

From: [A.J.](#)
To: [Grizzle, Betty](#)
Subject: Re: Wolverine and white markings
Date: Thursday, May 4, 2017 12:05:30 PM
Attachments: [White wolverine.jpg](#)

Hi Betty

I don't think anyone has looked at white traits in wolverines on a global scale, either prevalence or genetic markers. White markings on the feet are common (but not dominant) in Alaska, at least on the North Slope and Southeast Alaska where I have worked. I have attached an unusual individual, which I believe was caught in Alaska. One trapper I know in NE Alaska showed me a "white" wolverine he captured. Not an albino, but white with cream highlights where black would occur on a "normal" wolverine. From what I know of wolverines in Scandinavia, there is much less white even in the chest pattern. Jens could speak to whether they have ever gotten a white-footed wolverine. There may be regional differences in the occurrence rate and prominence of white markings, which suggests a genetic marker that runs in the population until something changes it. I once asked a fur buyer in Fairbanks about regional differences, and he said there were differences in the size and color of the diamond on wolverines across Alaska. We didn't discuss white feet. Some wolverines, almost as rare as white ones, are nearly completely black. It would be interesting to see if there are genetic differences and if they change over time regionally. The "white-less" wolverines in Scandinavia may be because the population may have descended from a few dark individuals and could change over time as the population increases and expands and dispersers arrive from Russia. The local buyer has purchased wolverines from Russia. I will have to talk to him again to see if white feet occurred on the hides he purchases. It seems to me I recall Jeff Copeland mentioning that he thinks a dominant male in an area can determine the coloration of the individuals in an area and perhaps he has worked with genetics along these lines. It does seem that wolverines from Montana more commonly had larger areas of white on chest, legs, and feet than in other areas. Bob Inman certainly has captured individuals like this.

On another subject, did you hear from Jens in response to your email? Did you ask him about the number of dens outside the snow model that they now have? He is going to try to photograph some of these den sites in the coming week.

Audrey

On Thu, May 4, 2017 at 9:28 AM, Grizzle, Betty <betty_grizzle@fws.gov> wrote:

Hi Audrey - You may have seen this OpEd from the Great Falls Tribune.

Wolverine study's plan preferred to endangered species listing

GreatFalls Tribune/Opinion

May 2, 2017

During a multi-state survey this winter to establish a baseline of where wolverines live in the U.S., one of the solitary mountaineers was photographed by a motion-detecting camera 65 miles southeast of Great Falls in the Little Belt Mountains.... <http://www.greatfallstribune.com/story/opinion/2017/05/02/wolverine-study-plan-preferred-endangered-species-listing/101208748/>

I noticed that one of the photographs (Pintler Mtns) shows a wolverine with white on its front paws. I had read (somewhere) about this interesting characteristic and ask Bob Inman if he knew whether this was unique to North America or Montana, and whether this has been observed in wolverines in Scandinavia. He said that they have seen fairly extensive white markings, often on the foot, in GYE and Montana, but did not know about other populations.

I also read the following account of almost all-white wolverines from Cardinal's report:

From Cardinal 2004 *Aboriginal Traditional Knowledge COSEWIC Status Report on Wolverine Gulo gulo Qavvik*: (page 7)

"A nearly all-white variant of wolverine has been trapped by hunters in the Kitikmeot region. Knowledge holders in the region state that this variety is very rare; in all of the other regions, only one other knowledge holder reported catching a wolverine that had a significant amount of white on it. Knowledge holders also mentioned that this variant has always occurred in this one area and reported their parents had caught this variety in the past. A pelt was also on display at the local HTC."

Question for you: Do you know if anyone has looked at these traits (on global scale) and how prevalent they are? And whether anyone has investigated the genetic markers for this?

Thanks.

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