

# Documentation of Coyotes on the Palos Verdes Peninsula

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## Abstract

Popular knowledge has held that coyotes moved onto the Palos Verdes Peninsula in the mid-1990's, a phenomenon bolstered by residential sightings and complaints about missing cats and other small animals. Despite the general knowledge that coyotes are living on the Peninsula, no scientific studies have been conducted to determine their presence and where exactly they abound. We began a study to investigate the coyotes' existence by surveying for coyote scat and footprints. Our surveys, conducted in the major canyons of Rolling Hills and the Canyons Ecological Preserve of the Portuguese Bend Nature Preserve, revealed the presence of coyote scat and tracks. We will use this initial survey as part of an ongoing study to determine the areas and movement corridors utilized by coyotes throughout the Peninsula. Additionally, we expect to use our results to help residents take proper measures for living harmoniously with coyotes.

## Introduction

Popular knowledge has held that coyotes moved onto the Palos Verdes Peninsula in the mid 1990's. Anecdotal incidences indicated their presence as residents began complaining about missing cats and hearing wild yips and howls in the night. Some residents set out traps. Another resident sent an email to the City of Rolling Hills in 2002 stating, "We saw a healthy coyote at the Wicks mailbox. He was again large, healthy and without fear of our presents (sic). Too bad I was not armed".

However, no one has documented where the coyotes are and how abundant they are on the Peninsula, or even proven their presence. This study was instigated to scientifically determine the existence of coyotes and where they are most prevalent on the Peninsula (Fig. 1). This initial information will be used to help find solutions to the controversy over coyotes in Palos Verdes.



**Figure 1.** The Palos Verdes Peninsula showing the location of our two study areas, The City of Rolling Hills is outlined in blue and the Portuguese Bend Nature Preserves' Canyons Reserve is outlined in green.

## Methods

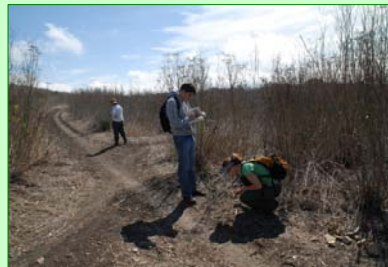
We began by compiling community coyote sightings collected by the City of Rolling Hills from 2001-2005 into a database (Fig. 2). By mapping these sightings, we identified places having a high probability of the presence of coyotes. We then hiked these high probability locations within the City of Rolling Hills, looking for evidence of coyotes, especially scat.

The City of Rolling Hills, which is located on the north flank of the Peninsula, abuts an area within the 1200-acre Portuguese Bend Nature Preserve, known as the 400-acre Canyons Reserve. By tracking scat, we discovered trails used by coyotes within the Canyons Reserve (Fig. 3).

We then set track traps at seven different locations on the scat-marked trails within the Canyons (Fig. 4) using gypsum. Following an initial spatial survey spanning the entire 400 acres, we then continued with a more intensive, temporal study on a major corridor separating the City of Rolling Hills and the Canyons Reserve. We conducted this temporal study in order to determine the frequency with which coyotes visit the seven areas. We did this over a three-week period, refreshing the gypsum after an unexpected April rain storm. When canine tracks were found, we utilized measurements provided by Lowry (2006) to discern between dog, fox, and coyote prints. Photographs of the prints were sent to James Lowry to confirm our identifications.



**Figure 2.** Map of compiled coyote sightings data reported by residents to the City of Rolling Hills from 2003 through 2006. The most reports occurred during 2003 (colored in red).



**Figure 3.** Becky conducts survey for coyote scat within the Canyons Reserve and is accompanied by a student interested in foxes.

## Results

Our initial surveys for scat found that, indeed, coyote were present on the Peninsula (Fig. 5). near a neighborhood where anecdotal tales of missing cats had been reported (John Nieto, personal communication), we found a scat specimen with cat fur and bones. Others were found along major trails on the Canyons Reserve (Fig. 6a).

Our spatial track survey resulted in one coyote print, located in the lower portion of the Canyons Reserve (Fig. 5). During our temporal survey, multiple coyote prints were found at this location and at the major corridor between the Canyons Reserve and the City of Rolling Hills (Fig 8). We found that red fox scat and prints were more numerous, but the most dominant print came from domestic dogs.



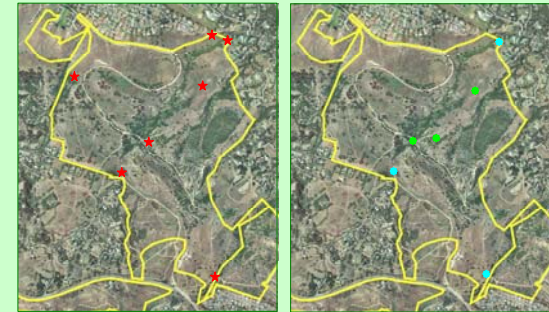
**Figure 4.** Becky, with help from her mother, places gypsum on likely coyote movement corridor, then follows-up with early morning observations of tracks. She found a coyote print at this location and is shown measuring the dimensions of the foot print.



**Figure 5.** Examples of scat found along trails used to determine the location of one of our gypsum track traps.



**Figure 8.** Examples of coyote prints found in gypsum track traps during the surveys.



**Figure 6.** Gypsum track trap locations, denoted by red stars (★), were placed on trails in areas where coyote scat was observed.

**Figure 7.** Following placement of the track traps, we found coyote prints at sites denoted by blue stars (★) and scat at sites denoted by green stars (★).

## Discussion

We found conclusive presence of coyotes on the Palos Verdes Peninsula. Their presence is relatively recent, having not been recorded prior to the 1990's (Gales 1988 and James Lowry, personal communication). At this time, we are uncertain about location of the source population.

The frequency of the scat and tracks is lower than those of red fox, suggests that the area is not highly populated with coyotes. Conversations with local residents and reviews of the City of Rolling Hills sighting data suggest that the number of coyotes has been decreasing over the last few years.

Following this preliminary survey, we will continue our research to determine the full range of coyote on the Peninsula. We also hope to establish a general estimate of the coyote population's size. Finally, we will use our findings to develop educational material for Peninsula residents to ensure peaceful coexistence with the coyotes.

## Literature Cited

Gales, D.M. 1988. Handbook of Wildflowers, Weeds, Wildlife, and Weather of the South and Palos Verdes Peninsula. FoldaRoll Company, Palos Verdes, CA. 229 p.

Lowry, J.C. 2006. The Tracker's Field Guide. A comprehensive handbook for animal tracking in the United States. Falcon Guide, Helena, MT. 408 p.

## Acknowledgements

This work has been generously supported through a grant from the Alcoa Foundation. We also appreciate the kind support offered by James Lowry through his expertise on tracking and knowledge of Palos Verdes Peninsula fauna.

