

CONFIRMATION OF A COUGAR (PUMA CONCOLOR)
SIGHTING IN LEELANAU COUNTY, MICHIGAN
ON SEPTEMBER 7, 2009

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INTRODUCTION

On Labor Day, September 7, 2009 Jerome Wiater and his adult son, Christian, observed what they believed to be a cougar (*Puma concolor*) at about 3:30 p.m. on a clear, sunny day. The sighting was along County Road 675 near its intersection with County Road 616 in Leelanau County, Michigan (T28N, R14W, Sec. 11, Empire Township). The site is near the south shore of Glen Lake and the Sleeping Bear Dunes National Lakeshore managed by the National Park Service.

This site is within about 300 feet of a seasonal home owned by Jerome Wiater who is an orthopedic surgeon (MD) residing in Bingham Farms, Michigan. While walking to Glen Lake with a camera in hand, Dr. Wiater observed the animal (as did Christian who was nearby), which he believed to be a large, long-tailed cat about the size of a large dog. The cat was walking roughly parallel to County Road 675 when Dr. Wiater took two photographs (Figures 1 and 2). The first photo (Figure 1) was taken when the animal was in shade. Figure 3 is an enlargement of that photo. The second photo (Figure 2) was taken when the animal was only partly shaded. Figure 4 is an enlargement of the second photo. The photos appear to show what Dr. Wiater and Christian Wiater reported—a large, long-tailed cat with profile and coloration consistent with that of a cougar. This investigation was conducted to verify the location where the photos were taken and to identify the species of the subject animal.

METHODS

I took measurements and photos at the site from 10:30 a.m. – 2:00 p.m. on September 9, 2009 accompanied by Christian Wiater, and by Douglas Holem of St. Charles, MI. We were joined by Amanda Brushaber of the National Park Service at about 1:00 p.m.

I used the clearer of the two photos (Figure 2) of the animal to align black locust trees and a utility pole and determined where the photo was taken from as well as the location of the subject animal. I then contacted by telephone Dr. Wiater; who was in southeastern Michigan, to inquire as to where he believed he and the animal were at the instant the photo was taken. Dr. Wiater stated that he was near the edge of a mowed area and that the animal was on the far side of the road in a shallow drainage depression along the west side of County Road 675. Since the locations he described were +/- 1-2 feet from

where we independently had determined he and the cat were, we proceeded with various site measurements. Diameters of selected trees and the utility pole were measured 4.5 feet above ground along with distances from each to the location where the animal was when the photo was taken.

We photographed at the same location several objects of known size including a 36-inch by 48-inch cardboard sheet (Figure 5). Finally, we normalized the photo of the cardboard sheet (placed where the subject animal stood) twice—once adjusting the photo size so that a selected tree (Figure 6) was the same size in the two photos to be compared (Figures 6 and 7), and once adjusting the photo size so that the utility pole (Figure 8) was the same size (Figures 8 and 9). By using two objects, one closer and one farther from the cameras, we accounted for differences in focal lengths between the lenses of my camera and the Wiater camera. By that method, the size of the subject animal could be compared with that of the cardboard.

RESULTS AND CONCLUSIONS

The juxtaposition of more than 10 identifiable black locust trees, the utility pole, and the subject animal provided irrefutable evidence that the photos were taken at the Leelanau County site. The animal is a long-tailed cat (Figures 1-4); therefore, cannot be a bobcat (*Lynx rufus*), a fairly common animal in Leelanau County. Coloration, considering shade in both photos, appears typical of a cougar and is not consistent with most house cats. The subject cat appears to have a black-tipped tail which is characteristic of cougars and seldom seen in house cats. Figures 1 and 3, in particular, show a small head relative to body size, one trait associated with cougars.

The distance from camera to the subject cat was approximately 209 feet when the photo in figure 2 was taken. The actual diameter of the locust tree used for normalizing the photos was 9 inches, and its width (facing the camera) was 9.5 inches (as estimated against a ruler). The utility pole was 8 inches in diameter. The subject animal was 69 feet behind that tree and 51 feet in front of the utility pole from the camera's perspective.

After normalizing the photos (Figures 6-9), I determined that, using the tree as the basis for normalizing the photos, the cat, from tip of nose to end of body (not including tail), was at least 27.1 inches long (Figure 10). I determined the body length to be 28.5 inches when using the utility pole as the basis for normalizing the photos. The small difference between these numbers and the relative sharpness of the images of the tree, animal, and utility pole in my photo and the Wiater photo indicate that any differences owing to focal lengths of the cameras were negligible. The calculated body length of 27.1-28.5 inches is a minimum since the cat was probably not in a stretched position (which is typically the case when cougar bodies are measured) and appeared to be not exactly perpendicular to the camera. Therefore, I believe the subject cat likely had a body length of more than 30 inches.

Because the cat when photographed was fairly close to level with the camera, I was also able to calculate its approximate height from top of back to bottom of chest/belly. This

type of measurement from a photo represents an underestimate if the camera is above or below the object in question. Again using the tree as the basis for normalizing the photos, I determined that the height of the cat from top of back to bottom of chest/belly was at least 10.9 inches. I determined the body height to be at least 11 inches when using the utility pole as the basis for normalizing the photos.

A full-grown, adult cougar typically has a body length of 40-50 inches, while a typical adult domestic cat has a body length of about 18 inches. I measured with a tape the height from top of back to bottom of chest/belly of a mounted cougar specimen as part of this investigation and found it was 11.5 inches. The mounted cougar had a body length of 43 inches and appeared to be an adult. Therefore, the subject cat is too large to be a domestic cat. It is the size of a small cougar. The Wiaters had a large hound at the site that measured 34.5 inches from nose to end of body. It stood 25 inches at the shoulder. Both Jerome and Christian Wiater stated that the cougar they observed was about the same size as their hound. Based on my analysis, it may have been slightly smaller than the dog, but was definitely the size of a small cougar. The Wiater photos, along with decades of sighting reports and tracks found in the same general area during the past 9 years, provide compelling evidence of the presence of cougars in the Sleeping Bear Dunes National Lakeshore area.

Key to Matching Figures with Photos

- Figure 1 = 1.jpg
- Figure 2 = 2.jpg
- Figure 3 = 3.jpg
- Figure 4 = 4.jpg
- Figure 5 = 5.jpg
- Figure 6 = 8.jpg
- Figure 7 = 9.jpg
- Figure 8 = 6.jpg
- Figure 9 = 7.jpg
- Figure 10 = 10.jpg