

QUAIL NEWS

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The newsletter of game bird research and management from the Bollenbach Chair in Wildlife Ecology, Oklahoma State University.

BOBWHITES SHRUG OFF MAN-MADE STRUCTURES IN WESTERN OKLAHOMA

Man-made structures associated with energy development and exploration might directly or indirectly reduce habitat space for wildlife. An analysis of data from western Oklahoma indicates oil and gas developments have largely neutral effects on bobwhites.

Stacy Dunkin and associates, Department of Natural Resource Ecology and Management, Oklahoma State University, analyzed radio telemetry data collected on the Packsaddle Wildlife Management Area during 1991–2002. The Oklahoma

Department of Wildlife Conservation organized and executed this study.

The study area consisted of 4,185 acres of good bobwhite habitat. Man-made structures on the area included 32,000 yards of fences, 9,700 yards of aboveground power lines, 32,000 yards of resurfaced roads, 12 oil structures (pump jacks and tank batteries), and 11 artificial water sites.

Bobwhites nested within 6 yards of fences, 66 yards of oil structures, 5 yards of power lines, 2 yards of roads, and 80 yards of water sites.

Minimum observed distances from radio locations to structures were 0 yards for fences, power lines and roads; 5 yards for oil structures; and 8 yards for water sites.

Bobwhites seemed to avoid barbed-

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Aldo Leopold reported these accidents for bobwhites

1. Drowning during over water flights
2. Young drowning in steep ditches
3. Flying into buildings and windows
4. Flying into woven wire fences and backstops of tennis courts
5. Freezing after wetting plumage in fermenting manure

Dr. Tim O'Connell of Oklahoma State University has documented collision mortality of bobwhites flying into wind turbines in Oklahoma.

wire fences for distances up to 300 yards from a fence. Fences are an occasional source of collision mortality for quail.

Generally, power lines, oil structures and water sites had no effects on bobwhite use of space.

Bobwhites apparently selected space within 350 yards of resurfaced roads. In other words, resurfaced roads seemed to attract them. The reason for this behavior is not known.

In general, bobwhites seemed to be compatible with man-made structures on the Packsaddle area. Of course, as the quantity of man-made structures increases, bobwhites eventually will be negatively affected.

A reprint of this article will be available in the future. If you would like a reprint, e-mail Fred S. Guthery at the address given in the box below.

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VET-MED DIAGNOSTIC LABS HELP DETERMINE CAUSES OF QUAIL DEATHS

On 6 May 2008 Ken Merrill of the Sutter Ranch in Ellis County, OK, found 3 dead bobwhites near boxcars used for grain and equipment storage. The birds seemed to have died in the roosting circle.

Merrill contacted me by e-mail and I recommended that he freeze one of the birds. Subsequently a graduate student picked up the bird and took it to the Oklahoma Animal Disease Diagnostic Lab, a part of the College of Veterinary Medicine here on campus.

The specimen was a male weighing 179 grams. It had normal plumage and good muscle and fat stores. The crop was full of weed seeds and some greens.

There were no pesticides or herbicides in the gut contents, thus ruling out these poisons as the cause of death.

There was no evidence of infectious disease, although disease problems can be difficult to identify with a single specimen.

No penetrating wound or bruising was noted in the skin or muscle.

A large blood clot was present in the body cavity on lobes of the lung and liver. The left liver lobes were fractured. Accordingly, the cause of death appeared to be trauma, or physical

injury, such as might have occurred if flying birds collided with the boxcars.

Although it is rare to find intact quail carcasses in the wild, quail enthusiasts should know that diagnostic lab services are available at land grant universities such as Oklahoma State and Texas A&M. Of course, your local veterinarian could be helpful.

In the case presented, we should have collected all 3 birds. If all had experienced trauma, this would have strengthened the diagnosis.

Be sure to take proper safety and health precautions if you collect quail carcasses from the wild.

When your editor was a pimply faced youth in the 7th and 8th grade (about 1960), he lived in Milton-Freewater in northeastern Oregon. Orchards, asparagus fields, alfalfa, sugar beets, perennial streams, and odd areas made this a good place for ring-necked pheasants, California quail, and bobwhites. Yes, we had bobwhites.

The California quail liked to dive into huge blackberry brambles when you flushed them. If you were hunting with a buddy, one of you could whack the bramble with a pole and get singles to fly out for possible shots.

The next door neighbors had a large ranch style house with picture windows lined up on the west and east sides. The windows looked like a flight corridor to California quail and each year several bashed into them.

Estimates suggest somewhere between 3 million and 1 billion birds die from window collisions each year in the United States.

*For some reason bobwhites seem unable to distinguish a white wall from open sky, and many lose their lives by flying full speed into white buildings when flushed. We have no records of their striking colored buildings with the exception of one.... Many people gain the impression that disease is prevalent among the birds because they find dead ones about their buildings that have been killed in this manner.—Herbert L. Stoddard, *The Bobwhite Quail: Its Habits, Preservation and Increase* (1931:220)*

FROM THE ARCHIVES: ARTIFICIAL FEEDING OF DESERT QUAIL

“The response of wild populations of scaled and Gambel’s quail to artificial feeding of grain was studied ... during ... 1954–56 [in New Mexico],” reported Howard Campbell of the Department of Game and Fish, Albuquerque. “Yearlong feeding was done at water developments in quail habitat of various kinds over a large area.”

“One of the game management measures often suggested by sportsmen and others interested in wildlife is artificial feeding, especially of upland game such as quail, pheasants, and turkeys. Superficially, this seems a logical means of bringing about and supporting dense populations of game birds.”

Campbell set out feeders that contained 80–100 pounds of grain at about half of some 200 water developments (700-gallon guzzlers). The remaining guzzlers served as experimental controls.

That is, any increases in quail counts between guzzlers only and guzzlers plus feeders could be attributed to the feeders.

“Resultant quail increases, if any, were much too small to justify the high cost of feeding,” Campbell concluded.

[Editor’s note: This article appeared in *The Southwestern Naturalist*, a technical journal, in 1959. It has a couple of telling properties.

First, the author uses the pejorative phrase, “artificial feeding,” instead of the neutral phrase, “supplemental feeding.” You would probably encourage your sister to date someone who “supplementally fed” but you’d be chary of someone who “artificially fed.” An author’s use of pejoratives instead of neutral words is a possible sign of bias.

Second, consider “resultant quail increases, if any, were much too small...” Given the design of the study, it was impossible for the author to assess whether quail declined, remained stable or increased because of feeding. His data were sufficient to determine only whether adding feeders at waterholes attracted more quail than waterholes alone. Note also that the wording quoted above is pejorative, further reflecting bias on the part of the author.

A skeptical reader of Campbell’s article might conclude that he *wanted* to find that supplemental feeding is ineffective and so that is what he concluded he found but not necessarily what actually transpired in the deserts of New Mexico. We will never know.

Visit the Bollenbach Chair website at <http://bollenbachchair.okstate.edu/>. The site contains information on the biology and management of bobwhites, coming events, back issues of *Quail News*, and other topics.

Be that as it may, the Campbell article highlights a serious problem in science and life. We human beings like to find scientific support for our values and that desire biases how we collect, perceive and transfer information.

This is a problem in all the sciences, including human medicine. Many articles in medical journals reflect bias that is homologous to bias in Campbell’s article. A good rule of thumb: don’t trust reports on the effectiveness of a drug if the research was funded by the company that makes the drug.

Be thankful that we have a strong immune system. It can shake off the effects of value-serving medical research.

Likewise, ecosystems shake off the effects of value-serving wildlife research.]



Editorial: Fire is just a four-letter word

In habitat management for bobwhites, fire is like a shot of tequila—sometimes you need one and sometimes you don’t but it always makes you feel good.

Herbert L. Stoddard first recognized the value of fire for managing

bobwhite habitat in the Southeast. He had been hired by the U.S. Bureau of Biological Survey in 1924 to explain a recent bobwhite decline in the vicinity of Thomasville, GA. This work led to the classic wildlife monograph, *The Bobwhite Quail: Its Habits, Preservation and Increase*, published in 1931.

Stoddard was a stronger advocate of fire in bobwhite management than is apparent from his writings in *The Bobwhite Quail*. The American Forestry Association, among others, was staunchly opposed to burning. The Association sent scores of young foresters into the South to preach against the sins of woods-burners according to historian Albert G. Way. Accordingly, Stoddard subdued his wording in the monograph to appease the pyrophobes.

The Thomasville, GA, area receives an average of 55 inches of annual precipitation. The growing season is lengthy owing to the low latitude. Accordingly, areas not burned frequently or otherwise treated turn into jungles that bobwhites cannot inhabit in a few years. Fire is not the only way to control plants-gone-wild, but it is the cheapest way.

But even in the Thomasville area, fire can have undesirable effects on bobwhite cover. Stoddard observed that woody cover such as sand plum on field borders could be wiped out with intense fires.

In western Oklahoma and north Texas, annual precipitation is 30–35 inches *below* that of Thomasville,

GA. Vegetation growth is slow relative to the Southeast. Hot summer months, occasional droughts and livestock grazing further limit plant growth and the need for burning.

Fire is not a catholicon in bobwhite management, especially in the southern Midwest. In specific applications such as killing eastern red cedar or reducing brush or grass coverage in special situations, it is a useful tool. But bobwhites do not inevitably increase just because something burned.

**Fred S. Guthery
Bollenbach Chair in Wildlife
Ecology**



[*Editor's note:* The title of the above essay is a shameless paraphrase of Bob Dylan's "Love Is Just a Four-letter Word."]

SAND PLUM IS FOR THE BIRDS

Sand plum is an important component of bobwhite habitat in north Texas, western Oklahoma and southwestern Kansas. Bobwhites may spend more than 80% of their lives within 35 yards of sand plum, including time spent inside thickets.

Researchers at Oklahoma State University are beginning to find that plum is important to nongame birds as well. Stacy Dunkin, a graduate student

The destruction of quail by the severity of the two preceding winters resulted in large shipments of these birds from Alabama and the Southwest in the effort to restock some of the Northern and Eastern States.—T. S. Palmer, (Yearbook of Agriculture 1907:533)

in the Department of Natural Resource Ecology and Management, observed 9 species of birds nesting in plum in north-central Oklahoma during 2007 and 2008. Noteworthy species included Bell's vireos and painted buntings, which are declining in North America. Bobwhites sometimes nest in plum.

The nongame birds nesting in plum used older thickets, usually more than 14 years old. Thickets of this nature provide excellent resting, escape, and thermal cover for bobwhites.

Documentation that nongame birds and bobwhites benefit from similar habitat is important for the conservation of both. Leonard A. Brennan and William Kuvlesky of the Caesar Kleberg Institute, Texas A&M University-Kingsville, have pointed out that bobwhite hunters and birdwatchers can thus work together in conserving and sustaining bird populations on grasslands in the Southern Great Plains.

BITS AND PIECES.....

- Silvia Diaz Fernández, a doctoral student from the University of Castilla La Mancha, Ciudad Real, Spain, spent mid-June–July 2008 in the Game Bird Research Laboratory, Oklahoma State

University, to learn about the theory and practice of game bird harvest. Ms. Diaz's research revolves around "Land Management and Red-legged Partridges: Working Towards Sustainable Harvest." The red-legged partridge is closely related to the chukar partridge, which has been introduced in some western states such as Oregon, Washington, Nevada, and Idaho.

- In South Texas, the number of antler points in a buck's first rack does not predict the size of its rack at age 4.5 and older. Whether a young buck has more or fewer points, racks tend to similar size as the deer ages. Accordingly, there is no management return from culling young bucks with fewer points. For further information contact Ben H. Koerth, Arthur Temple College of Forestry and Agriculture, Stephen F. Austin State University, Nacogdoches, TX 75962. Ask for a reprint of *Juvenile-to-Adult Antler Development in White-Tailed Deer in South Texas*.
- In 1949, Vincent Schultz speculated on the reason for the low bobwhite population in Ohio (Ohio Journal of Science 49:85–88). Among the hypotheses he advanced were severe winters, predator pressure, competition with pheasants and partridges, and inbreeding. Schultz drew no conclusion on the merit of these hypotheses.
- Richard Gerstell, Pennsylvania Game Commission, reported 90% mortality of artificially fed bobwhites in the winter of 1935–36 (Research Bulletin No.3, 1942).

OSU researchers have observed 80% winter mortality in the presence of an aggressive supplementation program.

- The Department of Natural Resource Ecology and Management publishes a quarterly, electronic newsletter with information on the ecology and management of fish, forests, rangeland, and wildlife. To subscribe, send an e-mail to LISTSERV@LISTSERV.OKSTATE.EDU with the following command in the body of the e-mail: SUBSCRIBE NREMNEWS-L. You should then get an e-mail response with a web link. Once you select that web link, you will be added. If you do not get a return e-mail within a day, e-mail dwayne.elmore@okstate.edu.
- *A Primer on Natural Resource Science* by Fred S. Guthery (Texas A&M University Press, April 2008) is available from the Department of Natural Resource Ecology and Management, 008C Ag Hall, Stillwater, OK 74078 for \$20 (soft cover) or \$40 (hard cover). Prices include shipping and handling. "Guthery has written a tour de force in depth that will shape the field of wildlife science for many years to come."—Steven W. Buskirk, Department of Zoology and Physiology, University of Wyoming.
- *On Bobwhites* by Fred S. Guthery (Texas A&M University Press, 2000) is available from the Department of Natural Resource Ecology and Management (address above). The book is in its second

printing and available only in paperback.

- *Bobwhites on Oklahoma Farms and Ranches: Management Options for Landowners* by Fred S. Guthery, Ronald E. Masters, and Michael D. Porter is available free from the Department of Natural Resource Ecology and Management (address above).
- *Patch Burning: Integrating Fire and Grazing to Promote Heterogeneity* by John R. Weir and co-authors is available for free from the Department of Natural Resource Ecology and Management (address above). The rotational burning of small plots causes grazing cattle to follow and results in more different types of plant communities and plant species (heterogeneity) in a pasture. Visit OSU's **prescribed fire website** at <http://fireecology.okstate.edu>.

Support quail research. Send a tax-deductible contribution made payable to "OSU Foundation/Game Bird Research Fund" in care of Fred S. Guthery, Department of Natural Resource Ecology and Management, 008C Ag Hall, Oklahoma State University, Stillwater, OK 74078. Contributors receive *Quail News* and *Quail Flash*.