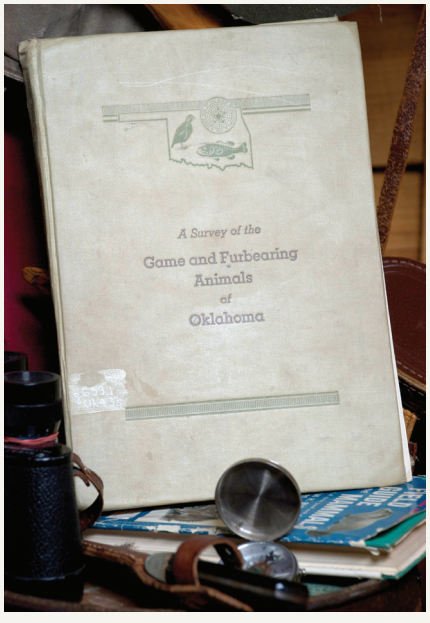
Lester G. Duck

Jack B. Fletcher

A Baseline of Diversity



By Rich Fuller, Sr. Information & Education Specialist

More than 60 years ago, two Oklahoma Game and Fish Department biologists Lester G. Duck and Jack B. Fletcher authored what might arguably be Oklahoma's most important and prolific biological research ever published. Their landmark 144-page book, A Survey of the Game and Furbearing Animals of Oklahoma, *and their equally thorough and beautiful A Game Type Map of Oklahoma has been sited within thousands of scientific journals since being published in 1943. Because of its breadth, accuracy and the fact that nothing like it had ever been done before, Duck and Fletcher's work continues to serve as the baseline to current and future research involving Oklahoma's living organisms.*

Invariably when visitors came to the house, they would ask, "Hmmm, what's cooking? Something smells absolutely delicious!"

Much to the delight of the young girl living in the house, it was always a big joke when her dad informed the house guests that he was not exactly preparing dinner, but actually preparing biological specimens. The savory odors wafting from the kitchen likely belonged to the boiling carcasses of such "unsavory" critters as skunks, bats, frogs, snakes or rats, but the visitors were invited to consume anything they'd like except for the bones! Of course, once the source of the aroma was identified, there were few takers.

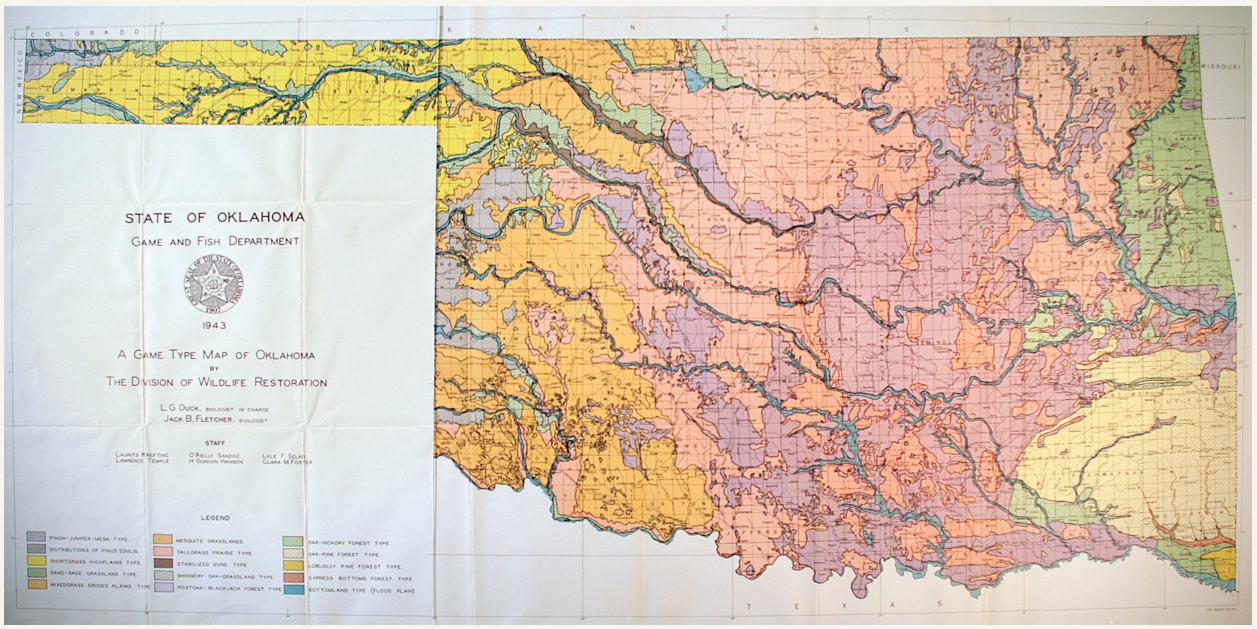
Such are some of the earliest recollections of Jo Ann Teter, daughter of Les Duck, the Director of Wildlife Restoration and Research for the Oklahoma Game and Fish Department during the early 1940s. Teter's father brought home both live critters and carcasses of all kinds — mostly those he had trapped, but also road-killed specimens. The birds and critters were boiled down to the bones in order for Duck and fellow wildlife biologists to better analyze and identify the bones and fragments found in the droppings (called "scat") left by predators such as coyotes or owls. As a young girl, Teter not only remembers what a boiling rattlesnake smells like, but also the comings and goings of several biologists through their home in Mooreland, Okla.

"My dad was put in charge of the survey in western Oklahoma, with the help of some other gentlemen, O'Reilly Sandoz, and later, H. Gordon Hanson," Teter said. "Our house was the base from which their individual and group research for the survey was conducted. Jack B. Fletcher was in charge of the survey in eastern Oklahoma, with the help of Laurits Krefting and Lawrence Temple. Lyle F. Selko was another man my dad worked with on the project. When Dad and the other biologists packed up their tents, Coleman lanterns and other camping equipment, etc. in our living room for their trips into the whole of western Oklahoma, I became very well acquainted with these men — it was like we were all family."

From the years 1938 through 1942, Les Duck, Jack Fletcher and a team of other wildlife biologists embarked on a quest with a simple, but weighty task — to survey all organisms in Oklahoma considered "game" species or "furbearers."

The purpose of the elaborate survey can be found in the forward of Duck and Fletcher's landmark 1943 book, A Survey of the Game and Furbearing Animals of Oklahoma:

PURPOSE OF THE SURVEY. The purpose of this survey was to make an adequate inventory of the wildlife resources of the State of Oklahoma. It was hoped that through this work the Game and Fish Commission would know exactly what it had and exactly what could be done toward making the best possible use of this resource. Such a project was necessary because information of this nature was not available and no far reaching, long time program of game administration could be initiated without having the information on which to base activities. Based on



Both Duck and Fletcher's Book, A Survey of Game and Furbearing Animals of Oklahoma, *and their map "A Game Type Map of Oklahoma," can be viewed on the Oklahoma Biological Survey website at: http://www.biosurvey.ou.edu/duckflt/dfhome.html.*

the project work which extended over a period of four years, the Game and Fish Commission has acquired information enabling it to establish a progressive program of game management, compatible with existing social and economic conditions...

Undoubtedly fresh on the minds of Duck and Fletcher's bosses were the grim conditions leftover from the Dust Bowl era. Severe drought compounded by poor farming practices had left Oklahoma's landscape barren and scarred in many areas. Particularly hard hit was western Oklahoma and the Panhandle. With the black clouds of dust came the decline of several game species such as quail or prairie chicken that were locally abundant just a few years previously. Along with recognition of the need for conserving soil was a grass roots effort to help bring back some of the birds and wildlife lost to drought and lack of habitat. Using funds provided by the new Pittman-Robertson Federal Aid in Wildlife Restoration Act, Duck and Fletcher's bosses essentially said, "Boys! Go find it. Catalog it. And when you get everything documented, we want you to tell us where we're at. Then we'll figure out how to improve things."

According to Richard Hatcher, Director of the Oklahoma Department of Wildlife Conservation, Duck and Fletcher's *Game and Furbearing Animals of Oklahoma* is one of his prized possessions.

"While a graduate wildlife student at OSU, I obtained my own copy of what many of us at that time called 'The Bible' of Oklahoma wildlife," Hatcher said. "I've heard there aren't too many copies of Duck and Fletcher's book in existence, so it's one of my rare books I'm hesitant to let people borrow. Fortunately the book has been put on the Internet, so now anyone can read it online."

Throughout several chapters of Duck and Fletcher's book, they exhaustively describe the current population and habitat preferences for Oklahoma's most popular game species such as bobwhite quail, prairie grouse (prairie chicken), wild turkey, whitetail deer, squirrel and rabbit. Ironically however, it's the second chapter of the book, titled, "The Game Types of Oklahoma" that might be the most historically significant.

The irony lies in the fact that while Duck and Fletcher's "game types" term lists the different species found in each "game type," the term is really a descriptor of the vegetation type and plant community, borrowing more modern terms

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A recent modern-day reenactment of the 1930s-40s work of Les Duck and Jack Fletcher reminds us all of the effort that went into the early days of conservation success in Oklahoma. Today, Duck and Fletcher's publications are still in use, and their ground-survey map, "A Game Type Map of Oklahoma," is remarkably accurate even when compared to modern technology such as GIS and GPS.

DARRIN HILL

Jo Ann Teter, daughter of 1930s–40s era conservationist Les Duck, visits with Melynda Hickman, wildlife diversity biologist for the Wildlife Department while looking at a copy of her late father's "A Game Type Map," which he and co-creator Jack Fletcher developed to visually depict each of the "game types" listed within their book, Game and Furbearing Animals of Oklahoma. *Their work through the book and map helped to establish a baseline of wildlife diversity in Oklahoma which conservationists could move forward after the state was hard hit by the Dust Bowl era.*

A Legacy of Learning

According to Jo Ann Teter, Lester Duck's daughter, both her father and mother were natural teachers to whom education, books, the observance of nature and the joy of learning new things were of supreme importance.

"I remember several pickups parked outside our house at different times, with cages full of rattlesnakes or sometimes a coyote, and even a porcupine," Teter said. "As you can imagine, this was an idyllic time for me. It was during the Depression, and nobody could afford baby sitters, so I was greatly enriched by almost always being around adults, who were always willing to show me bugs, animal and bird skulls, fossils, salamanders, tadpoles, and any number of wondrous things."

Although she was familiar with her dad's published works, it wasn't until she moved back to Oklahoma in the early 1990s that Jo Ann Teter realized the Duck and Fletcher Map remains a vital baseline for biological research.

"After contacting the Oklahoma Biological Survey, Bruce Hoagland sent me small copies of the map, which he said are still being used in Oklahoma schools and universities," she said. "I was amazed and grateful to learn that the map was still pertinent. My dad died at age 57 in 1970, and as he was in touch with so many people; I imagine he was aware then of the maps usage. He wasn't one to brag, and he never mentioned this to any of us.

"I wonder how many descendents of all these men are aware of the longevity of their work. But now, it is over 60 years since its inception. I know he would be so proud, as we and all the families are whose dads, uncles, etc. were involved with this massive undertaking."

In 1975, the Cy Curtis Awards program was established to recognize trophy deer taken throughout the state. The program was named in Curtis' honor for being the man most responsible for the restoration of whitetail deer in Oklahoma. Cy Curtis and Jack Fletcher Sr. were married to sisters.

such as "ecotype," "ecoregion" or "landscape." Duck and Fletcher use the term "game types" to describe a dozen unique sets of vegetation communities. Examples of their game types include postoak-blackjack oak forest, sandsage grassland, tallgrass prairie and pinon-juniper mesa. More than 100 years earlier, Oklahoma explorer and author Washington Irving described some of Duck and Fletcher's so-called game types. Examples are the postoak-blackjack oak game type, which Irving coined, "The cross timbers." Irving simply called any relatively treeless area a prairie during his 1832 expedition. Within Duck and Fletcher's survey, however, they recognized significant differences among Oklahoma's prairies and identified three prairie-like game types — tallgrass prairie, mixedgrass eroded plains and the shortgrass high plains. It was Duck and Fletcher's recognition and descriptions of each unique game type that gave rise to the acknowledgement of Oklahoma's unique biological diversity.

Although Oklahoma wasn't exactly an uncharted wilderness in the late 1930s, the tools available to Duck and Fletcher were pretty limited. Not having the benefit of previous comprehensive research or inventories dealing with plants and animals, they essentially had to start from scratch. Not only would they compile their survey data into a 144-page report (*Game and Furbearing Animals of Oklahoma*), but also another product of the survey — the creation of a unique map that visually depicted each of the "game types" listed within the book. Today Duck and Fletcher's "A Game Type Map of Oklahoma," is still displayed in Oklahoma schools and universities and is sited in countless scientific journals of biological research. In addition to the 12 identified game types in Duck and Fletcher's book, there are three additional game types listed on the map including the distribution of Pinus Edulis (pinon pine), the cypress bottoms and the mesquite grasslands. Teter remembers her dad's work on the map.

"No matter where his work space was, he always kept everything neatly in order," Teter said. "He certainly had lots of neatly stacked notebooks and jars containing bones and many, many books in bookcases — and I always had access to his books, his work space and could look at the map lying out on his desktop.

"The zip-up-folding container, when laid open exhibiting the many wondrous Mongol colored pencils he was using on the maps, was certainly a temptation. And those, he told me and later my brother, were off limits.

"They were only for the maps."

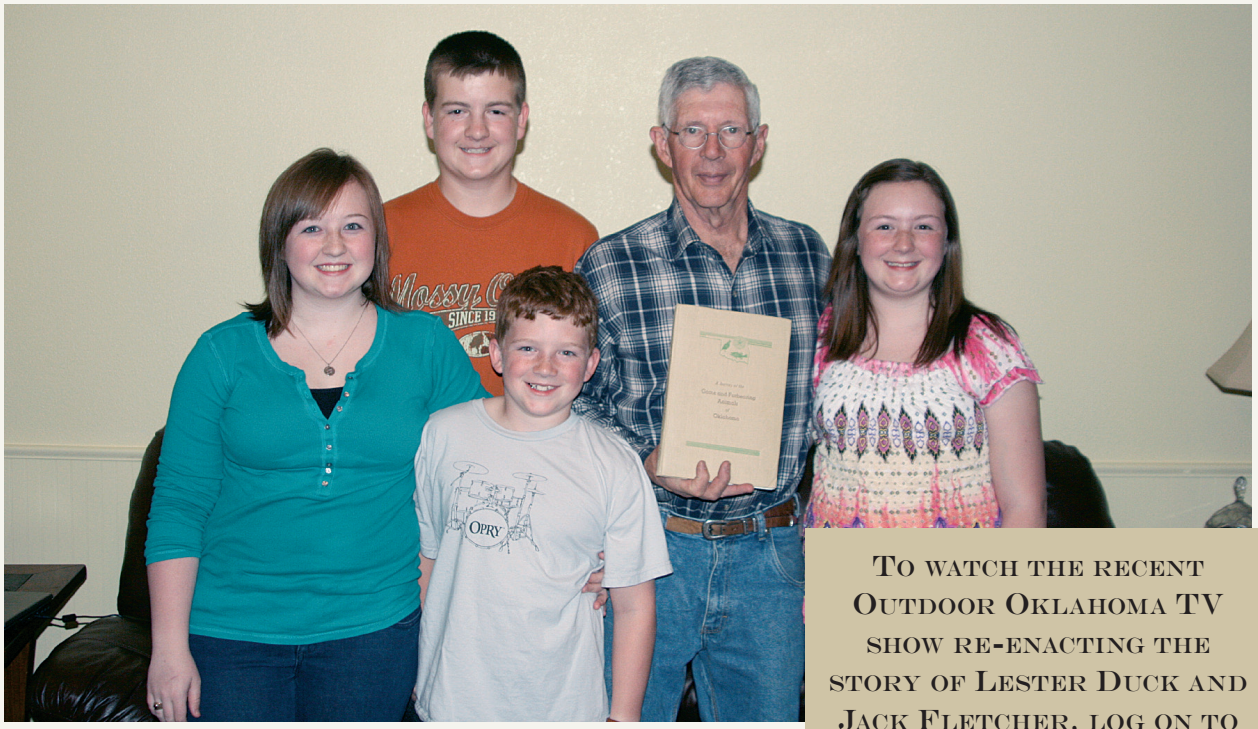
Duck and Fletcher's glorious map is remarkable for several reasons. First, when compared with modern vegetative cover maps created with the latest and greatest cartographic tools including satellite imagery, Geographic Information Systems (GIS) and Global Positioning Systems (GPS) it's astounding how accurate Duck and Fletcher's map remains more than 60 years since it was created. Obviously Oklahoma has experienced several vegetative changes since 1943 such as the encroachment of Eastern red cedar, which is partly responsible for the shrinking mixed grass and tall grass prairie game types. But overall, the 15 distinct "Game Types" are still found where they were consolidated from Duck and Fletcher's meticulous notes and compass coordinates taken more than 60 years ago; and remember their surveys would have certainly been exclusively "ground surveys."

According to Dr. Bruce Hoagland, coordinator of Oklahoma Natural Heritage Inventory and geography professor at the University of Oklahoma, Duck and Fletcher's map remains an unparalleled document.

"In my 20 plus years of biological research in Oklahoma, the Duck and Fletcher map is the best baseline of potential natural vegetation map ever created in the state; and probably won't ever be surpassed," Hoagland said.

"You can set it side-by-side a modern satellite map and it's remarkable how accurate it still is. It's what Oklahoma would look like without all of our wheat fields."

A second reason Duck and Fletcher's map remains so popular even today is due to its unique nature. Certainly biologists, nature lovers and sportsmen had long realized how blessed Oklahoma was in terms of its biodiversity, but perhaps not until Duck and Fletcher's map was published could others grasp the enormity of how diverse Oklahoma really was (and is). With the possible exception of California and Texas, Oklahoma possesses one of the most diverse landscapes of any U.S. state, and would probably surpass even those if it had areas adjoining an



To watch the recent Outdoor Oklahoma TV show re-enacting the story of Lester Duck and Jack Fletcher, log on to wildlifedepartment.com

After co-authoring the book and map in 1943, Jack B. Fletcher entered the Navy and served in the Pacific theater of World War II. Upon returning home, he didn't return to the Game and Fish Department, but helped run the family hardware store in Stilwell. Today, his son, Jack B. "Blake" Fletcher, Jr. (pictured with grandchildren Tyler, Tosha, Tanner and Terin and holding a personal copy of his father's book) lives with his wife Mary in the hills near Stilwell where he enjoys fishing, hunting, kayaking and nature with his grandchildren. He recalls how much his father cherished his time working for the Game and Fish Department.

"My dad was kind of quiet and closed-mouthed fellow, and would probably be a little embarrassed to hear of the significance of his book and the map that he worked with Mr. Duck and other biologists to create so many years ago; but I know he was always proud of his brief career working for the Game and Fish Department," said Fletcher, Jr.

Incidentally, Jack Fletcher Sr. was not the only ancestor of Blake Fletcher's to work for the Oklahoma Game and Fish Department. Joe Fletcher (Jack's younger brother and Blake Fletcher's uncle) was the manager of the Cookson Hills Wildlife Management Area for more than 20 years, and many Oklahoma deer hunters will recognize the name of Blake Fletcher's other uncle, Cy Curtis.

ocean. And finally, undoubtedly a primary reason for the longevity of Duck and Fletcher's map is simply its beauty. Since I've been a kid, I've loved looking at maps. When I look at Duck and Fletcher's map I not only see the beautiful colored pencil shading of each "game type," but due to my position as a producer for the Wildlife Department's television show, "Outdoor Oklahoma," the map rekindles memories of another kind. Through my good fortune I've had multiple opportunities to collect video at every corner of the state and at every one of Duck and Fletcher's unique game types.

As I gaze at the map, I picture in my mind what the pinon-juniper mesa looks and smells like from the top of Black Mesa, Oklahoma's highest point at the tip of the Panhandle. When I look at the cypress bottoms game type, it reminds me of trout fishing among the weird cypress "knees" that grow up along the Lower Mountain Fork River in McCurtain County. And finally, the shaded area depicting the tallgrass prairie reminds me of the strange "bubbling" chirps of prairie chickens making their mating calls on their "booming grounds" on the Osage . . . and the list goes on and on and on.

Duck and Fletcher's book continues to serve as an important baseline for biological research, and their fantastic map reminds us all of how fortunate we are to live in Oklahoma; a land rich with such incredible biodiversity.