



# THE COVEY



A NEWSLETTER FOR LANDOWNERS, QUAIL HUNTERS,  
ENTHUSIASTS, AND SCIENTISTS

A publication of the Caesar Kleberg Wildlife Research Institute  
at Texas A&M University-Kingsville

Winter 1999  
Volume 2, Issue 4

## OUT WITH THE OLD, IN WITH THE NEW

The desire to personalize any endeavor is an interesting part of human nature. And I am no exception. Every project I work on, whether it's a research project or a classroom lecture, I like to leave my "mark", to develop it in a style unique to me. After Dr. Andy Radomski (previous editor) left and I assumed the editorship of this newsletter, I began to feel the need to make it my own. But what changes could I make? After many nights of brainstorming, I decided to make a considerable modification: change the name of the newsletter. The only problem is that a new name meant new graphics. Back to the drawing board. After many Picasso drafts, I finally decided on a drawing. The only problem was finding someone to draw it, but thankfully I believe I have found the right artist.

So what are these changes? Well, I've realized that suspense is the best medicine for continued readership. You'll just have to wait and see. But, I believe you will enjoy the new design.

## A BOBWHITE BOOGIE MAN?

Growing up in a relatively secluded ranch, I remember my mom would not let me go outside the house after sunset because "El Chamuco" (The Boogie Man) would get me. The idea of being kidnaped by the Boogie Man was more than enough to keep this 6-year old from stepping out into a dark, dreary night. Of course, there was no Boogie Man; my mom just wanted me to feel safe inside the house. Becoming involved with the South Texas Quail Project (STxQP) has made me wonder if momma quail also warns her chicks of a Boogie Man. Although bobwhites have been studied extensively, brooding and roosting ecology have received relatively less attention than other aspects of the bobwhite life history. Last year, we had the opportunity to collect some data on the roosting ecology of bobwhite broods.

In Fall 1999, we monitored 10 broods to 5 weeks of age via radio-collared adults. Broods were located at night while taking extra care not to disturb or flush the covey. Once pinpointed, we would drop a radio transmitter adjacent to the location (to find this site again the next day) and promptly leave. We returned in the morning and obtained coordinates using a Global Positioning System (GPS) and measured roost-site habitat variables. Broods also were located during the day to obtain more GPS coordinates so that brood home ranges could be calculated.

We observed relatively good brood survival. Six (60%) broods were alive at 5 weeks. Average brood size declined from 10 chicks at time of hatching down to 6 (week 3), and remained at 6 chicks to week 5. Thus, 60% of the chicks survived from hatching to 21 days, and approximately 100% from 22 to 35 days. These results are somewhat comparable to chick survival in the PackSaddle Wildlife Management Area in western Oklahoma. The Packsaddle crew reported 38% chick



Photo by Danny Vasquez

After locating broods, we used GPS to obtain coordinates for roosting and loafing sites. These coordinates were used to calculate brood home ranges.

survival from hatching to 20 days, and 97% survival from 21-39 days. Thus, it appears that chick mortality is highest during the first few weeks of life.

We also were able to calculate some crude home range estimates for broods using the GPS coordinates. The average home range for broods was 18 acres. This corresponds well with a 1991 study conducted in South Texas under the direction of Dr. Fred S. Guthery. His graduate student also found home ranges during the brood-rearing period averaged 18 acres. I am curious to know how differences in habitat quality or precipitation (drought vs. wet years) affect brood home ranges. It's a good thing the STxQP is a 4-year study.

Several interesting findings arose from our roosting information. We discovered that broods were not roosting in the typical covey circle even at 5 weeks of age. Instead, the few broods we observed would be found scattered around the adults in no particular pattern. I say few because broods did not roost in open areas, typically used by adult coveys. Broods, with the adult, tended to roost under shrubs or in dense vegetation. Ninety percent of the roosting sites were located in dense shrubs in week 1. The majority of the roost sites were located under tasajillo (58%). Dense sunflower stands accounted for 23% of the roost sites, with other shrubs (example: prickly pear) accounting for the remaining 19%. The use of dense shrubs as roosting sites gradually declined as the broods aged. This use declined from the initial 90% to 70% (week 3), 53% (week 4), and finally 33% (week 5).

Because of this high use of shrubs as roosting cover, we decided to calculate the "volume of obstruction" provided by these shrubs. We visualized the shrub as a "cylinder" offering overhead protection to the brood. Using the mathematical equation to determine the volume of a cylinder, we then took the necessary measure-

ments to calculate the "volume" of the shrub (or volume of obstruction). We discovered the volume of obstruction remained relatively stable at approximately 3 cubic meters through week 5, with some fluctuations. Thus, although the use of shrubs as roosting sites declined with age, the shrubs that were used continued to offer similar obstruction through time.

As a researcher, I'm always curious in the why. Why were broods roosting under dense shrubs in Fall 99? A knee-jerk response might be for predator protection. An alternative speculation could be for thermal insulation during this relatively cooler season. Call me crazy, but I think it's something else. I bet momma quail is warning her chicks to stay under the shrubs lest "El Chamuco" will get them. Who knows, maybe there is a Bobwhite Boogie Man. Hey, it worked for my mom. Until next time--

Fidel Hernandez

If you or someone you know would like to receive a free copy of **THE COVEY** Newsletter, please write to the address below.

*Would you like to support the **South Texas Quail Project**? Send a tax-deductible contribution to:*

**South Texas Quail Project  
Caesar Kleberg Wildlife Research  
Institute, Texas A&M University-  
Kingsville, MSC 218, Kingsville, TX  
78363-8202**



**Caesar Kleberg Wildlife  
Research Institute  
MSC 218  
Kingsville, Texas 78363-8202**

Editor: Fidel Hernandez  
Layout: Alan Fedynich

**THE COVEY** is printed on recycled paper

Non-Profit Org.  
U.S. Postage Paid  
Kingsville, TX 78363  
Permit #172