

FIELD GUIDE FOR TEXAS EXOTICS

By Jim Heffelfinger



YATHIN S. KRISHNAPPA PHOTO

Axis Deer can freely shift from grass to forbs to browse, which makes it much easier for them to get the upper hand on native deer during dry times.

Texas is known today for its great diversity of hoofed animals (ungulates) and many of them are not native to North America. Exotic ungulates were first brought to Texas in the late 1920s when nilgai antelope were introduced onto the Norias Division of the King Ranch. This introduction was followed soon after with the release of axis deer, sika deer, sambar deer and blackbuck antelope, as well as eland in several places in the state before the end of the 1930s. By the 1950s, exotics were becoming more common and a few ranches began to offer hunts. So began Texas' reputation of being a melting pot of the world's ungulates. At last count, there were more than 164,000 exotic animals in Texas represented by 67 species, with two-thirds of them living in the Hill Country.

A survey of landowners by Texas Parks and Wildlife in 1995 showed that of the exotics in the state, 39 percent were axis deer, 20 percent blackbuck antelope, and 14 percent aoudad.

In fact, there are eight common species that have been the most successful and are often referred to as "Texotics."

Axis deer, nilgai antelope, blackbuck antelope, aoudad, fallow deer, sika deer, mouflon sheep, and feral/wild hogs round out the "Big 8" and make up a vast majority (90 percent) of the total exotics in the state.

Axis Deer (*Axis axis*)

This large and beautiful deer is the most popular and wide spread of the 8 Texotics. Axis deer, also referred to by its native name "chital," were first introduced in 1932 by Richard Friedrich onto his Bear Creek Ranch in Kerr County. It was thought that this part of Texas resembled its native habitat in India. Mr. Friedrich was on the board at the San Antonio Zoo and brokered a shipment of axis and other animals from various zoos to his ranch. The axis came from the herd at the Smithsonian's

National Zoo and did very well in their new home, growing in numbers both as ranch stock and also as escapees. The number of axis in Texas nearly doubled between landowner surveys conducted in 1966 and 1971. Today it is a widely distributed and successful Texotic with more than half of the Texas population free ranging. It's easy to understand the popularity of this species, with its reddish coat dappled with white spots (even as adults), delicious meat, and impressive 3x3 antlers growing up to 36 inches in length. It has a calm disposition and the unique quality of an asynchronous antler cycle, which means there are some males in each population in hard antler, velvet antler and already shed at any given time of year. These deer are very social and found in herds, with males weighing 150-230 pounds and females somewhat less. The fawns are born year round with a peak in January through April. Axis deer have a very unique alarm "bark" to warn others in the herd of danger. This adaptable deer is known for its ability to switch from a mostly-grass diet to browse or forbs (weeds) and do better on poor range than native whitetails.



Nilgai

CHENNAI PHOTO

attacked her Range Rover. Nilgai normally occur in herds of 10 (sometimes up to 70) and the males and females stay separated outside of the breeding season (mostly December to March, but can occur year round). Both sexes have the unique habit of marking their territories by leaving scat (dung) pile accumulations as markers. These piles can reach 10 feet in diameter.



Blackbuck

PRANAY YADDANAPUDI PHOTO

Blackbuck Antelope (*Antelope cervicapra*)

The blackbuck is another Indian antelope species that far surpasses the nilgai in the horn department. Blackbuck horns spiral upward to a length of 24-28 inches and form a "V" when viewed from the front. Their coloration is a striking bicolor pattern with males black above and white underneath; females and young males differ in that they are tan above. Both sexes have obvious white eye-rings and a chin patch. Males weigh only 100 pounds and females average about 75 pounds. The first release in Texas was in 1932 as part of the very same Bear Creek Ranch release that brought us axis deer, courtesy of Richard Friedrich. Even though they were subsequently released in other regions of Texas, most (80 percent) now inhabit the Edwards Plateau because of higher coyote densities to the south and colder winters to the north. They mostly graze on grasses, but will browse some shrubs. Adult males are highly territorial and do not tolerate other males intruding in their space. Breeding (and birthing) can occur in any month, but winter births are less common. This species is one of several examples of Texas landowners playing an important part in international endangered species conservation. The blackbuck antelope became rare in its native India and eventually disappeared altogether in Pakistan. In 1971 and several more times in 1980-90s, blackbuck were translocated from ranches in Texas to their historical range in Pakistan to become reestablished. The blackbuck is second only to the axis in abundance and popularity in Texas.

Nilgai (*Boselaphus tragocamelus*)

Nilgai are the largest antelope in their native India and sometimes called "blue bulls" due to the bluish-gray color of the mature males. The name "nil-gai" literally means "blue bovine" in local Indian dialects. Males weigh 250-600 pounds with females smaller (200-475 pounds) and brown rather than blue-gray. Both sexes have an erect mane on the back of the neck, white cheek spots, white throat bib and ankle stripes. Only males have horns, but they are never described as impressive, reaching 6-9 inches in mature males. What it lacks in "wall-appeal" it makes up for in edibility—the meat is lean (1 percent fat) and delicious. The nilgai arrived in Texas through releases between 1924-29 by Caesar Kleberg onto the Norias Division of the King Ranch in Kenedy and Willacy counties. Nilgai avoid thickly wooded areas and prefer the flat to gently rolling habitat in the Gulf Coast area. Their devil-like appearance accurately describes their personality; they are known to be aggressive. The only nilgai that existed on the Rio Paisano Ranch I managed was eventually killed by the owner's wife after it



Aoudad (*Ammotragus lervia*)

Also called barbary sheep, the aoudad is a goat-like animal that is native to the dry, rocky mountain ranges in North Africa. The scientific name "Ammotragus" literally means "sand-goat," thought to refer to the sandy color of their coat. The name aoudad comes from the local African tribal languages. Areas of longer hair on the throat extend down to the chest and front legs in males. Aoudads weigh 100-300 pounds and males sport sweeping horns that are triangular in cross section and relatively smooth. They are very well adapted to areas with little water and like rocky outcroppings where they can showcase their ability to leap over 7-foot obstacles from a standstill. The breeding season seems to be loosely-timed, but primarily from September to November. Most of the lambs are then dropped between late February and late April. New Mexico had released aoudad in 1950, but the first direct releases into Texas (the Palo Duro Canyon area) were conducted by Texas Parks and Wildlife and private individuals in 1957-59. Aoudads have been known to switch from 60 percent forbs after a rainy period, to 96 percent grass when available, to 98 percent browse when there is nothing green and tender on the ground. Aoudads also love mountain mahogany and oak, which can bring them into direct competition with whitetails and mule deer. To add insult to injury, aoudads are aggressive around feeders and water sources and that behavior also plays a role in their ability to outcompete native deer. In an experiment, six aoudad and six whitetails were placed in a high-fenced pasture and after 6 years together 30 aoudad and 12 whitetails remained. Because of their similarity to desert bighorn, aoudad have a potential to negatively affect bighorn restoration through disease and competition.



Fallow Deer (*Dama dama*)

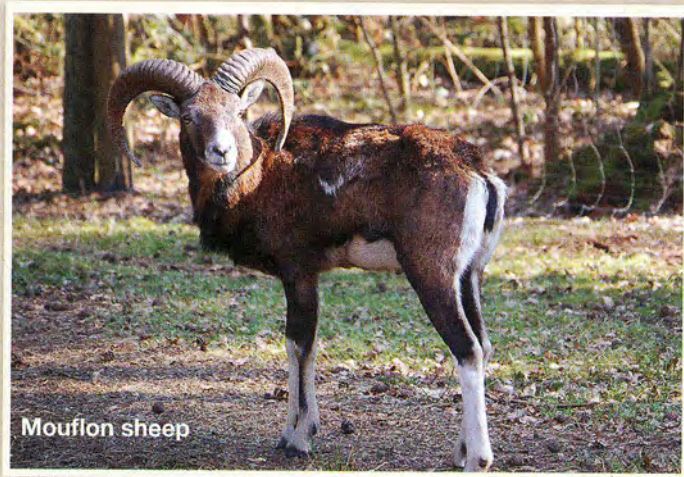
Fallow deer are one of the most common of all captive deer worldwide. They are native to the Mediterranean region of Europe and Asia, but have been introduced to all continents including at least 93 Texas counties. Fallow bucks weigh 130-220 pounds and does 70-110 pounds and are commonly found in at least 3 main color variations: white, dark brown, and brown with white spots. Their antlers are unique and striking in appearance because of the broad moose-like palms that are seen after they reach 3 years of age. The extinct giant deer sometimes called the "Irish elk" was actually a large fallow deer. During rut (October) males defend a territory which attracts females that are then bred as they come in to heat. After the rut, males band together again in bachelor groups. Most fawns are then born late May through June. The first fallow deer were brought into Texas by Leroy Denman, Sr., and released on the Blackjack Peninsula in Aransas County between 1930 and 1936. By the time the peninsula became the Aransas National Wildlife Refuge, few fallow remained. However, subsequent releases by others eventually spread the popular fallow deer to many regions of the state. A study on the Kerr Wildlife Management Area revealed fallow deer ate 54 percent browse, 30 percent grass, 12 percent forbs, and 5 percent other things. Another competition experiment with six fallow and six whitetails resulted in only one fallow and 19 whitetails at the end of the study, showing that not all exotics out-compete native whitetails.



Sika Deer (*Cervus nippon*)

Sika are native to many areas of Asia, including Japan where they're common. Their name actually comes from the Japanese word for deer (shika). This deer species varies considerably among subspecies or races with small island forms from Japan that weigh 100-150 pounds to large Manchurian forms in the former Soviet Union that weigh 150-250 pounds or more. Sika are closely related to red deer and elk and can freely interbreed if given the opportunity. Like elk, male sika have a distinctive neck mane during rut. The original Texas stock probably came from the original shipment of mixed exotics that Richard Friedrich brought to his Bear Creek Ranch in 1932.

Through the years, the different types of sika have been mixed and hybridized creating a tangled sika pedigree that won't ever be sorted out. Small dark varieties and brightly spotted ones are now blended throughout many areas of the state. Sika are not sought after for their trophy appeal because of their relatively short antlers (up to 30 inches) and 3-4 points per side. Strangely, female sika have dark bumps on their foreheads where antlers would be. Most of the sika diet is grasses and the leaves and twigs of woody shrubs. During the rut—usually peaking in September and October—males maintain territories and keep harems of females. Most fawns are born May through August. This deer seems to have the ability to seriously out-compete our native whitetails. Researchers once placed six whitetail and six sika deer in a pen together. When they concluded the study they found 62 sika and no whitetails left. As an experimental control, they also had six whitetails in the third pen and found they multiplied to 14 by the end of 9 years.



Mouflon Sheep (*Ovis orientalis musimon*)

Mouflon sheep are relatively small sheep with rams weighing 90-120 pounds and ewes only 75 pounds. They are boldly marked with brown bodies, black neck and legs, and a light colored saddle on their back. With age, this saddle becomes whiter. As with all sheep species, they easily hybridize with other sheep species and this accounts for the wide diversity of exotic sheep one sees throughout Texas. The mouflon is native to the Middle East and now exists in Iran, Iraq, and the islands of Corsica and Cyprus. They have been translocated to many places in Europe and North America. The well-known "Corsican" ram is a mouflon-domestic hybrid that was developed on the famous Y.O. Ranch to "improve" the mouflon. Pure mouflon rams have horns that arch away from the head and then curl inward, differing from most sheep species that curl out at the tips. As with many sheep they are primarily grazers of grass, but can do well on most any green plant material, including some plants that are toxic to livestock. They can compete seriously with deer if there are too many for the habitat. In Texas they breed August to September and lambs are born January through March.

Feral/Wild Hogs (*Sus scrofa*)

The wild hog needs no introduction; it's easily recognized and widespread in Texas and beyond. Hogs come in a variety of colors, but most are reddish or black and lightly haired. Tusks (canine teeth) curl out from upper and lower jaws and wear

against each other to maintain sharp edges. Old boars can grow tusks up to 6 inches on top and 9 inches from the lower jaw; more than half of that is inside the jaw and skull. Christopher Columbus brought the first pigs to the New World (the Caribbean) and the Spanish later brought them to Florida. Many times through history domestic pigs were allowed to go wild (feral) and the adaptable hog rose to the challenge. To increase the "wildness" factor of feral hogs, European boars were brought in to hybridize with existing "wild" hog populations in many parts of the country. Typical traits of the European boar can be seen in many populations: heavy front shoulders, straight tails, bristles on the neck and down the back, furry coats, and young with tan fur and dark horizontal stripes down their backs. The physical characteristics of domestic hogs can change from a pink barnyard pig to a furry wild creature in just a few generations. The original wild boars in the former Soviet Union approach 800 pounds, but the wild hogs in Texas weigh closer to 150-350 pounds. Hogs can eat absolutely everything from dead and rotted cattle carcasses to insect larvae. They use their tusks and snout to root for insects, worms and roots – sometimes making craters 3 feet deep. Wild hogs are welcomed for the hunting they provide and the excellent meat. However, in many areas they have over-stayed their welcome. In more productive areas, sows can begin breeding at 6-8 months of age and have 2 litters of a half dozen piglets each every 12-15 months. Their productivity and destructive potential have spawned a very public effort of eradication with outdoor reality shows.



Native Exotics

Texas has had so many different exotic animals for so many years they have become common place and some have seemingly acquired a "naturalized" status. There are many reasons exotics have been brought to Texas for nearly 100 years. Exotics provide income and enjoyment to many through hunting, wild-life viewing, sale of meat and byproducts, and by selling source stock to other operations. They help diversify and supplement income and their success in doing that is proven by their continued popularity. Exotic species from around the world have found a permanent home in Texas.