. 2019). Feeding or roosting shorebirds respond differently to dogs than they do to people; the distance they fly and the interval before returning is significantly greater when disturbed by dogs (Lafferty 2000, Burger et al. 2007). When nesting shorebirds are disturbed, they flush, leaving their eggs and chicks vulnerable to predation and exposure to the harsh beach environment. In extreme or chronic cases of disturbance, nesting shorebirds may permanently abandon their nests. This behavior substantially decreases nesting and fledging success for beach-nesting birds (Safina and Burger 1993, Ruhen et al. 2002) and is exacerbated by the presence of dogs (Faillace 2010).

Shorebirds often use beaches as stopovers during migration. They are negatively affected by the presence of dogs when they are flushed from their foraging grounds, causing excess loss of energy and fat reserves needed for migration (Lafferty 2000). Following a disturbance, some larger species of birds, including gulls, tend to return to foraging grounds more quickly than smaller shorebirds, giving them a competitive advantage (Burger 2007). Furthermore, the energy a shorebird expends while evading a dog can offset the energy gained while foraging, negatively affecting their survival. In addition, the presence of dogs can significantly reduce the amount of time shorebirds spend consuming prey (Murchinson et al. 2016, Thomas 2002).

Beach mice are impacted from the presence of dogs, although those impacts are far less obvious. Habitat loss and degradation, including the activities of beach visitors, residents, and their pets, have a cumulative negative impact on beach mice (Humphrey 1992, Brown 1997, FWC 2005). Dogs have been observed to dig in dune habitat, which removes plants, creates weak points that accelerate dune erosion, and destroys wildlife refugia. Dogs are opportunistic predators and will hunt small mammals through chase or by digging (Ritchie et al. 2014). This behavior likely causes depredation of beach mice in dune habitats, in addition to other wildlife occurring on coastal dune ecosystems. Additionally, walking on dunes can cause burrows to collapse and displace beach mice. Beach mice are vulnerable to habitat loss from largescale development of native habitat to anthropogenic use. Intact patches of suitable habitat have

become significant areas for the recovery of imperiled beach mice. Disturbances to these sensitive habitats compound the pressures from habitat loss and degradation.

Managing Impacts

The FWC recommends that existing dog ordinances be consistently enforced on beaches to improve compliance and protect coastal species. Dogs are prohibited in Critical Wildlife Areas, National Parks, and on most Florida State Parks beaches. Owners that allow their dog(s) to enter areas posted for shorebirds and sea turtles can be held liable for any resulting violation of state and federal laws. It is recommended that owners refrain from walking dogs on beaches with posted shorebird nesting areas, do not allow dogs to chase or flush groups of birds, avoid digging holes that may damage sea turtle nests or trap hatchlings, and stay off the dunes to avoid disturbance of beach mouse habitat. Additional best practices include disposal of pet waste in trash receptacles, use of a leash that meets ordinance requirements, and immediate notification to the FWC when dogs are observed disturbing protected wildlife.

In accordance with Americans with Disabilities Act Title III regulations, disabled individuals are allowed to be accompanied by service dogs on any beach open to the public. A service dog is trained to do specific tasks directly related to the owner's disability. Emotional support animals, comfort animals, and therapy dogs are not considered service animals under Title II and Title III of the ADA and therefore are not permitted on beaches that are closed to pets. A service dog must remain under the owner's control at all times. Any individual whose failure to maintain control of a dog results in disturbance to wildlife should be asked to leave the beach and possibly receive a citation if that disturbance results in harm or harassment (take) of protected wildlife.

Educating residents and visitors on existing ordinances, locations of dog-friendly beaches, and tips for avoiding human-wildlife conflict is of paramount importance. Education can be accomplished through signage, material distribution, and interactions with bird stewards or sea turtle surveyors.

To continue providing locations for beach users to recreate with their dogs, the FWC encourages local municipalities to establish dog-designated beaches (if not already available) away from important wildlife habitat (e.g., nesting areas and occupied beach mouse sites). Establishing dog-friendly beaches in areas of low suitability for wildlife to breed, feed, and shelter will result in less conflict between pets and wildlife. Dog-designated beaches can be more effective with signage, barriers, increased enforcement, and caging of sea turtle nests. It may be necessary to periodically evaluate the location of coastal dog parks as habitat conditions change.

The FWC recommends that domestic dogs (both leashed and unleashed) be prohibited from beaches with sensitive wildlife. Criteria for identifying times and locations where dogs may be prohibited could include beaches where imperiled wildlife are concentrated in significant numbers (e.g., during nesting or migration seasons). Regional FWC Species Conservation Planning staff are available to provide technical assistance with siting considerations.

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