

# Researchers suggest wild animals avoid power lines due to UV light emittance

March 13 2014, by Bob Yirka

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Credit: Tony Boon/Wikipedia

(Phys.org) —A team of researchers from several institutions in the U.K. and Norway has published a paper in the journal *Conservation Biology* suggesting that the reason wild animals avoid power lines is because they are bothered by visible UV light. Humans cannot see UV light, and have thus been mystified as to why deer and other animals avoid power lines

and the sometimes large frameworks that hold them.

High-voltage [power lines](#) are a source of UV light due to a build-up of ionized gas—when it suddenly dissipates, flashes of UV light are emitted. The larger the buildup and release the larger the flash. Power companies try to minimize such build-ups as they indicate a loss of power, or inefficiencies in a line—they use special goggles to find and repair large problem areas. Normally people only become aware of the flashes when they hear cracking or popping noises, particularly in winter.

Many animals (approximately 35 known species) on the other hand, are able to see UV light in all its glory, and most of them appear to find it alarming in power cables. It tends to cause fragmenting of species, problems with grazing and a reduction in populations. Prior to this study, it was thought that perhaps animals avoided power line paths due to the openness of the terrain created when trees are removed. In this new effort, the researchers note that one species of animal, reindeer, appear to be particularly sensitive to the UV light. Not only can they see UV light (normally used to help find plants buried beneath snow) but their eyes are particularly sensitive to it because of the long dark winters. They see the UV light as random flashes lighting up the area (made worse when it bounces off snow and ice) accompanied by popping noises. It's enough to cause the animals to stay away from lines and structures—they won't walk under them, leaving them cut off from land on the other side. The problem has caused herders in Norway to be at odds with power companies over construction of new lines.

Scientists have noted a tendency for animals to avoid power lines in places all over the globe, but were confused as to why—power lines are high enough to avoid contact and few people are around once they are put up. Some have suggested it was due to clear cutting vegetation, but [animals](#) in areas where there is little vegetation to begin with (such as reindeer habitat) have avoided them as well. More studies will have to be

done to conclusively prove that it's UV light, but at this point, it appears likely.

**More information:** Tyler, N., Stokkan, K.-A., Hogg, C., Nellemann, C., Vistnes, A.-I. and Jeffery, G. (2014), Ultraviolet Vision and Avoidance of Power Lines in Birds and Mammals. *Conservation Biology*. doi: 10.1111/cobi.12262

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