

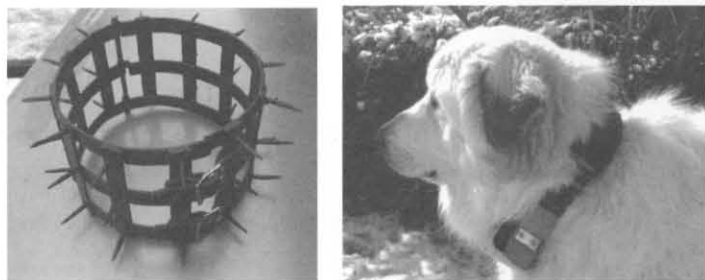
# Sheep and LGD's: Evidence of an Ancient Relationship of Trust?

Keith T. Weber with J. Bret Taylor

As Pyr fanciers, we know the Great Pyrenees is a livestock guardian dog (LGD). But, have you ever wondered what influence guardians have on the livestock they protect? In other words, apart from the obvious fact that guardian dogs can save the lives of sheep, which is a substantial affect no doubt, are there any day-to-day, hour-by-hour effects on the foraging behavior of sheep?

I've often wondered about this and recently had the opportunity to answer this question. I'm the Director of a Research Center at Idaho State University and we teamed with fellow researchers from the USDA and Oregon State University to study the interaction of LGD's and sheep at the USDA, Agricultural Research Service, US Sheep Experiment Station (USSES) in Dubois, Idaho.

Our study replaced the historic spiked-collar, worn by the predecessors of current-day LGD, with a state-of-the-art GPS collar that monitored their location every second of the day. Using the data collected by GPS collars worn by both LGD and sheep, we were able to compare the activities of "sheep with LGDs" to "sheep that did not have LGDs with them".



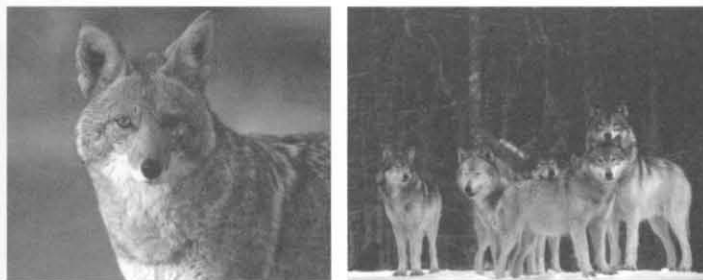
**Figure 1.** A functional spike collar as traditionally worn by livestock guardian dogs (left) and the GPS collar worn by LGD's in this study (right). The Great Pyrenees pictured here is Simon (LadyHawke's Delta Force).

What we found was absolutely fascinating:

- Even though the sheep were rotated through different pastures, their overall daily activities did not differ between pastures.
- Even though different groups of sheep wore the GPS collars throughout the study, their daily activities did not differ compared to other groups of sheep.
- However, sheep that had a LGD along with them always exhibited different daily activities compared with the sheep grazing without a LGD in their pasture.

- Sheep with LGDs seemed to move more freely and covered more ground in each pasture compared with sheep grazing without a LGD.

Why? Well, that's the million dollar question and we will never know for certain unless we learn how to speak to sheep. But, we can speculate based on our own experience with livestock, rangelands, and Great Pyrenees. You see, the USSES is the home of not only sheep and LGD's but is habitat for abundant wildlife including coyotes and wolves.



**Figure 2.** Predators are fairly common throughout the west, including coyote (left) and wolves (right).

So, if I was a sheep and I knew predators were afoot, I would probably be pretty nervous. As I grazed a pasture, I might take a mouthful and then look around and listen. Once I found an area that seemed pretty safe, I would probably stick around there and not venture out too much. However, if I had a big dog with me that I trusted to protect me, I might spend less time on the look-out for predators and would likely feel more comfortable venturing over to the next hill to gobble up the fresh grasses growing there.

Now, I am not entirely convinced this is the actual thought process of sheep, but it certainly makes sense in light of the data that we recently collected and analyzed. It also makes sense from a historical husbandry perspective as both sheep and Great Pyrenees have effectively grown up together for centuries. And thus, what could be better than a long-term relationship to build such a level of trust?

## ABOUT THE AUTHORS

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