

Should there be restrictions on dogs welcome in parks?

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Introduction

Humans have a great impact on the environment around them. There is a universal human belief that they are the ‘superior species’, which can have a negative impact on wildlife species (Monsó 2019). Humans have a detrimental effect on natural habitats due to many factors, such as deforestation and urbanization (Scanes 2018). Along with that, humans create recreational parks and trails that can create stress for wildlife and possibly cause them to use energy reserves that they may need for other things (MacDonald 2015). In these recreational areas, many humans like to bring along their four-legged companions with them: dogs.

Dogs (*Canis lupus familiaris*) have been present in human culture since the paleolithic era, which occurred around 35,000 years ago (Galibert et al. 2011). It is uncertain how *Canis familiaris* evolved. Some scientists believe that the wolf (*Canis lupus*) is the sole ancestor, but others believe several species, including jackals (*Canis aureus*), were involved in the evolution of what are today’s domestic dogs (Galibert et al. 2011). Despite the confusion behind how domestic dogs came to be, they do resemble natural predators in the ecosystem, such as wolves, coyotes, and foxes among other species in the Canidae family (Boitani and Ciucci 1995). There is also a wide variety of dog breeds throughout the world, with the American Kennel Club recognizing 200 different breeds that vary in size, shape, and color (AKC 2023).

With outdoor recreation becoming more popular, dogs are frequently accompanying their owners at recreational parks (Lenth et al. 2008). Owners often take this as an opportunity to walk their pets in the comfort of nature, but don’t understand the effect this may have on the wildlife that make these parks their home (Weston et al. 2014). In some parks, the domestic dog may be

the most common carnivore in the area, and this can have significant impacts on the wildlife present (Lenth et al. 2008). Since dogs have been shown to increase negative impacts on wildlife, it is important to conduct studies with different dogs in many different parks (Sterl et al. 2008). The objectives of this study are to [1] observe the abundance of wildlife present in parks in relation to the size of dog present in the park and [2] analyze the possible effects dogs may have in parks.

Study Area

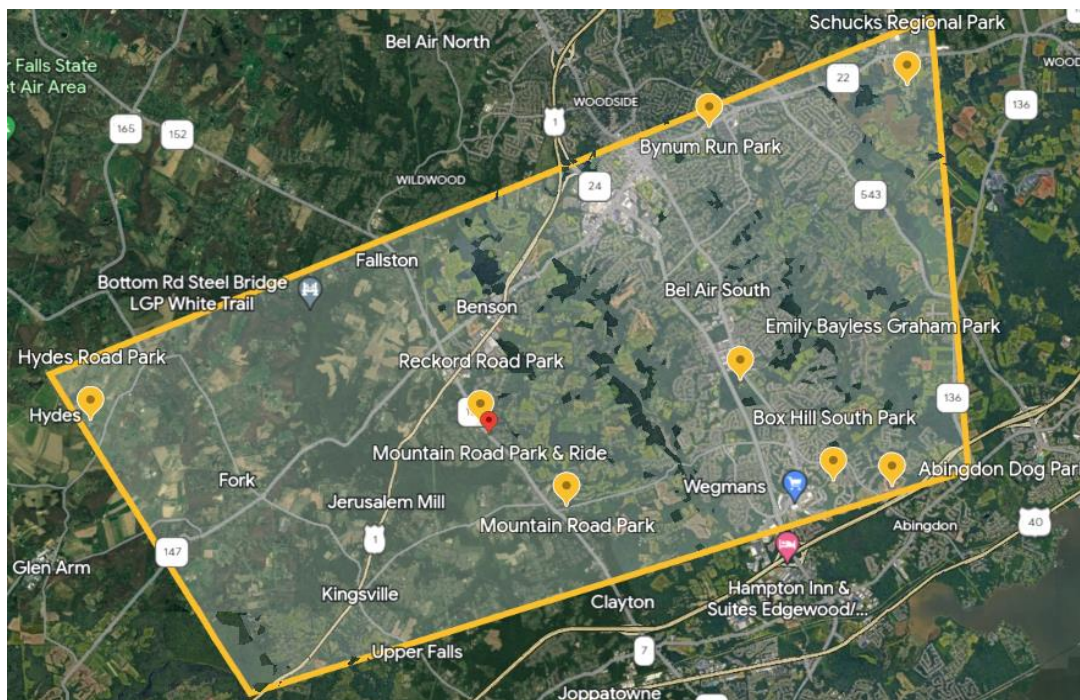


Figure 1: This map made on Google Earth shows the parks used in the study. Seven of the parks are in Harford County, Maryland, and one park is in Baltimore County, Maryland.

The study was conducted at eight different public parks between Harford and Baltimore County, Maryland. The parks that we conducted the study in include: Box Hill South Park, Abingdon Dog Park, Emily Bayless Graham Park, Bynum Run Park, Schucks Regional Park, Reckord Road Park, Hydes

Road Park, and Mountain Road Park. The area in total adds up to 156.82 km. These parks are around areas with high urbanization, with homes and businesses close by.

Methods

Over three separate days, we conducted our study at 8 different parks. We had three study groups during each park visit: no dog (the control group), small dog, and big dog. For the no dog category, a human would walk by themselves throughout the park. For the small dog category, a Jack Russell Terrier was used to walk through the park. The dog used is approximately 10 inches tall and 13 pounds. For the big dog category, a Great Pyrenees was used to walk through the park. The dog used is approximately 32 inches tall and 143 pounds. These dogs are personal pets of the researchers, and were walked on leashes through the parks.



Figure 2: Pickles is a Jack Russell Terrier who weighs approximately 12 lbs. She was used for the small dog category.



Figure 3: Moose is a Great Pyrenees who is approximately 143 lbs. He was used for the big dog category.

At each park, we walked separately and counted silently as to not create a bias in the data. To avoid any other bias in the data, we considered other people that were present in the park and if they had dogs with them as well. Once the walk around the park was complete, the abundance counted by each category was recorded on a datasheet.

Results

At Box Hill South Park (Location 1), there were two other dogs present with their owners. At the end of the walk, the person with no dog saw the highest number of wildlife, and the person walking the big dog had seen the fewest. This walk took place during the morning, and only birds were seen.

Location 2 was at Emily Bayless Graham Park, and we were the only people present. At the conclusion of the walk, the results were similar to that of Location 1. There was far less wildlife at this park, and only birds were seen once again.

Location 3, Schucks Regional Park, was very similar to Location 2. There was not much wildlife to be seen, mostly birds and a few squirrels, but there were also a lot more people present in the area. There is a large playground structure at the park, and many children were playing there with their parents present.

Bynum Run Park (Location 4) was by far the most diverse park we had visited. We only encountered birds again, but there was a wide variety of species present. With a pond right in the center of the trail path, there were many waterfowl species, including Canada geese (*Branta canadensis*), Mallard ducks (*Anas platyrhynchos*), Great blue heron (*Ardea herodias*) as well as a few other duck species we couldn't identify. During this walk, the person walking the big dog noticed the most wildlife whilst the person walking no dog noticed the least.



Figure 4: A Great blue heron present at Bynum Run Park.

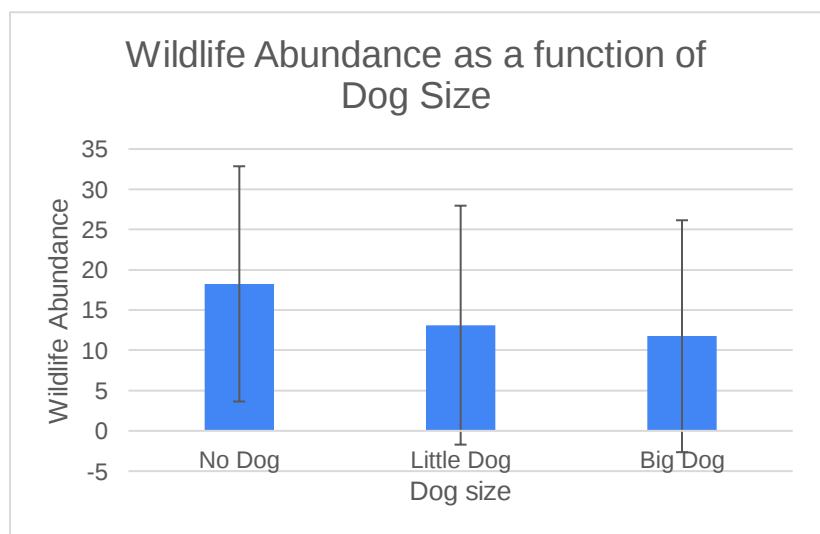


Figure 5: Graph of the averages of wildlife abundance encountered by each category in the study.

Hydes Road Park (Location 5) was very low on diversity. There were several people there at the same time as us; we had gone during the evening which coincided with some sports practices. Walking around the fields, we only saw a few birds and some insects flying around.

Abingdon Dog Park (Location 6) has a great trail to walk around. During this walk, we encountered one other person walking their two dogs. We encountered many birds during our walk, and the person with no dog encountered the most whilst the person walking the big dog noticed the least.

Mountain Road Park (Location 7) did not have a lot of diversity. The only wildlife encountered here were birds, as was the same at Reckord Road Park (Location 8). These locations had the fewest abundances in the dataset.

In Figure 5, the data set shows that the highest abundance of wildlife was seen by the person with no dog. The other two categories (little dog and big dog) are fairly close in number, but the little dog category saw more wildlife than the big dog category.

Discussion

There is a lack of studies conducted on dogs in parks, and the interactions they have with wildlife (Weston et al. 2014). With the prevalence of domestic dogs in many societies and cultures worldwide, it is surprising that there is a lack of knowledge of the effects dogs have on the environment (Weston et al. 2014). Most of the current data known about dogs in parks is biased because the data is being taken in well developed countries, such as the United States. (Weston et al. 2014). Despite this, more studies need to be done no matter the location of the study.

The study we conducted shows that the most wildlife was seen by the person walking without a dog. Because of urbanization, human and wildlife contact has become more common.

Wildlife still may fear humans, but humans do not resemble the natural predators of the ecosystem like canids do. The little dog and big dog categories were each lower in abundance seen than the no dog category. Because canid species resemble natural predators, the presence of dogs in the parks can cause stress for the wildlife. They could feel threatened by the domestic dogs, and expend energy they may normally use for foraging to move a distance away from the area where the dogs are present. It could reduce habitat for these species who are afraid to live in an area where dogs frequent. Size of the domestic dog can have an impact because wild canids range in size as well. Small dogs like terriers are similar or slightly smaller than red and grey foxes (*Vulpes vulpes*; *Urocyon cinereoargenteus*) whereas large dog breeds like Mastiffs are similar to coyotes and wolves (*Canis latrans*; *Canis lupus*).

To avoid overstressing wildlife in their habitat, some regulations should be imposed at parks in regards to dogs. Restrictions can be put into place at parks, limiting the time of day dogs may be present in the park, and the size of dog allowed in the park. Certain trails can be made just for dogs and their owners to walk, and leave other areas just for wildlife. All dogs present, even the most well-trained dogs, should be on a leash at all times. Many state parks even have a policy that pets are welcome, but must always be on a leash no longer than six feet in length at all times (MD DNR 2023). Some breeds, like Jack Russell Terriers, are bred to hunt rodents and small mammals, so it is important that all dogs be kept on a leash to protect the wildlife living in the parks.

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