

Cattle respond to magnetic fields from power lines

March 16 2009, By RANDOLPH E. SCHMID , AP Science Writer

(AP) -- High-voltage power lines mess with animal magnetism. Researchers, who reported last year that most cows and deer tend to orient themselves in a north-south alignment, have now found that power lines can disorient the animals.

When the [power lines](#) run east-west, that's the way grazing cattle tend to line up, researchers led by Hynek Burda and Sabine Begall of the faculty of biology at the University of Duisburg-Essen in Germany report in Tuesday's edition of [Proceedings of the National Academy of Sciences](#).

They also found that [cows](#) and deer grazing under northeast-southwest or northwest-southeast power lines faced in [random directions](#).

The research team studied cows and deer using satellite and aerial images.

In their report last August, Burda and colleagues suggested the north-south orientation was in response to the Earth's [magnetic field](#).

The new study adds weight to the animals responding to [magnetic effects](#) , since power lines also produce a magnetic field. And the effect was most noticeable close to the power lines, declining as the magnetic field of the electric lines was reduced by distance.

Wind and weather can also affect which ways cows choose to face, but without such factors about two-thirds of them tended to align north-

south when away from power lines.

The Earth's magnetic field is thought to be a factor in how birds navigate, and other animals also are believed to respond to it.

In addition to Burda and Begall, the research team included Julia Neef of the University of Duisburg-Essen, Jaroslav Cervený of the Czech University of Life Sciences and Pavel Nemec of Charles University in Prague, Czech Republic.

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