



SCIENCE

# Hyenas can FACEBOOK with their ARSES: True FACT

It's like a business card, say po-faced boffins

By Jasper Hamill, 12th November 2013 [Follow](#) 913 followers

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Whiffy bacteria found in hyenas' anal secretions function as a natural social network, boffins have found.

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Researchers from [Michigan State University](#) examined the pongy bacteria hyenas leave behind whenever they smear their secretions, or "paste", on a tree, plant or grass stalk.

The excretions contain friendly microbes, which emit smells which serve as "messages" for other hyenas to interpret.

"The sour-smelling signals relay reams of information for other animals to read," said Kevin Theis, an MSU postdoctoral researcher. "Hyenas can leave a quick, detailed message and go. It's like a bulletin board of who's around and how they're doing.

"Scent posts are bulletin boards, pastes are business cards, and bacteria are the ink, shaped into letters and words that provide information about the paster to the boards' visitors. Without the ink, there is potentially just a board of blank uninformative cards."

The researchers studied several groups of male and female spotted or striped hyenas in Kenya.

They then analysed the molecular structure of the vast array of microbes which live in the hyena's bum juice.

The scientists found the diversity of bacteria was far higher than previously estimated, with large differences in the type of bug found in each species' paste.

Different bacteria signal a variety of things, including how keen a hyena is to mate, with varying smells emitted to indicate reproductive states. Each species also appears to have its own smell and therefore a unique bacterial culture within its paste.

The research differed from previous studies because the scientists examined the microbes in the wild, rather than by creating a culture. Boffins also combined odour data from wild animals with the microbial surveys to identify a symbiotic relationship between bug and beast.

"There have been around 15 prior studies pursuing this line of research," Theis continued. "But they typically relied on culture-based methods, an approach in which many of the similarities and differences in bacterial communities can be lost. If we used those traditional methods, many of the key findings that are driving our research wouldn't be detected at all.

"Now I just need to get back into the field to test new predictions generated by this study. The next phase of this research will be to manipulate the bacterial communities in hyenas' scent glands to test if their odors change in predictable

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The research was published in the *Proceedings of the National Academy of Sciences*. ®

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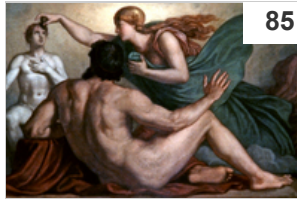
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