

Predation Control



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Predation

Lamb (Kid Goat) Loss:

- National
 - 3.9% Lamb Crop
 - \$20 Million
- Texas
 - 20% Lamb (Kid) Crop
 - \$20 Million

Adult Loss:

- National Sheep Flock
 - 1.8% Flock
 - \$12 Million
- Texas
 - 3.2% Sheep & Goats
 - \$5 Million

Origin of Livestock Guardian Dogs



Livestock Guardian Dogs



Photo provided by John Walker

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Texas A&M AgriLife Research
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The Texas A&M University System

Domestic livestock, particularly sheep and goats, are susceptible to predation from various wild and domesticated animals. With the proper instinct and training, livestock guardian dogs (LGD) can minimize predation on livestock. Such was the case when Texas A&M AgriLife Research acquired the Carl and Bina Sue Martin Research Ranch in 2009. The ranch weaned only a 20 percent lamb crop that year. Livestock guardian dogs were acquired to reduce predation, and since 2012 the lamb crop has exceeded 100 percent. Other sheep and goat producers have used LGD and have had similar results.

Though common elsewhere for centuries, LGD have only been used commonly in the US since the late 1970s. As a result, many livestock producers are unfamiliar with how best to use these dogs to reduce predation. What follows are the basics of guardian dog behavior, training, and how to integrate them into a livestock operation. This information combines anecdotal experience and scientific research on canine behavior.

How LGD reduce predation

Unlike methods such as hunting and snaring that are used after predation occurs, guardian dogs can prevent predation by deterring predators all the time. This level of security can save you money and increase your peace of mind.

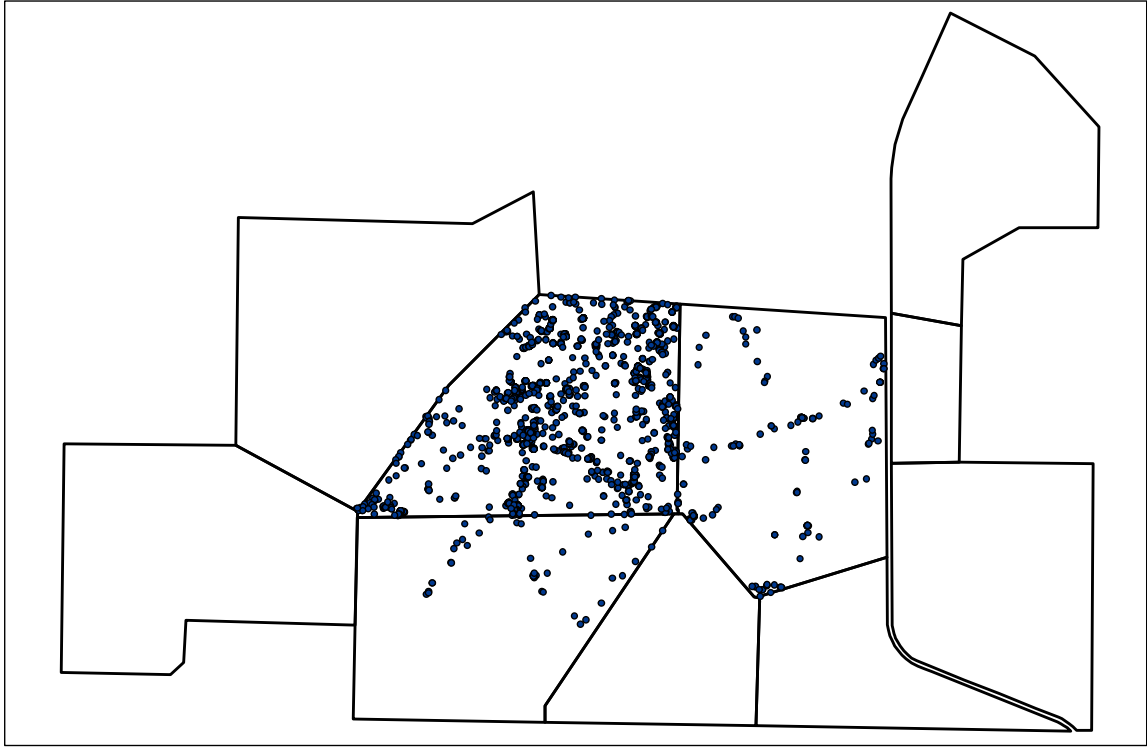
Guardian dogs reduce predation in three major ways: 1) territorial exclusion, 2) disruption, and 3) confrontation. Territorial exclusion is particularly important for protection against other dog like (canid) predators. All dogs, whether wild or domestic, use scent to mark the boundaries of their territory. Other canids, even of different species, recognize these boundaries and tend to seek unoccupied areas rather than risk invading another dog's territory. Disruption is aggressive behavior such as barking and posturing that falls short of direct physical aggression. Finally, confrontation is used when predators are not dissuaded by exclusion or disruption. However, even confrontation is not necessarily lethal to the potential predators.

Properly reared guardian dogs are exposed to livestock from birth. They do not regard livestock animals as competition for territory but rather an extension of their pack. Guardian dogs include livestock within their territory, and they prevent losses by discouraging predators, such as coyotes, from that territory. Ultimately, predators avoid protected pastures and keep safely away from flocks to avoid being detected or confronted by the guard dog.

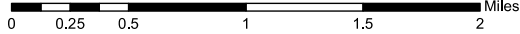
Martin Ranch Research

- ⦿ Donated to Texas A&M in late 2000s
 - 2009
 - 25% lamb/kid crop
 - 2010
 - Implemented a LGD program to be able to conduct research
 - 2015
 - 125% lamb/kid crop
 - Hired Dr. Redden/Tomecek
 - Implemented LGD Research Program

Texas Scenario



Martin Ranch



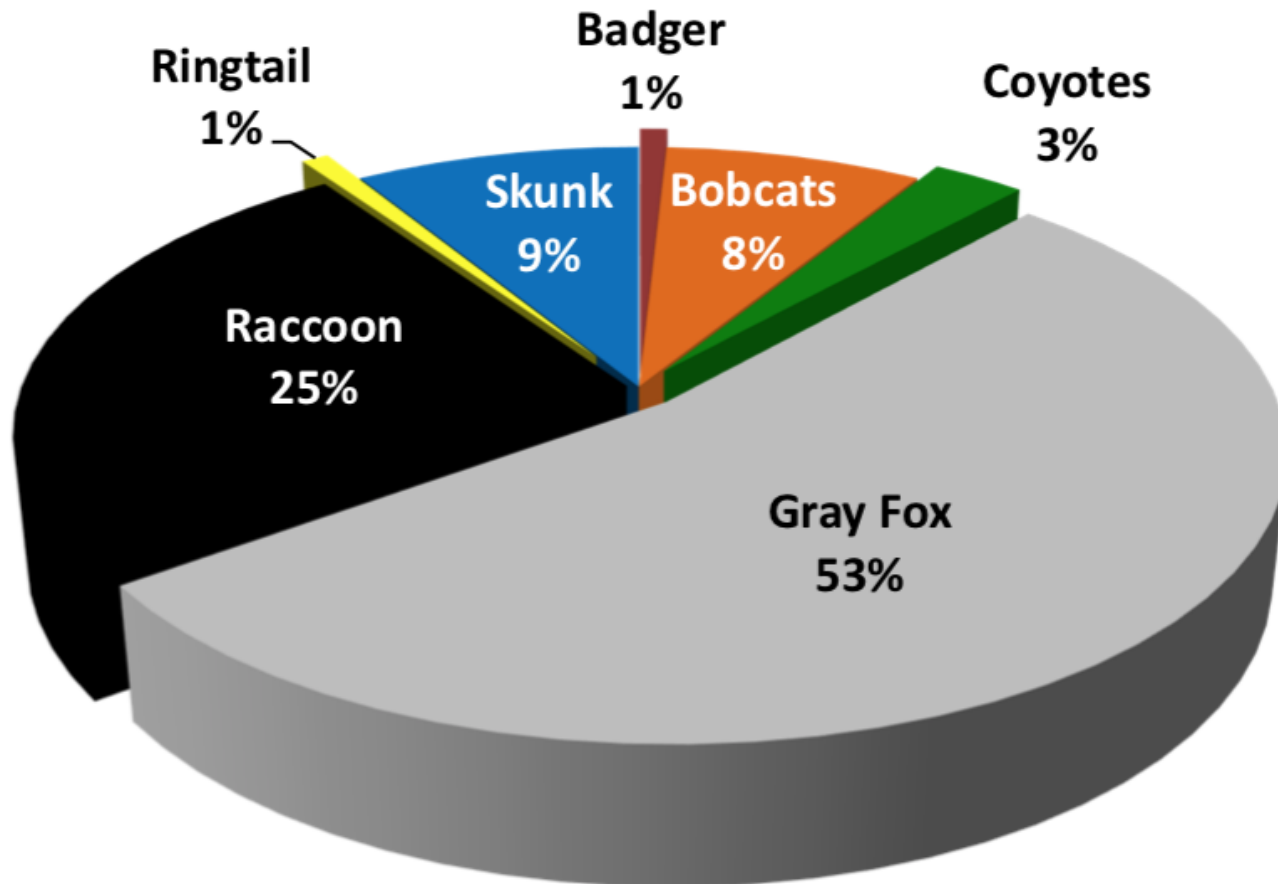
- Nigel
- Martin Ranch

Justin French
TAMU WFSC
02/24/16
Datum: WGS 1984
Projection: NAD 1983 Zone 14N



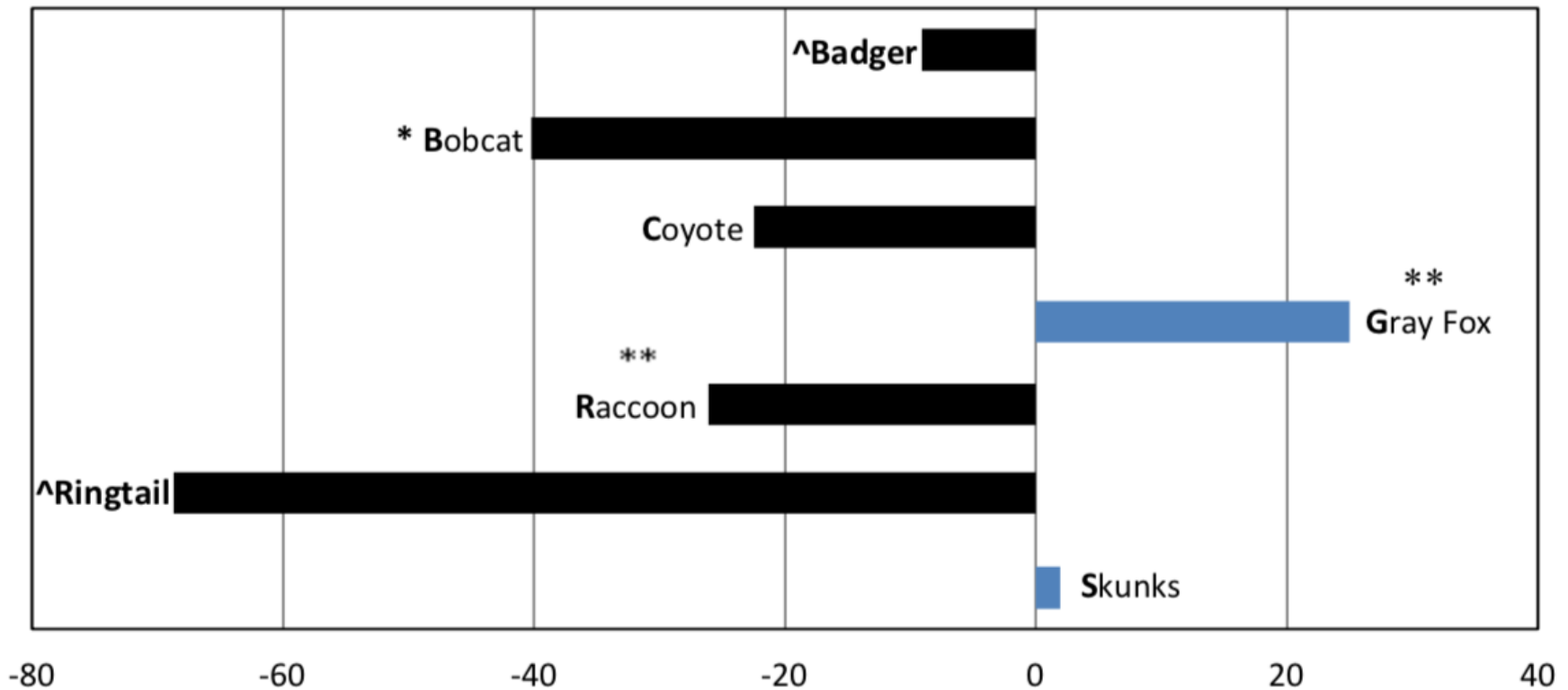
Martin Ranch - Menard TX

Proportion of All Mesocarnivore Detections Observed



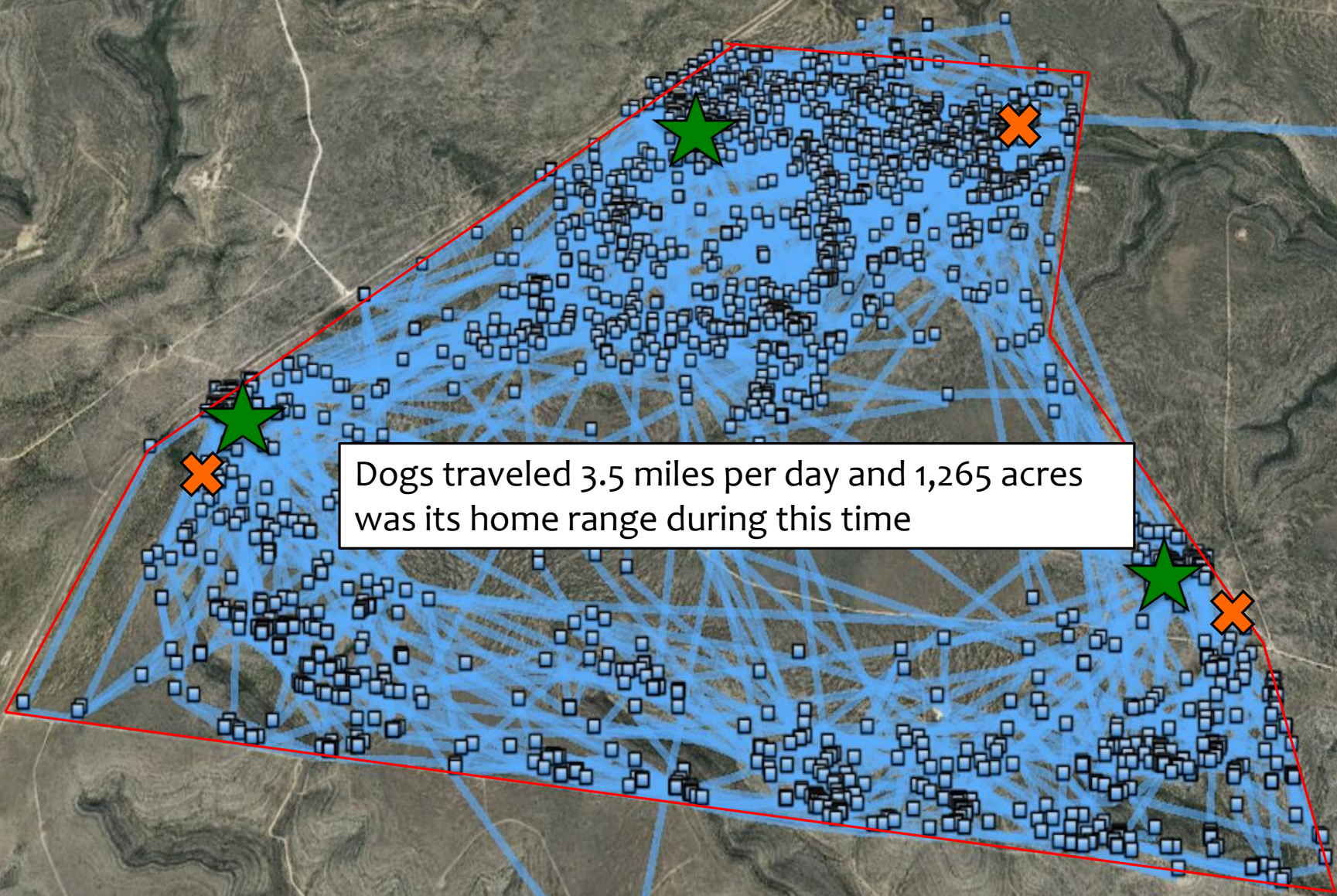
Tomecek (unpublished data)

Pastures (in Relation to LPD Unoccupied Pastures)



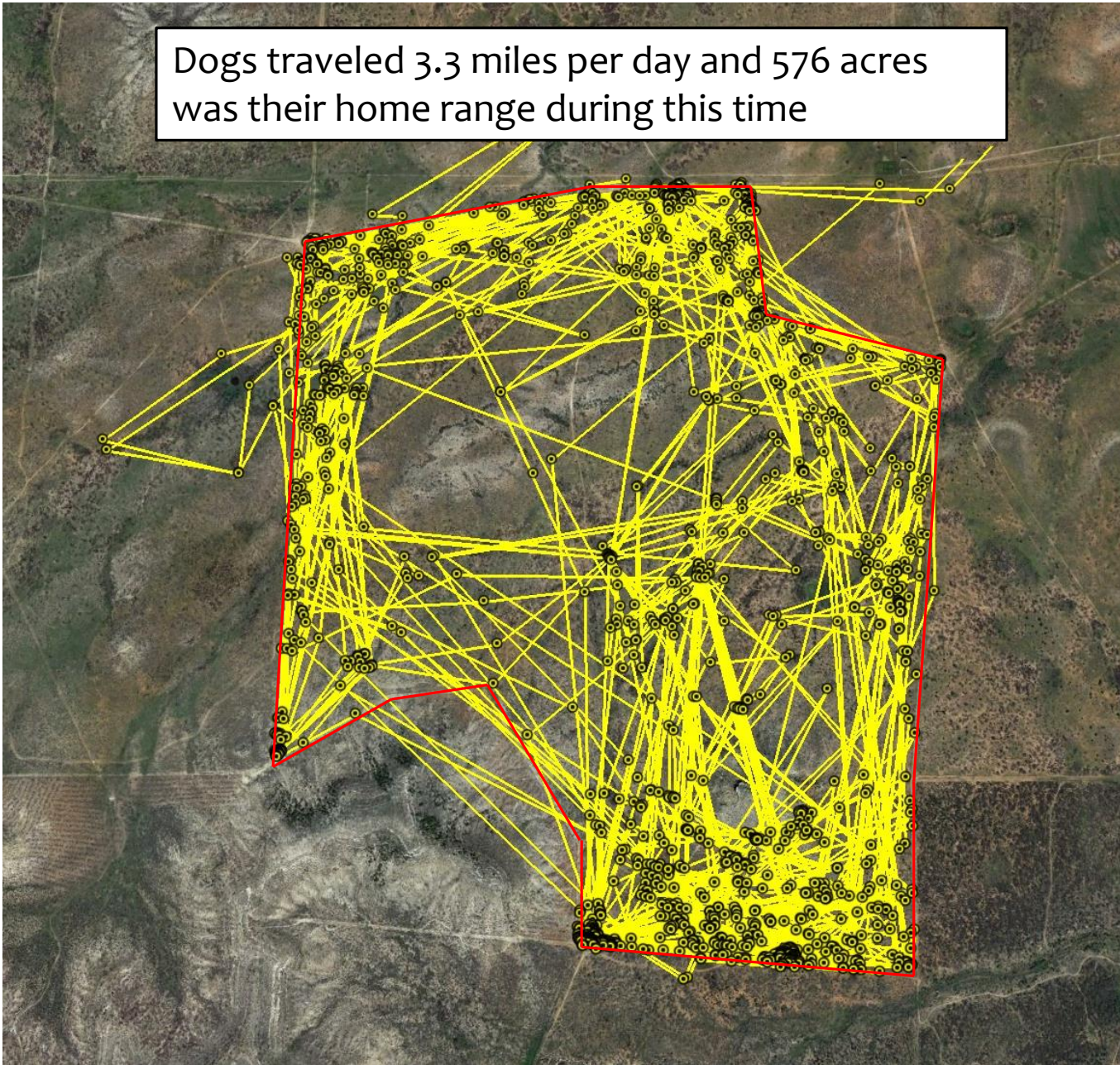
NSIIC - LGD Cooperator Project

- ⊙ 6 Cooperators (2 extras)
 - No LGD Experience
 - Large Range Operations
 - 22 Bonded LGD Ready to Work - One Supplier
 - Tracked Lamb Crop
 - Tracked LGD with GPS Collars



Dogs traveled 3.5 miles per day and 1,265 acres was its home range during this time

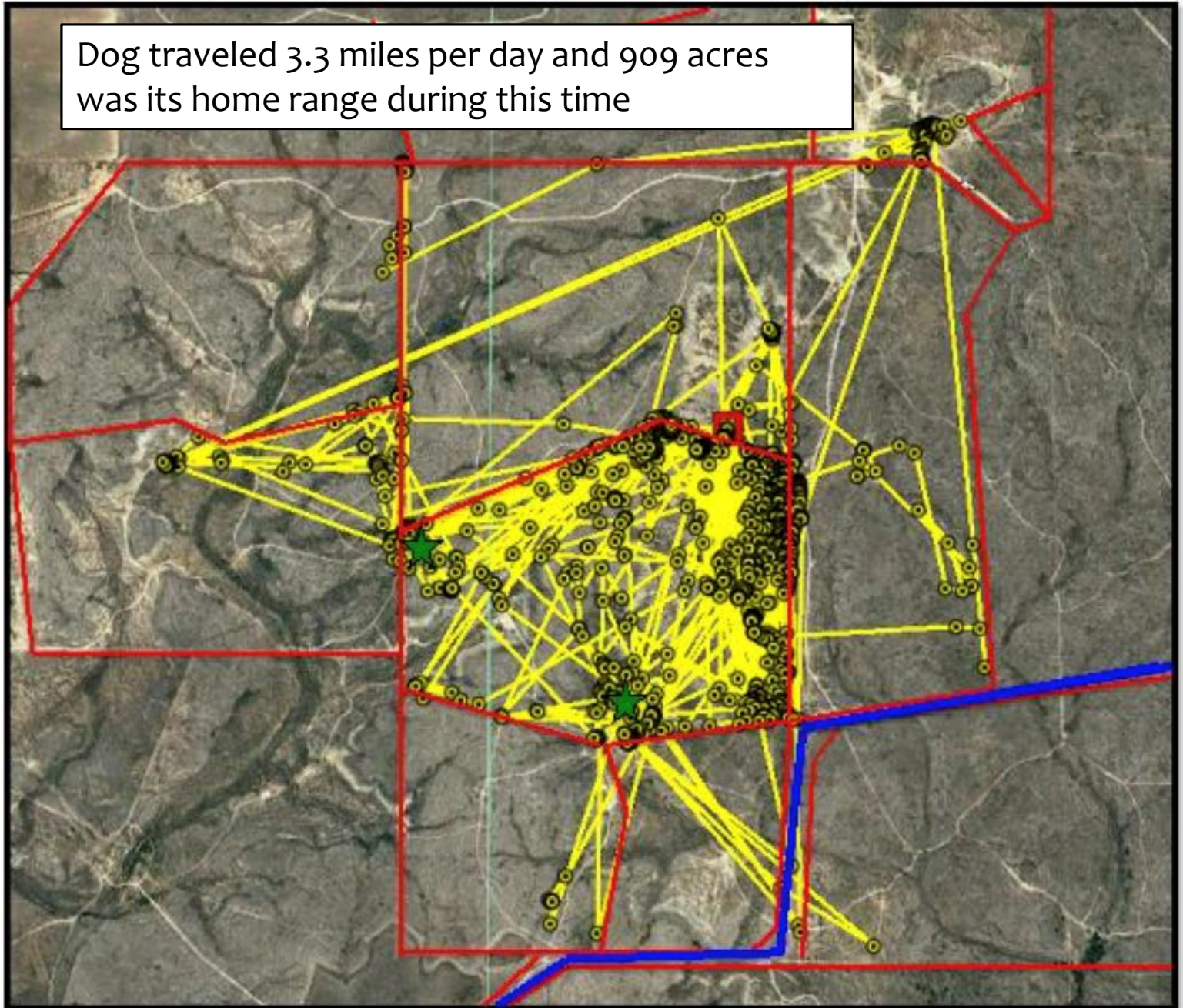
Dogs traveled 3.3 miles per day and 576 acres was their home range during this time



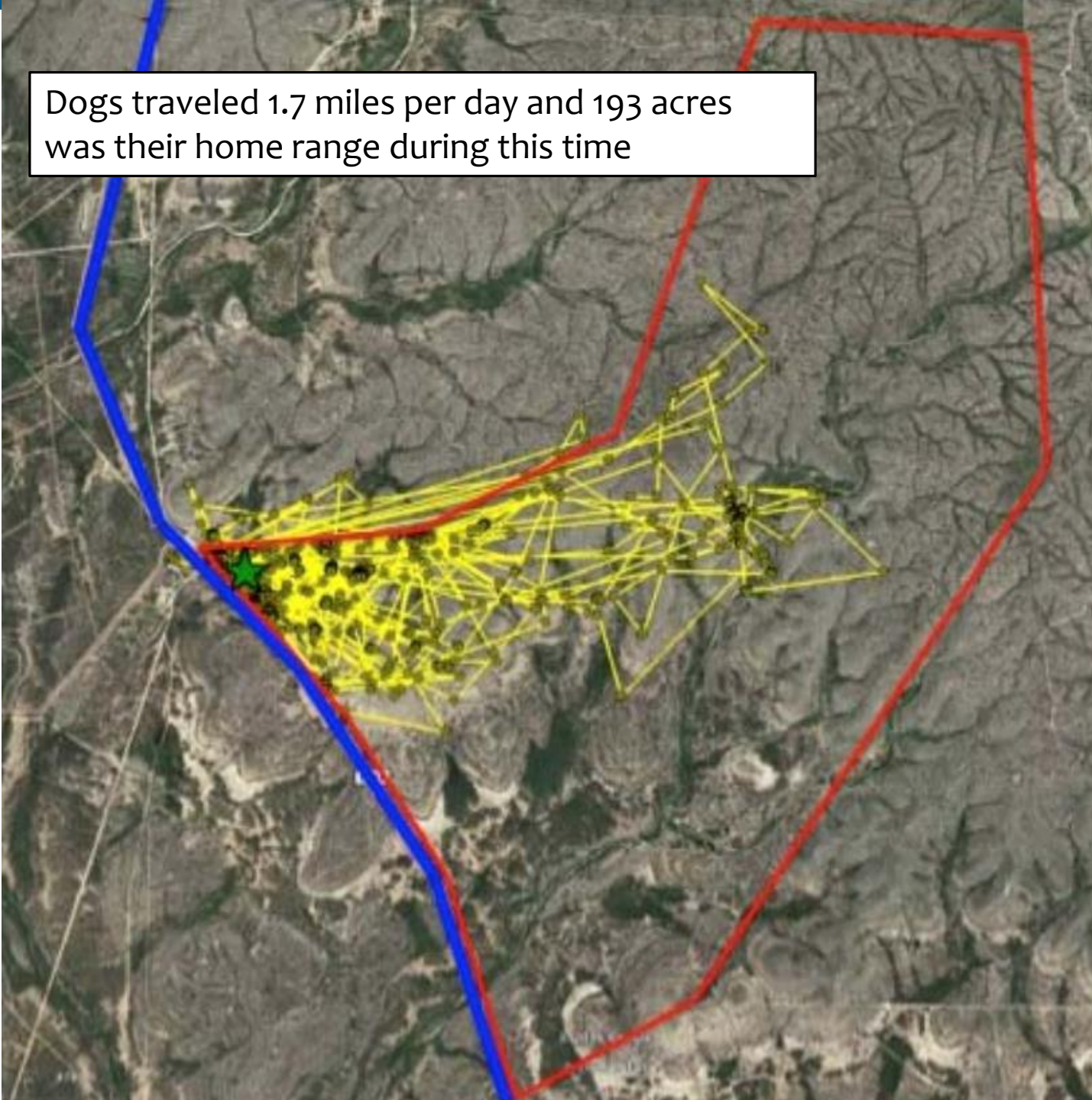
Case

Dog traveled 3.3 miles per day and 909 acres was its home range during this time

- ⊙ Rest
- La
-
-



Dogs traveled 1.7 miles per day and 193 acres was their home range during this time



Results

- ⦿ Case Studies are Online: sanangelo.tamu.edu
- ⦿ All cooperators reported issues!!!!
 - Dogs killing lambs & harrasing deer
 - Dogs leaving and never seen again
 - Dogs not staying with sheep and can't catch dogs
- ⦿ Bottomline
 - 50% of cooperators found the dogs to be helpful
 - 50% of LGD remained after 1-2 years
 - Breeders report 90+ percent success rates

A photograph of a large flock of sheep in a grassy field. In the foreground, a white dog is lying down, looking towards the camera. The background shows a line of trees under a blue sky with some clouds. A large, semi-transparent white circle is overlaid on the right side of the image, containing text.

Using GPS Trackers

Texas A&M AgriLife

John Walker

Reid Redden

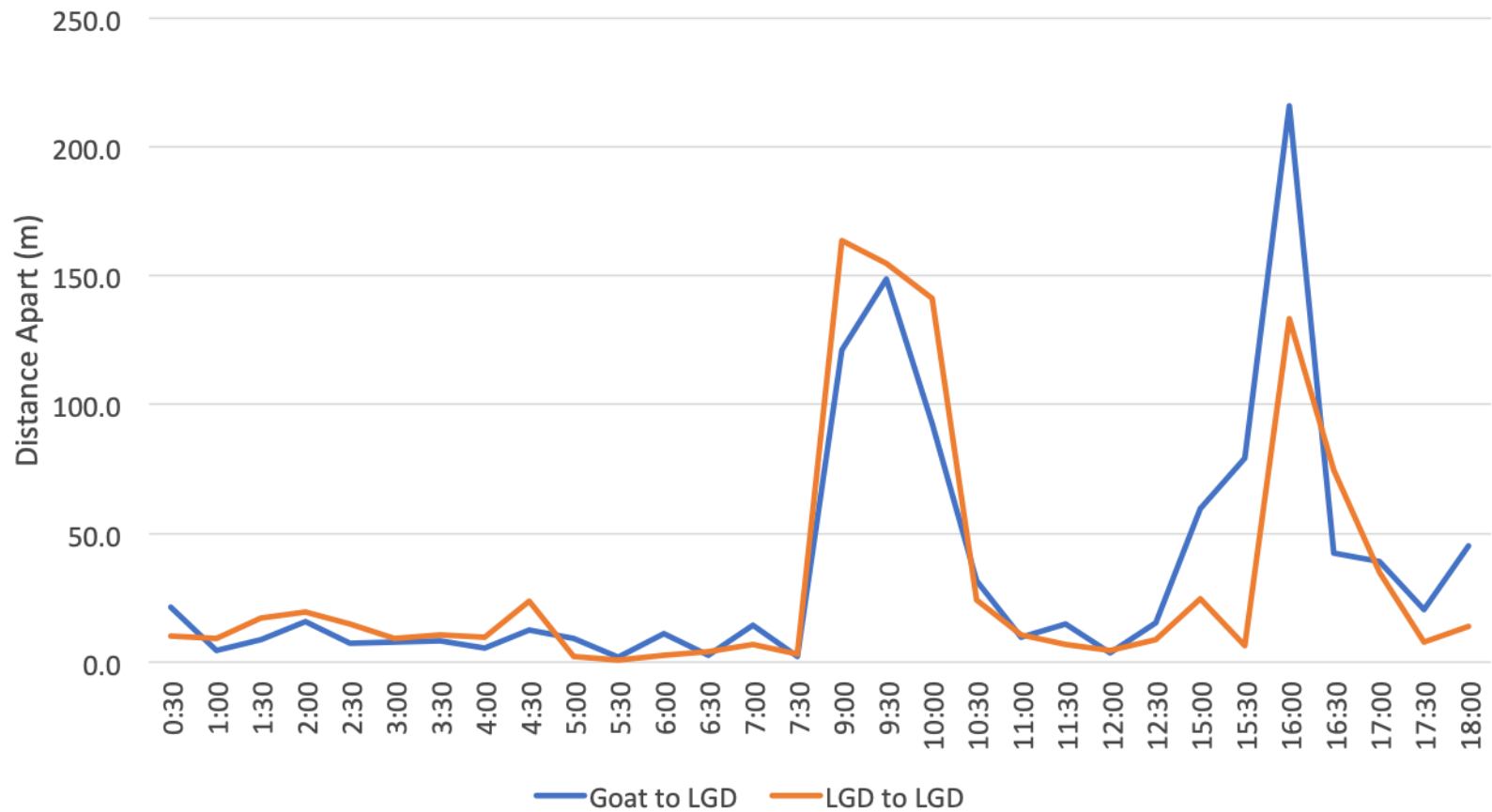
Bill Costanzo

Comparison of trackers



Unit Name	Battery Life	Cost	Monthly Service Cost
i-gotU GT-120	10 days	\$55.99	NA
Optimus	5 – 7 days Depends of strength of cell signal	\$59.95	\$20.00
Yabby/Oyster	Up to 3 years	\$129.00	\$6.55

Distance between animals

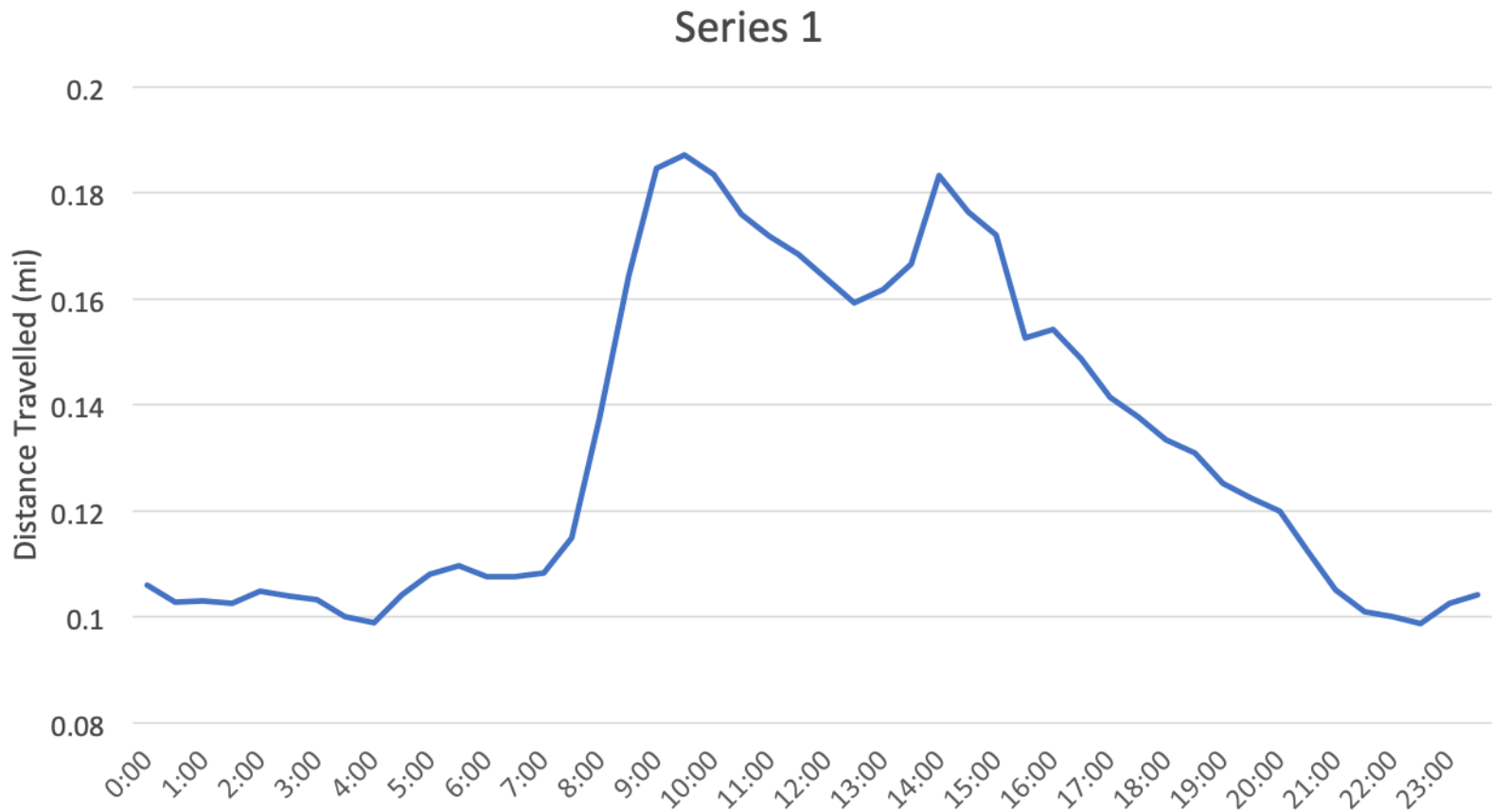


When are dogs most active?



Activity of LGD – 7 miles/day range 4 – 12

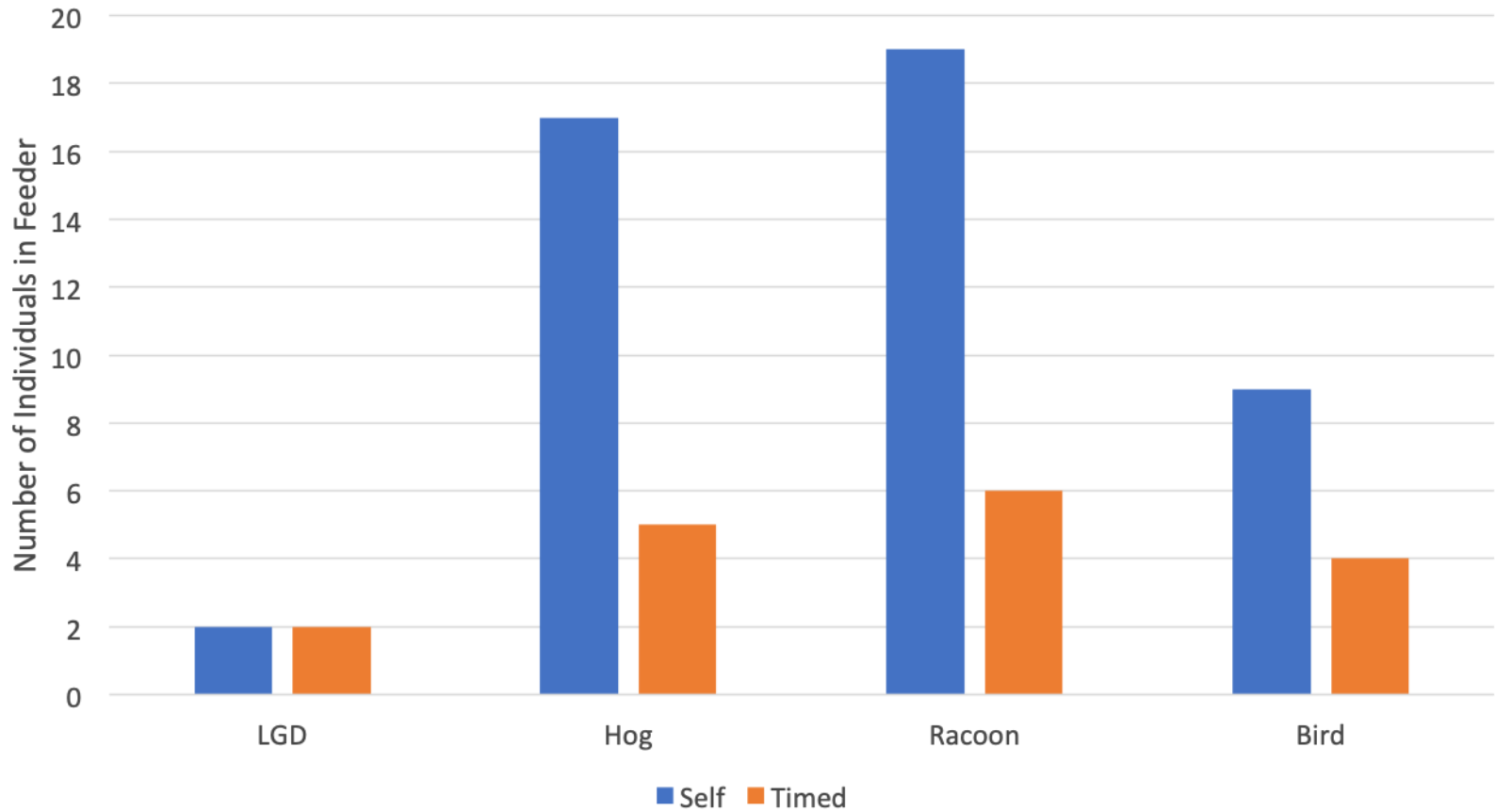
Average of 456 LGD days

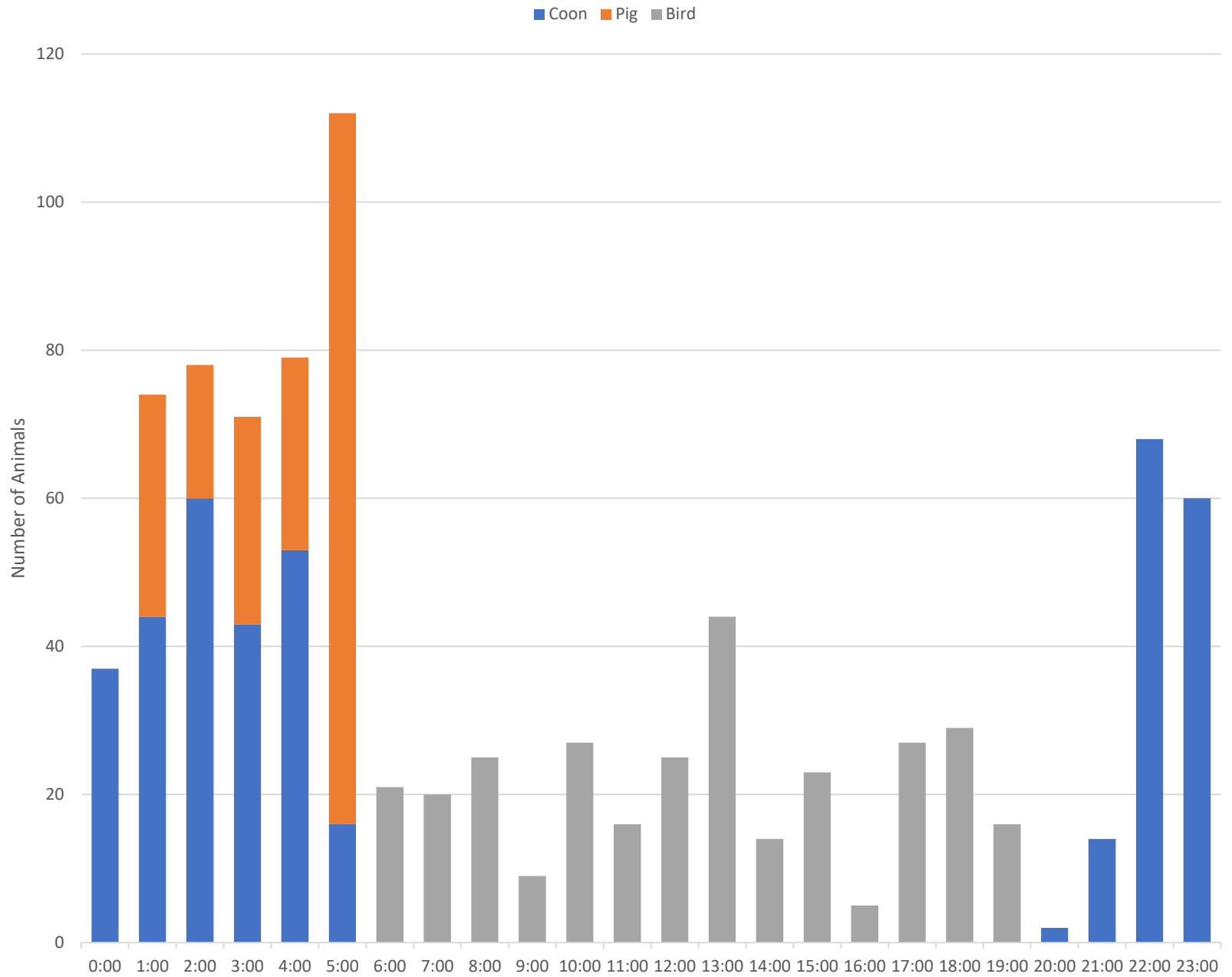


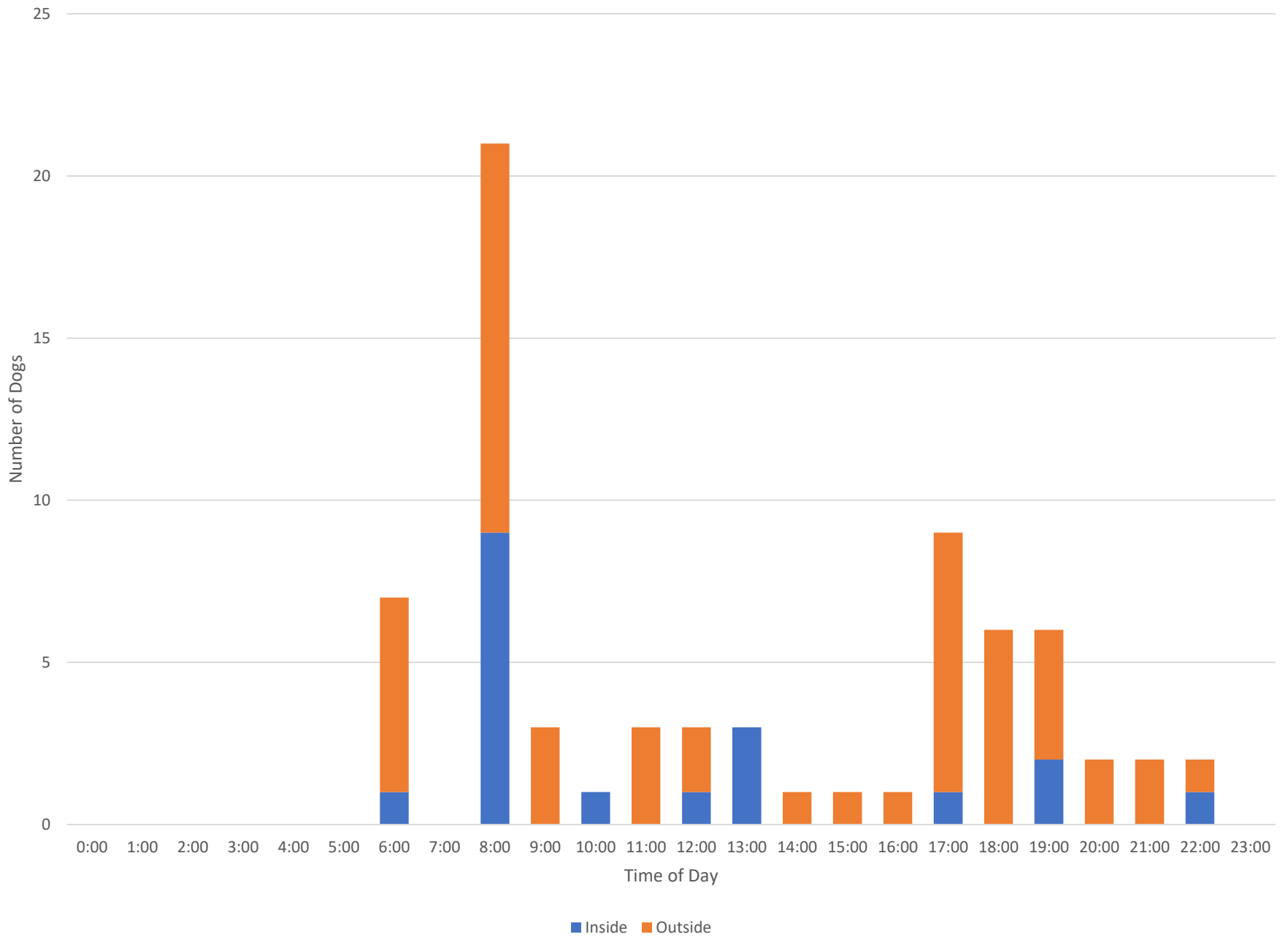


What's
been
eating
your dog
food?

Use of Feeders







LGD Feeders

New Feeder

LGD Research Specialist

Bill Costanzo

- Grant Funded
- Texas Predator Management Board

Questions

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