
Why are some moose white?

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Photos of the popular white moose in Sweden's Värmland County have been spread round the world in social media. Swedish scientists are now trying to find out why the animals are white.

The lack of pigment is genetic. No doubt about that.

The white moose of Värmland are not albinos. If they were, their eyes would be red. The white albino hides are a result of leucism, a condition something like albinism which results in a partial loss of pigmentation in the skin, hair, feathers or scales.

Leucism is a permanent condition in polar bears. Amongst other animals, such as the arctic fox, arctic hare and the European weasel the condition appears protectively in the winter. But none of these animals are albinos.

Researchers at the Swedish University of Agricultural Sciences want to compare the DNA of white moose with that of their common brown cousins to see which mutations in their genes are making them white.

White moose are not uniquely Värmlanders or Swedish even though they are most plentiful there. They are found occasionally in neighbouring Norwegian counties Østfold, Akershus and Hedmark. North American moose, which are larger than those in Europe, can also exhibit leucism now and then. Native Americans called refer to them as "white spirit moose".

White moose do not migrate from Värmland across the border to Norway very often.

When one individual, which the media quickly named "Albin," paid a visit to Østfold County in 2011 it immediately became a national celebrity. Unfortunately, its fame was not international. Soon after the moose hunting season had started in the autumn, a group of Danish hunters in Norway – unaware of its popularity – bagged it.

Novel technology that enables a complete sequencing of an individual's DNA has opened up new opportunities for understanding why some moose are white.

"Now we are waiting for the completion of the DNA sequencing to see where the deviation in the white moose genes is," says SLU researcher Sofia Mikko to ScienceNordic.com's Swedish partner forskning.se.

[Read the Norwegian version of this article at forskning.no](#) [5]

 [Swedish scientists want to know why many white moose are seen in Värmland County. They are currently analysing the moose DNA to find an answer. \(Photo: Lase Dybdahl, Wikimedia Commons\)](#) [6]

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