Study: Weather affects lion manes

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A study of zoo lions across the United States suggests weather conditions are responsible for differences in manes, not just genetics.

The study by Bruce Patterson of The Field Museum in Chicago indicates up to one-half of the length and density of a zoo lion's mane can be attributed to temperature. Other factors include nutrition, social differences, individual history and genetics.

"Many variables interact to affect mane development in wild lions," said Patterson, the museum's curator of mammals and lead author of the research. "Several of these variables, including food, water, and social groupings, are controlled in zoological parks, where the (study found) climate has a major effect on mane development."

A lion's mane primarily serves to attract females and intimidate male competitors, Patterson said. But it comes with a cost: A full mane takes energy to grow and maintain, gives the animal's location away to prey, makes maneuvering through bramble difficult, harbors parasites, and retains heat.

The complete study appears in the April issue of the Journal of Mammalogy.