

THE WILD LLAMA

by Keith Payne

I am often reminded of the written words of LaRue W Johnson, Professor Emeritus, Colorado State University “. . .the truly perfect camelids are those that run wild and have emerged as champions in the struggle for survival of the fittest. As such, they are characterized as animals having stamina, straight strong limbs from the anterior view, and adequate angulation of the pelvic limbs from the lateral view. Body proportionality in these animals definitely relates form to function . . .”

But there is much more than simply the physical attributes of the guanaco which have allowed it to survive in the harsh, unforgiving topography and changing climate of the Andes mountains to become the dominant large ungulate. Instincts, traits and intelligence have allowed the guanaco to be found in the widest range, in diverse arid and semi-arid habitats from sea level to 4,500 metres (14,600 feet) from Peru to Tierra del Fuego . The guanaco was to South America what the bison was to North America and the springbok to Africa.

The estimated aboriginal guanaco population was 30-50 million when Europeans came to the Andes in the 1500's. Current estimates of surviving guanaco vary but are generally in the vicinity of 500,000.

Prior to the Europeans, the guanaco battled climate change and predators. With the Europeans came hunting and poaching, competition for prime grazing from domestic stock, new disease, roads, fences, railroads, loss of access to water, industry pollution, and so on.

The guanaco is recognized by the Convention on International Trade in Endangered Species (CITES) as rare and endangered.

When the guanaco is domesticated, it is known as a llama.

The series of articles to come are intended to provide llama owners with an insight into the life of a wild llama, a life where decisions of life and death are driven by instinct shaped by environment, climate and predators, both natural and man made. One constant through the centuries is the llama's ability to adapt and its very survival has been dependent upon this. It can be said that the llama's strongest instinct is its determination to survive. Understanding how instincts and traits are formed and adapted may assist today's llama pastoralists to understand and care for their modern day llamas.



HOW THE WILD LLAMA REACTS TO PREDATORS

Wild llamas are social animals. There 3 basic types of groups:

- 1) a dominant adult male and 5-10 adult females with their progeny;
- 2) bachelor male groups;
- 3) a single adult male defending or seeking out an area but without females.

In some areas where the availability of feed is seasonal there can be migratory large grouping of females and males which will separate back into the basic groupings above.

Social groupings are important as they will often determine the nature of response when a predator is sighted. A dominant male will often issue an alarm call or adopt a head and neck upright, ears erect, eyes fixed, motionless posture, either of these sufficient to alert his girls to the danger and allow them to initiate flight. Rather

than flee, he will keep the predator in vision and only flee once an attack is launched. BUT, the male will alter this dependent upon varying factors such as vegetation cover, topography cover, number and age of youngsters in the herd, etc. A herd with youngsters may initiate flight over a greater distance and after a shorter assessment period than a larger group without young. An alert signal may be initiated sooner in steeper sloped country with irregular topography and higher vegetation cover than a location which affords greater observation of a predator's movements.

Solitary males will react earlier and flee further than groups of llamas. In fact the greater the number of llamas in a group the more tolerant the llamas are of predator approach before they commence their flight.

Llamas use sight as their principal method to detect predators. The puma is a silent hunter with a talent for using vegetation and topography cover and the llama is intelligent enough to respect a predators practice of approaching from down wind.

The manner in which llama react to the presence of predators is critical for its survival. The type of vegetation ie: height and density of shrubs/bushes is very important for observing the approach of a predator. Topography also plays a similar role as ravines, gullies etc all provide a predator with cover for unseen stalking. Availability of an escape corridor in areas of rough terrain is an important factor in a males selection of a sedentary home for his harem.

The most important predator is the puma, which relies on stealth, vegetation and rock cover to approach within 20-30 metres before launching an attack. It does not try to run down its prey.

Pumas were responsible for 70 – 80% of guanaco kills and have been the most natural llama enemy for many many years. Culpeo fox are a threat to very young cria/chulengo only. Packs of feral dogs have become a dangerous threat to guanaco, especially very recently in Peru. They, like the culpeo will try to 'run down' their prey, quite different from the non pursuit tactics of the puma. Culpeo will launch an attack against a female and her very young cria, intending to separate the cria during a prolonged pursuit.

The arrival of humans has introduced a new predator, early on hunting with spears and then arrows and more recently with weapons that can kill from great distance. With the hunters (and poachers) have come roads and fences which cut through traditional wild llama migration routes – followed by their domestic stock: sheep, cattle, horses, donkeys, etc. Traditional watering holes around which grazing and travel movements were dependent have been closed off by humans. Many farmers consider the guanaco to be a menace to their domestic animals.

The larger the group of llamas, the less vigilant they are individually in regard to the detection of a predator. Large groups allow faster detection and increase the individual possibilities of escaping. The term "cooperative vigilance" is used to explain this aspect of predator surveillance.

There are no pumas on the island of Tierra del Fuego although the culpeo fox is active there. But the greatest predator risk comes from ranchers, forestry interests and poachers. The wild llama has only very limited resources to counter this threat apart from avoidance. As the 'safe' territories continue to be reduced, the prospects for surviving guanaco also are reduced.



WHY SURVIVAL OF THE WILD LLAMA IS IMPORTANT

Over the centuries, from its beginning as a double coated, full shedding, fine fibred athlete of uniform colouration there have been almost constant efforts to alter it. It has been bred to have a single coat, it has been bred for different colours (for sacrifice), it has been crossed with alpaca (to increase fibre quantity and add crimp), it has been bred for size (for the meat market) etc etc. And the resulting varied fibre types from these efforts have been allowed to interbreed such that today's llama is indeed often a far cry from the original first domesticated animal. David Browman, Dep't of Anthropology, Washington University recently commented " . . .it is felt that the modern llama is essentially a kind of mixed breed combination of the earlier distinct llama varieties . . ."

But whether today's llama breeder is interested in an athletic packer carrying a load in the hills, an impressive looking head turner for the show ring, a producer of quality fine fibre or simply a rewarding companion, the llama is capable of all these things. But the critical feature is that we still have the original wild llama fending for itself in the Andes. It is here where we can still find the dominant genetics on which the breed has been formed.

This is very unique. Those original genetics are critical for breeders who wish to restore original breed conformation and vitality to their herds.

Of course, many will simply prefer the look of a hybridised llama. Many others prefer the long fibred fancy sheared look of the show llama while still another group may be content with the social nature of a companion llama. But a growing number of professional llama breeders are finding the availability of new genetics harder to come by. And they are beginning to look to the wild populations.

The next article in this series will delve deeper into feeding habits of the wild llama. How it has adapted to climate change, reduced safe grazing areas and having to share territory with domestic stock such as sheep, horses, cattle, donkeys etc



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