FIELD NOTES
THE NEWSLETTER OF
THE SOUTHWEST WISCONSIN CWD, DEER AND PREDATOR STUDY

USING GPS TO UNDERSTAND ANIMAL BEHAVIOR

Field Notes Edition 2 - Originally Released August 2017

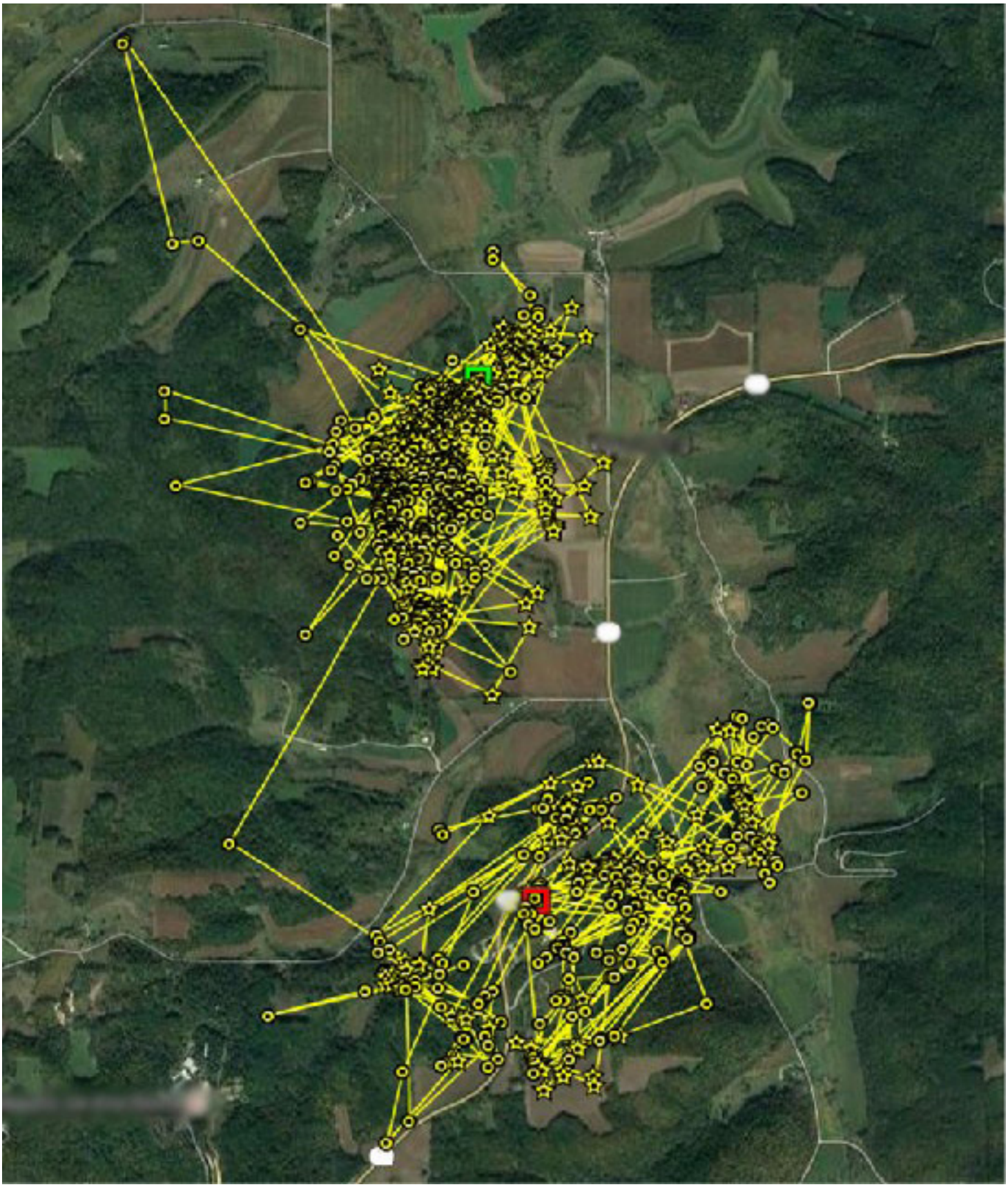
In the early hours of May 22, collared button buck No. 24213 struck out south from his natal range, the home territory where he was born and weaned. He covered only about a mile of ground before choosing his new home turf. Fifteen days prior, on May 7, another button buck, number No. 24201, began moving east from his own natal range. He walked for three days, eventually turning northeast in search of his new home. He chose a patch of woods and open fields more than 10 miles northeast from his birthplace. He made two sorties out from his new range, one north and one south, before settling into a routine.

We know that male deer leave their natal ranges around their first birthdays or shortly thereafter during the following rut. Before GPS collars became available, researchers relied on radio telemetry to track deer movements.

We checked on radio collared deer one at a time, sending out field crews to scan for their collar signals. If a deer was on the other side of a hill or had moved too far in the days since its last ping, we had no way of knowing where it had gone or why, or if it was even still alive. Even in the best conditions, we could only estimate a deer's location.

The path of buck No. 24201. He set out from his natal range in the southwest of the photo and moved northeast to his new home range over the course of three days.

This limited picture of deer behavior narrowed the types of research questions we could ask with radio technology. In the past, we would notice that a deer had left its natal range. After driving back roads with our telemetry equipment, we would (hopefully) find its new spot, never knowing what happened in between.



Buck No. 24213 moved south from his natal range, settling just over a mile from where he began a day earlier.

With radio telemetry, we could see the big pictue of deer behavior. For example, we knew that male deer disperse from their mothers' ranges when they are about a year old. Now with GPS collars, we can monitor deer remotely, almost in real time.

This wealth of location data allows us to study the fine-grained details of deer behavior. For example, how do deer behave just before and during their dispersal from natal ranges? Do male deer make small exploratory movements before setting out? How does the landscape influence how far deer will move? Do they take a straight path, or do they search around before settling in one spot? What do they look for in their new home range, and do they immediately settle there? Or do they search around before choosing?

Beyond dispersal, GPS collars allow us broadly to understand how animals move and use the landscape. In our next newsletter, Part II of this article will look at how advances in GPS technology allow us to collar smaller animals, like bobcats, and learn about their elusive behavior.

Bucks No. 24213 and No. 24201 are just two examples of the many dispersals we'll see over the course of this study, and they behaved very differently in their dispersals. As we observe more deer dispersing, we'll be able to uncover patterns in their movement. But for now, we are content to marvel at some of the unique things these deer are showing us.

* * * * * *

Photo Credit: Jerry Davis