

Researchers find dogs sensitive to small variations in Earth's magnetic field

January 3 2014, by Bob Yirka



A team of researchers in the Czech Republic has found that dogs can now be added to the list of animals that are able to sense and respond to the Earth's magnetic field. In their paper published in *Frontiers in Zoology*, the researchers describe field experiments they conducted that indicated that dogs prefer to defecate while in a North-South stance relative to the Earth's axis, during times when the magnetic field is calm.

Intrigued by the growing list of animals that appear to have a magnetic sensitivity, the researchers focused on [dogs](#) to see if they too had any such abilities. After some initial observations, the team began to notice a pattern of behavior related to stance during defecation—that was enough to embark on some field studies.

The field studies were conducted in an open field so as to ensure that the dogs weren't being impacted by familiar surroundings—in all 70 dogs (37 breeds) were observed circling and defecating for a total of 1,893 times. The dogs exhibited, the team reports, a very clear inclination to defecate with their bodies aligned in a North-South stance. But, more tellingly, when the magnetic field was not calm, the dogs showed no such preference, suggesting that when there is a clear [magnetic field](#), dogs can feel it, and for unexplained reasons, prefer to align themselves in a certain posture.

The team also found that freedom was a factor—dogs on leashes didn't appear to have as much of an inclination to align themselves in any particular direction as did dogs who were allowed to roam free in a field as they did their business.

No one can say for sure why dogs might prefer to align themselves in a particular direction when defecating, of course, though the researchers suggest they might simply feel more comfortable. They note that their study also found that the dogs tended to intentionally avoid crouching in an East-West, alignment, perhaps finding it the most uncomfortable of all. Their study, they say, is the first to conclusively show that [dogs](#) have magnetic sensitivity.

Other studies have found that other animals, such as cattle, deer, foxes, birds and even some species of fish adjust their actions according to the Earth's [magnetic field](#), though how they do so is still unclear in most instances.

More information: *Frontiers in Zoology* 2013, 10:80 [DOI: 10.1186/1742-9994-10-80](#)

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