

Wildlife Pathology Unit

New York State Department of Environmental Conservation

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CASE REPORT

Species: **mountain lion (hair)**

WPU Case #: **100948**

Date received: 12/21/10

Examination date: 12/22/2010

Examiner: K. Hynes

HISTORY

A live mountain lion (aka cougar, puma) was reportedly observed by Cindy Eggleston in the backyard of her residence at 44 Truesdale Hill Road Lake George, NY (Town of Lake George, Warren County) at 8:00 PM on December 16, 2010; the cat was backtracked through the snow the next day by her husband, retired NYSDEC Colonel David Eggleston, and ECO Louis Gerrain (NYSDEC R-5); the tracks in the snow were photographed and several hairs were recovered from an apparent bedding site. The hair samples and track photographs were submitted for species identification by Jed Hayden (NYSDEC R-5 Warrensburg) on December 21, 2010.

GROSS EXAMINATION FINDINGS

The hair sample consists of 15 fine hairs in an unlabelled zip-loc style sandwich bag. The hairs range in length from 9 to 15mm and are tan with dark (black) tips; they appear to be underfur, no guard hairs are present. They have a dark thick medulla with some vacuoles present and brownish yellow ungranulated pigment. The track photos consist of 36 photographs of tracks in the snow, some with a yardstick for scale. The foot print measures approximately 4 1/4 inches long by 3 1/2 inches wide; a trilobed heel pad is clearly evident in some footprints. Based on the yardstick in some of the photos the stride is estimated at ~30 inches.



Photograph of track taken by ECO Gerrain on December 17, 2010.

HISTOPATHOLOGICAL FINDINGS

None.

MICROBIOLOGY

Five hairs were sent to Dr. Melanie Culver at the University of Arizona School of Natural Resources on February 9, 2011 for DNA analysis to determine species and subspecies if possible; results are still pending as of the date of this report.

Four hairs were sent to Kristine Pilgrim at the US Forest Service Rocky Mountain Research Station on July 28, 2011 for DNA analysis to determine species and to determine if it was the same mountain lion that was killed in Milford Connecticut on June 11, 2011. Initial results of mitochondrial DNA analysis confirmed the hairs were from a cougar (mountain lion); subsequent DNA profiling, amplified eight loci, and confirmed that the hairs were from the same mountain lion that was killed in Connecticut, and that was previously identified through scat, hair and blood from one site in Minnesota and three sites in Wisconsin in late 2009 and early 2010. At eight loci the probability of two individuals with the same genetic profile of NY100498 (Lake George WPU Case # 100948), CT-PC-1 (Milford Connecticut roadkill), and WI-StCroix (hair and scat samples from Minnesota and Wisconsin December 2009/2010) matching by random chance is greater than 1 in 345,000.

TOXICOLOGY

None.

DIAGNOSIS: Species Identification: mountain lion (*Puma concolor*)

COMMENT: This sighting turns out to be a part of a remarkable and fascinating case. According to Kristine Pilgrim and Michael Schwartz at the USFS Rocky Mountain Research Station, the profile of this cat's DNA is most closely related to a breeding population in the Black Hills of southwestern South Dakota. This cat was first sighted in eastern Minnesota on December 11, 2009 when DNA analysis confirmed it as a cougar. Adrian Wydeven (Wisconsin Dept. of Natural Resources) reported additional DNA identifications of the same cat were made in St. Croix Wisconsin in late December 2009 and in Bayfield County Wisconsin on February 15, 2010. On May 20, 2010 a trail camera photographed a young cougar in Oconto County Wisconsin and later a trail camera in Michigan's Upper Peninsula photographed what Wydeven believes is the same cat. The next known sighting of this cat was in Lake George NY (the subject of this report) on December 16, 2010. According to Paul Rego (CT Dept. of Environmental Protection) the cat was spotted several times in Greenwich Connecticut in early June 2010 before it was hit and killed by a motor vehicle on the Wilbur Cross Parkway in Milford Connecticut on June 11, 2011. A necropsy, performed in Connecticut by a USFWS Wildlife Forensic Lab veterinary pathologist, found an apparently healthy 140 lb male mountain lion in good physical condition; the stomach was empty, there were porcupine quills under the skin; there were no signs of de-clawing or neutering and no sign of a microchip (sometimes implanted in captive or study animals).

Straight line distance from Champlin Minnesota where the cat was first identified to Milford Connecticut where it was killed is approximately 1,057 miles. The previous record for distance travelled by a dispersing mountain lion was from South Dakota to Oklahoma a distance of approximately 663 miles. This cat may have been born in the Black hills of South Dakota (or possibly to parents that had previously dispersed to the east) and it appears that it travelled through Minnesota, Wisconsin, the Upper Peninsula of Michigan, and likely southern Ontario, then into New York, and Connecticut, a potential total distance of approximately 1800 miles.

Mountain lions were extirpated in New York in the late 1800's and the eastern cougar was declared extinct by the USFWS in March 2011. The last confirmed mountain lion sighting in New York was a 7.5 lb kitten (WPU Case #940105) that was shot in Saratoga County on December 31, 1993; the emaciated kitten was approximately 3 months old and had lesions on the footpads suggestive of captivity on a rough concrete surface, DNA analysis on that cat by Dr. Culver determined it had genes from South American subspecies and was likely an escaped or released captive.

ECO Gerrain and retired Colonel Eggleston provided clear, detailed photographs of the tracks in the snow with accurate scales (yardstick) and made a careful search for hair and scat for DNA confirmation. It is interesting to note that this one lone mountain lion passing through New York was detected and confirmed through track photographs and DNA (and also detected and confirmed several times in other states) which is good evidence that if a population of mountain lions lived in the northeastern US they would likely be detected.

Kevin Hynes
August 16, 2011