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ENVIRONMENT

The social lives of cows are remarkably sophisticated

Locked away in dairy barns and cattle pens, cows and their culture need a moment to shine.

BY BRANDON KEIM | PUBLISHED FEB 23, 2023 9:00 AM EST

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How well do you know your pets? [Pet Psychic](#) takes some of the musings you've had about your BFFs (beast friends forever) and connects them to hard research and results from modern science.

YOUNG MALE COWS, not unlike many teenagers, can be a handful. They like to test boundaries; they challenge the other members of their herd, looking to establish themselves within its hierarchy. And so when Sammy, a six-year-old cow at [Peace Ridge Sanctuary](#), hit adolescence, he confronted Theo, the herd's patriarch.

Theo is a big animal, standing seven feet tall at his shoulders and weighing a muscular ton, but a gentle one. He's something like a kindly uncle, taking calves under his wing, quick with a soothing lick and nurturing by disposition. He's not a fighter—and Sammy was already larger than he, and aggressive to boot.

"He didn't know what to do," recalls [Daniella Tessier](#), the sanctuary's founder and operations manager. "That was probably a little scary to him." Then Clementine, the herd's matriarch, noticed what was happening. "She went over to the younger steer, pushed him out of the way, and challenged him. And the minute she did that, it was like a lightbulb went off. Sammy stopped—and that was the end of that." Theo and Sammy have been friendly ever since.

There are more than 300 rescue animals at Peace Ridge, which is located on a windswept hilltop in rural Brooks, Maine: donkeys and goats, sheep and geese, rabbits and pigs. But their 50 cows have an extra-special place in Tessier's heart. She's known bovines ever since she was a toddler on her grandfather's farm, and has come to appreciate them in ways few people have a chance to. Not only has Tessier spent a great deal of time with them—she's been able to study them outside the confines of farms, in rare sanctuary settings where animals are less stressed and able to express social behaviors that would otherwise be stunted.

"When you get to interact with groups who are able to stay intact, you can see right away that they have such complex relationships," says Tessier. "And there is so much expression of affection and nurturance and genuine care."

There's a hierarchy at Peace Ridge, but it's not determined solely by physical dominance. Presiding over it is Clementine, who is far from the biggest cow of the bunch, or the strongest, and who doesn't even have horns. She is, however, the oldest, and seems to have earned the regard of her peers by dint of life experience and her dedication to maintaining good relations between herd members.

"Clementine is always looking around to make sure everyone's OK," says Tessier. Theo does this too, but when tensions start to rise, it's Clementine who steps in. "She's an active peacekeeper," Tessier says. "She's just going to get in there and say, 'Don't go over that line.' And everyone listens to her, though she's an older, smaller cow. It keeps things in balance."

I volunteer at Peace Ridge, although with the goats, not the cows. To be honest, the cows have always made me a bit nervous. They're such massive creatures, and, like many folks, I don't have much familiarity with them. When Tessier told me about Clementine and the herd's organization, I was surprised.

It wasn't that I considered cows stupid—an old stereotype so ingrained that it's actually [a subdefinition of the word](#)—but their social complexities didn't ever come to my mind. "Most people's perception of them is as plodding herd animals with little individual personality and very simple social relationships or preferences," wrote ethologist Lori Marino of the Kimmela Center for Animal Advocacy in [a review of cow cognition](#). That about summed my assumptions up—until I heard Clementine's story.

A skeptical reader, however, might be inclined to dismiss Tessier's observations as anecdotal. So what does science have to say?

There's a fair bit of research on cow cognition and relationships. One [especially delightful study](#) from the University of Cambridge, which measured their reactions while learning to open a gate, described how finding a solution produced a *Eureka!*-style moment of excitement. It should come as no surprise that cows [prefer the company](#) of some individuals more than others. But it may be more surprising to learn just how [important licking is to them](#), reducing tension and helping individuals bond, like grooming in primates.

As for social organization, biologists have long [described hierarchies in the few feral herds](#) that exist across the world, providing a glimpse into how cows would live in a natural setting. Those groups are matriarchal and led by elder females, just as Tessier has observed. Hierarchies have also [been observed in farmed cows](#), but there are no records in either feral or farmed cows of the sort of peacekeeping behaviors Tessier describes.

"There is not much work on this," says [Cédric Sueur](#), an ethologist at the University of Strasbourg who has studied group dynamics in European bison—in whom he documented [female leadership and collective decision-making](#)—and their farmed cow relatives. Still, says Sueur, "I do not exclude that [such behaviors] exist." It might simply be that researchers haven't looked for them or, as Tessier believes, that groups of cattle are too unstable and unnatural for their innate sociality to flourish.

Whether cows are raised for beef or milk, and whether they're kept on small farms or large-scale operations, turnover within herds is far greater than at Peace Ridge or in the wild. Collectives don't remain intact for years. "When a farmer changes out their stock, they're interrupting whatever social hierarchy was allowed to happen," says Tessier. "It might be that every six months to a year, members are taken away. That breaks up relationships you might have been able to observe."

[Christian Nawroth](#), an ethologist at the Research Institute for Farm Animal Biology in Germany, calls this "a very important point" and agrees that captivity in production settings "decreases the possibility of expressing social behavior." He also points to research on reconciliation and conflict resolution in [domestic pigs](#) and in [goats](#). "Settling disputes is probably something we could observe in cows," Nawroth says.

The next question would be whether that reflects care for the well-being of other cows and even a conscious attempt at maintaining a herd's good vibes. Tessier is certain that this is so, although an alternative explanation, says Nawroth, is that dominant individuals "want to have it quiet in the pen" and decrease the risk of injury to four-legged bystanders.

Perhaps research on stable herds at sanctuaries will someday resolve that question. Indeed, the new [research program at Farm Sanctuary](#) in New York was launched with the belief that more can be learned—not just about cows, but about all farmed animal species—at sanctuaries than in dairy stalls and livestock pens. In the meantime, Clementine will be watching over her herd, keeping the peace, as her own caretakers understand.

We hope you enjoyed [Brandon Keim's column](#), [Pet Psychic](#). Check back on [PopSci+](#) in April for the next article.

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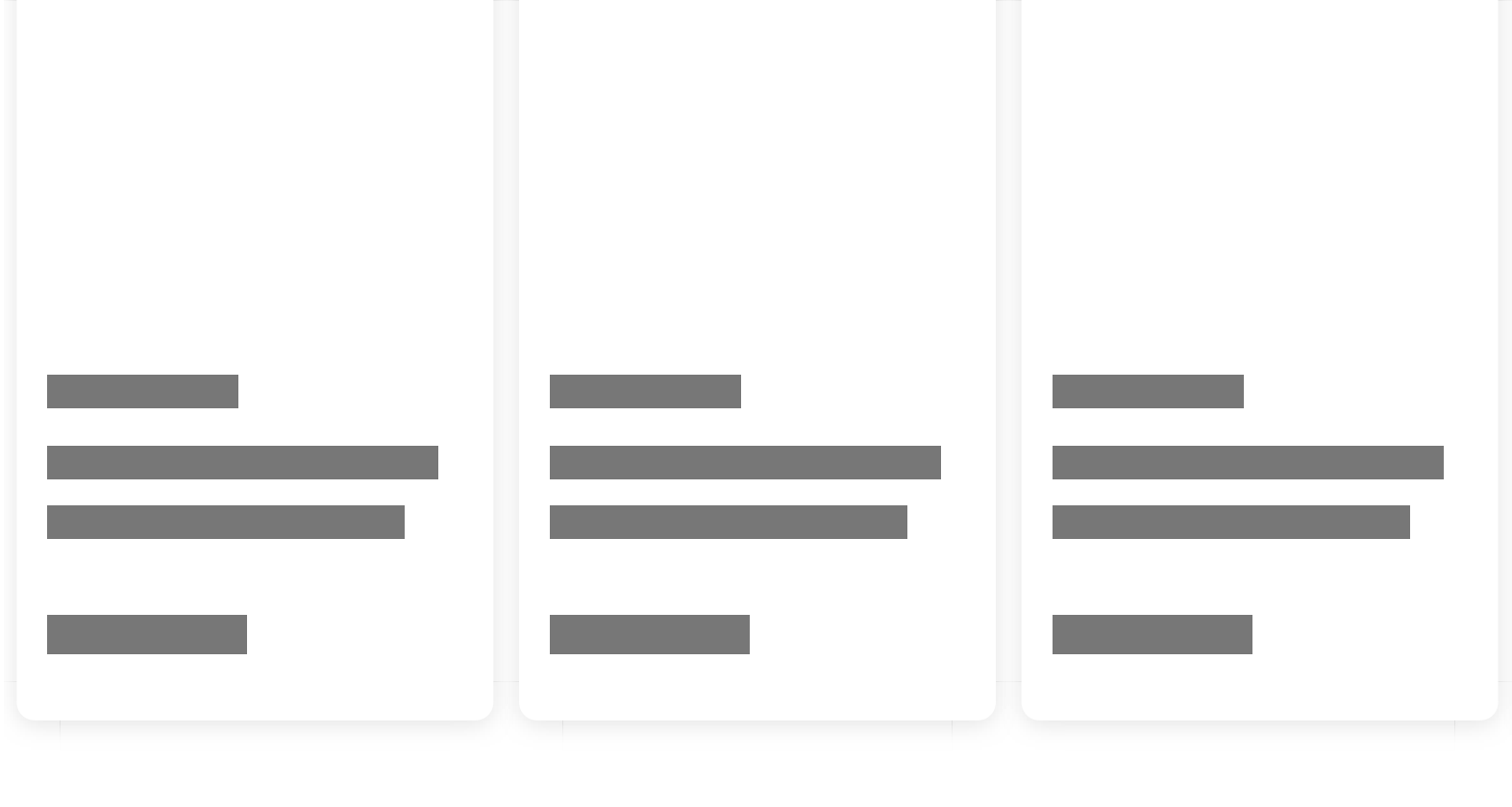
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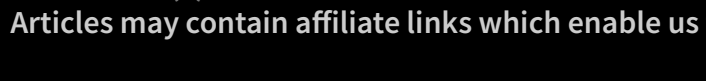
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