



# American Kestrels and the Importance of Serendipity in Science

**By: Carter Crouch**

Ph. D. Candidate

---

During the fall of 2014, I started a project on American kestrels. You may know them by the old common name of “Sparrow Hawk”. My primary project is on Northern bobwhite habitat restoration, but I also wanted to add a component to my dissertation that addressed other grassland birds.

I have always been fascinated by kestrels and was interested in learning about them. That coupled with the facts that there is a high density of kestrels in South Texas, they are highly visible due to their propensity of sitting on powerlines, and that they winter in South Texas, made them seem like a good species to work with. The last one is important because it allows me to study them from September-March, an important logistical consideration for a graduate student studying bobwhite from March-early September. In addition to these considerations, HOW AWESOME IS IT TO STUDY FALCONS?

I initiated the project with a few questions: How large of an area do kestrels use in the winter? Said another way, what is their territory size? Are they returning to the same territories year after year, or what is winter territory site fidelity? What is their survival during the winter in South Texas? I undertook this project in large agricultural areas, where wide open spaces with short vegetation and plentiful perches, such as powerlines, attract a high density of kestrels. This is not what I would typically consider quality bobwhite habitat, but I often flushed bobwhite along the grassy roadways and drainage ditches in these areas.

I trapped kestrels with something called a bal chatri trap baited with a wild-caught mouse (See photo). Once trapped, I banded kestrels with a United States Geological Survey aluminum leg band and 3 color leg bands. I also applied non-toxic fabric dye to the breast, belly and under the tail (See photo). These color combinations allow me to identify individual kestrels. Uniquely marked kestrels are crucial to following them on their winter territory.



*Left: American kestrel caught in a bal chatri trap. Right: Color marked American kestrel, ready for release.*

I trapped and marked 34 kestrels in 2014 and 31 kestrels in 2015. I did not trap in 2016, but I am still resighting previously marked kestrels that returned to their territory. I have collected data that will allow me to answer my research questions; however, here I would like to focus on two instances that illustrate the role of serendipity in wildlife research. Dr. Brennan once told me, “Never discount the importance of serendipity in research”, and I have come to appreciate that sentiment. Merriam-Webster defines serendipity as the faculty or phenomenon of finding valuable or agreeable things not sought for.

On December 10, 2014 after a long day of trapping I was hoping to catch one more kestrel before the sun went down. She was not interested in the trap, but as it got darker I watched her fly underneath the rafters of an oil tank before flying back out to the powerline. I wondered if this is where she may go to roost, so I waited and watched. She went back, and I watched her sit in the rafters until it was too dark to see. Although documenting roost site use was not an expected goal of this project, that evening I realized I could obtain roost site data without the use of telemetry equipment. I have since discovered over 30 kestrel roosts in both shrubs, trees and various man-made structures, all of which would not have been possible without “accidentally” finding the first one.



*Examples of American kestrel roost site locations in South Texas.*

During September of 2015, I found a kestrel with only an aluminum leg band in a territory of one of my color banded birds from the previous year. The color leg bands are made of plastic, and occasionally, kestrels lose them. During this study, I have had two kestrels lose two of their three color bands. Since this kestrel was banded and in the same spot as the year before, I was confident it was my kestrel and she had just lost all 3 of her color leg bands. But, I needed to catch her to be sure. After 1.5 months of trying to catch her unsuccessfully, I finally caught her on November 29, 2015. To my surprise the leg band did not have a number I recognized. The band read 1623-44426, this was not a kestrel I banded! After contacting the Bird Banding Lab at the Patuxent National Wildlife Research Center in Maryland, I found out that this bird was banded by Jared Clarke, a volunteer bird bander in Saskatchewan on June 30, 2015. She was banded as a chick, and 152 days and over 1580 miles later she was recaptured in South Texas and being marked with blue dye, 2 black leg bands and a white leg band. While I am not sure if she returned to Saskatchewan to breed, she returned to her winter territory in South Texas during September 2016. As I am writing this, she is still hunting grasshoppers and mice within 200 yards of where I first banded her a year earlier. I often ponder what the likelihood of catching this bird was. If she picked a territory a mile away, I may not have ever seen her. I'm glad this spot was appealing to her!



Left: 1623-44426 and her siblings in Saskatchewan (Photo by Jared Clarke). Right: 1623-44426 in a bal chatri trap in South Texas (Photo by Matthew Garrick).

A quote sums up my thoughts on serendipity in wildlife research...

“In reality, serendipity accounts for one percent of the blessings we receive in life, work and love. The other 99 percent is due to our efforts.” Peter McWilliams

Wildlife research is hard work. It entails a great deal of planning and even more adapting as circumstances change. However, don't discount the importance of the one percent!

For more on Kestrel's please click the links below

<http://bandinginsask.blogspot.com/2015/12/one-little-birds-2500-km-journey.html>

[http://www.reflectionstexas.com/?page\\_id=878](http://www.reflectionstexas.com/?page_id=878)

[https://soundcloud.com/theprairienaturalist/the-prairie-naturalist-episode-45-02feb17?utm\\_source=soundcloud&utm\\_campaign=share&utm\\_medium=facebook](https://soundcloud.com/theprairienaturalist/the-prairie-naturalist-episode-45-02feb17?utm_source=soundcloud&utm_campaign=share&utm_medium=facebook)

---

**Over the many years that I have been involved with research on wild quail, I have always thought it was important to understand how other species of wildlife shared and used habitat space which was also used by quail. This began with my research on Mountain Quail in California 35 years ago and it continues to my research on Bobwhites today.**

**This article by Carter Crouch documents some interesting aspects of habitat use and behavior of the American Kestrel, a small migratory raptor that winters in South Texas and shares grassland-shrubland habitats with Northern Bobwhites.**

**Carter embarked on this research journey with the idea of learning about how Bobwhites and Kestrels might use and share habitat resources during the winter months in South Texas.**

**What he learned about how Kestrels make their living during the winter in South Texas shows us how research can lead to serendipitous discovery in wildlife science.**

-----Leonard A. Brennan