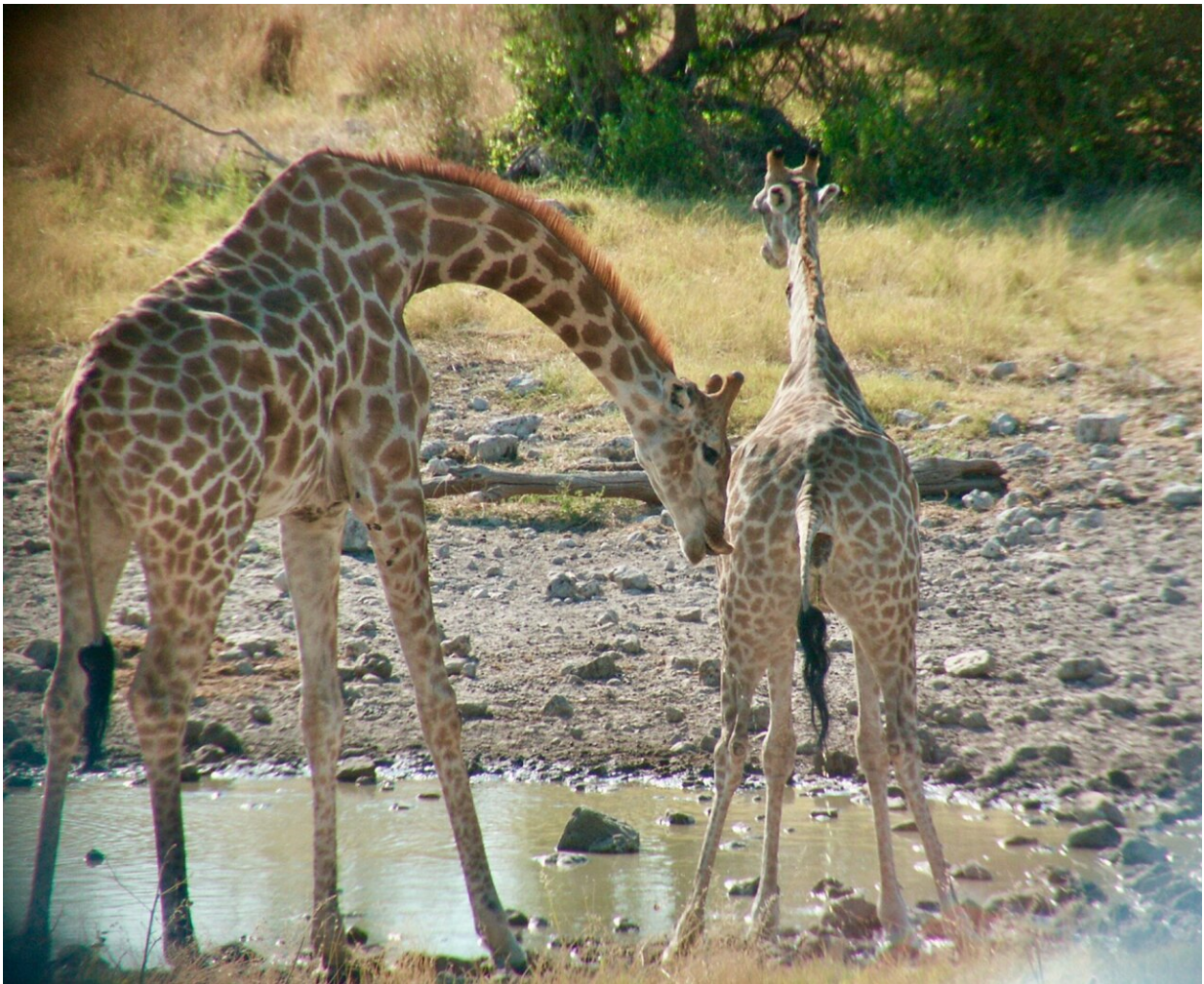


Heavy necking: New insights into the sex life of giraffes

February 8 2023, by Kat Kerlin



A male giraffe begins the lip-curling flehmen behavior as the female begins to urinate. (Lynette Hart, UC Davis). Credit: Lynette Hart, UC Davis

It can be hard to know if someone is really into you. Sometimes, you get hints—a certain look or smile, a nervous blush or flirtation. Giraffes get none of that.

They have no set breeding season. They don't go into heat, like dogs or cats. They don't make mating calls or provide visual cues of sexual readiness. So how is a male [giraffe](#) to know his advances will be well-received? In short: pee, pheromones and a gentle nudge.

A study from the University of California, Davis, provides new insight into the unique sex life of [giraffes](#), their reproductive [behavior](#), and how their anatomy supports that behavior.

Animal attraction

The study, published in the journal *Animals*, describes how male giraffes test females for sexual receptivity.

First, the bulls provoke the females to urinate by nudging them and sniffing their genitalia. If the female is open to his invitation, she widens her stance and pees for about 5 seconds while the male takes the urine in his mouth. He then curls his lip, inhaling with an open mouth—an act called flehmen that transports the female's scent and pheromones from his oral cavity to the vomeronasal organ.

The study provides the most precise understanding yet of how flehmen occurs with giraffes' anatomy. While flehmen is common among many animals, including horses and cats, most mammals wait until urine is on the ground to investigate. The giraffe, however, is not built for such explorations.

"They don't risk going all the way to the ground because of the extreme development of their head and neck," said lead author Lynette Hart, a

UC Davis professor of population health and reproduction in the School of Veterinary Medicine. "So they have to nudge the female, effectively saying, 'Please urinate now.' And often she will. He has to elicit her cooperation. If not, he'll know there's no future for him with her."



A male giraffe mates with a female giraffe at Namibia's Etosha National Park.
Credit: Lynette Hart, UC Davis

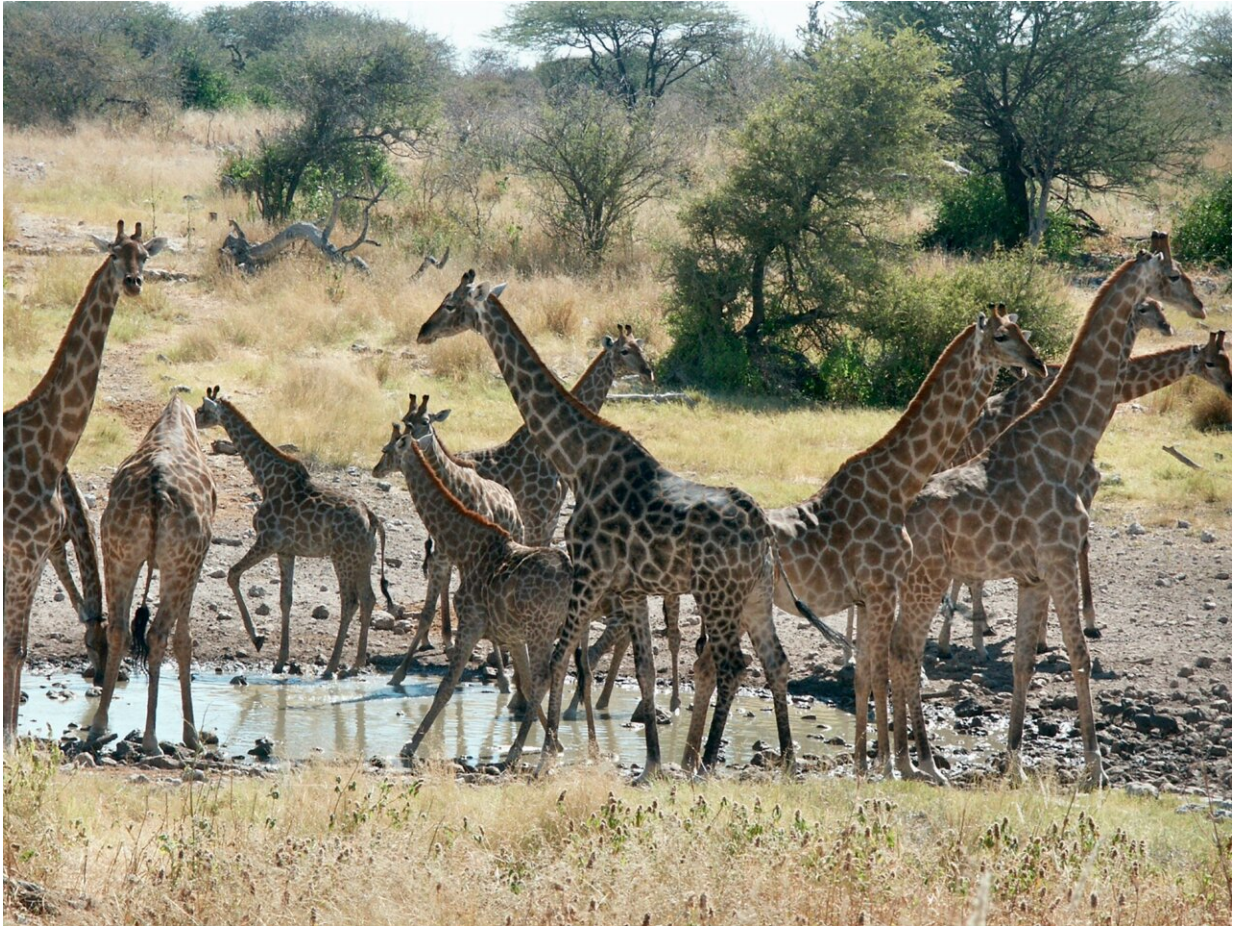
Straight from the Harts

Hart and her co-author and husband Benjamin Hart, professor emeritus with the UC Davis School of Veterinary Medicine, witnessed this behavior on multiple research trips to Namibia's Etosha National Park.

Dotted among the park's western side were large watering holes, where dozens of giraffes would congregate. Lynette called it "a dream come true" for observing giraffes. "So often you see a few in the distance, not an up-close view of what they're doing," she said.

Benjamin had studied how flehmen behavior worked within the anatomy of other animals, including goats. During their trips to East Africa, the Harts suspected a similar process was underway for giraffes.

"This is part of their [reproductive behavior](#)," Benjamin Hart said. "This adds to our understanding of what giraffes are doing as they accumulate around a water hole. People love watching giraffes. I think the more the public understands about them, the more interested they'll be in their conservation."



A group of giraffes congregate at a watering hole in Namibia's Etosha National Park. Credit: Lynette Hart, UC Davis

Calling bull, chewing bones and possibly grieving

The Harts also describe in the study previously undocumented giraffe behaviors, from chewing bones to potentially mourning their dead:

- Earlier studies noted that osteophagia, or chewing bones, was unusual for giraffes. But the Harts observed many instances of giraffes seeking and chewing bones, and sometimes getting them lodged in their mouths.

- After a giraffe had been killed by two lions, the Harts also witnessed for several days a steady procession of giraffes arriving to investigate the body.
- The Harts experienced another significant observation when they heard a bull emit a loud growl on different occasions. It was most likely a warning call, as it drove away most surrounding giraffes. Giraffes are typically very quiet and were once even thought to be mute.

More information: Lynette A. Hart et al, Flehmen, Osteophagia, and Other Behaviors of Giraffes (*Giraffa giraffa angolensis*): Vomeronasal Organ Adaptation, *Animals* (2023). [DOI: 10.3390/ani13030354](https://doi.org/10.3390/ani13030354)

Provided by UC Davis

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