Finding DNA in Coats

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Abstract

As the winter season approaches, people are looking for the perfect coat to keep them warm. Many people prefer synthetic fur on their coats as opposed to real fur that is collected from animals. However, are people sure the coats with the fur they are purchasing is consistent with what is advertised? This research study consisted of determining whether the fur within coats are synthetic or real as advertised. In order to determine this, various fur samples from different types of coats were collected to see if they had DNA. If the fur had DNA, then it was real but if not then it was synthetic. Our results showed that there was no DNA present therefore, all coats had synthetic fur.

Introduction

Here, in New York, we have the unfortunate pleasure of having all 4 seasons throughout the year. This means that for roughly 3-4 months we are wearing winter jackets to protect us from the low temperatures. Canada also faces very low temperature and because of this the coat Canada Goose was made. According to "Canada Goose" without real down and fur the chances of frostbite or freezing becomes a real possibility. It is highly important to have high quality coats because it can mean the difference between life and death. Canada goose coats are extremely expensive and the price can range from 350 dollars up to almost 2,000 dollars. Canada Goose claims that when creating a Canada Goose product down, fur, and wool are used. All of their products that are made with down contain Canadian Hutterite which is the highest quality available. They use down for their products because they believed that it is the world’s best natural insulator. All of the down used in their product are hypoallergenic and laboratory tested. Fur is also used to make Canada Goose products because they believed that in very cold environments fur is the best choice. They have fur trim around the hood on the jacket in order to disrupt airflow and protect the face from frostbite. According to Canada Goose they are required to only use wild fur from North American suppliers and they never use fur from farms or from endangered species. The wool that is used in Canada Goose products is claimed to be ultra fine Merino wool.

Materials & Methods

A lot of different samples will be collected from different coats and brands. The way that we plan on collecting the data is by cutting off a piece of the fur or feather from the coat jackets from either friends or family members that we individually know. Once we have these pieces we will put them in separate plastic bags and label them by brand name as well as documenting the date collected. We will use these pieces to evaluate our data into multiple categories shown in the table shown below. By separating the information into these 7 categories we will be able to determine our main goal of seeing if what is being advertised is true. We also would like to see if we find something cheaper than advertised or something not allowed to be sold. To get our results we conducted the DNA barcoding protocol as prescribed by the Harlem DNA Lab using a vertebrate primer.

Tables & Figures

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<th>Sample Number</th>
<th>Species Expected / Location</th>
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</table>

Results

Out of the 7 samples, we got no results leading back to DNA. All of the hairs were either too processed or synthetic to start with. To add on, hair is something that is really hard to grind down so the attempt to get DNA out of it is not simple. This was something that was well expected from our project.

Discussion

As shown in the data table, there was no DNA collected from any of the fur samples including those that were advertised to be real. As a result, all the coats had synthetic fur and those that advertised the coats to have real fur are guilty of false advertisement. It’s possible that in the process of trying to identify any DNA, the samples could’ve gotten contaminated or something similar. Another possibility is that the hair extracted may have not had any DNA to begin with, and as we went through the whole procedure no DNA was sampled. However, to determine if this was the case the experiment can be conducted again for more accuracy in results.

References


Acknowledgements

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