

“Conceptualizing the Suri as a breed can unite U.S. breeders around a common goal of producing the most exceptional Suris in the world.”

The Suri Alpaca is a unique breed of camelid with certain defining characteristics of fleece and conformation. These characteristics differentiate the Suri from any other fiber producing livestock. The Suri is truly a breed apart from all others in the animal kingdom.

Despite wide acceptance of this concept by Suri breeders, why are there still those who question the validity of the Suri as a separate and distinct *breed* of alpaca?

The confusion may arise because there is misunderstanding about what factors constitute the definition of a breed. Some see this as simply a biological question, when in fact in addition to biology there are philosophical, political, cultural, environmental, and economic factors at play in defining a breed.

Webster's Dictionary defines a breed as: “A relatively homogeneous group of animals within a species developed and maintained by man.”

Under this broad functional definition, the Suri would certainly qualify as a breed. Looking closely at the implications of this definition it is clear that man, not biology, takes the leading role in creating a breed. Biology, via the process of natural selection, produced the ancestors of what we now recognize as a Suri Alpaca. However, over several thousand years, man has been responsible for directing the evolution of these ancestors into a distinct livestock “breed.” Through his understanding of genetics and the application of selective breeding, man has utilized the process of biology to produce a relative-

The Suri Alpaca: A Unique Breed

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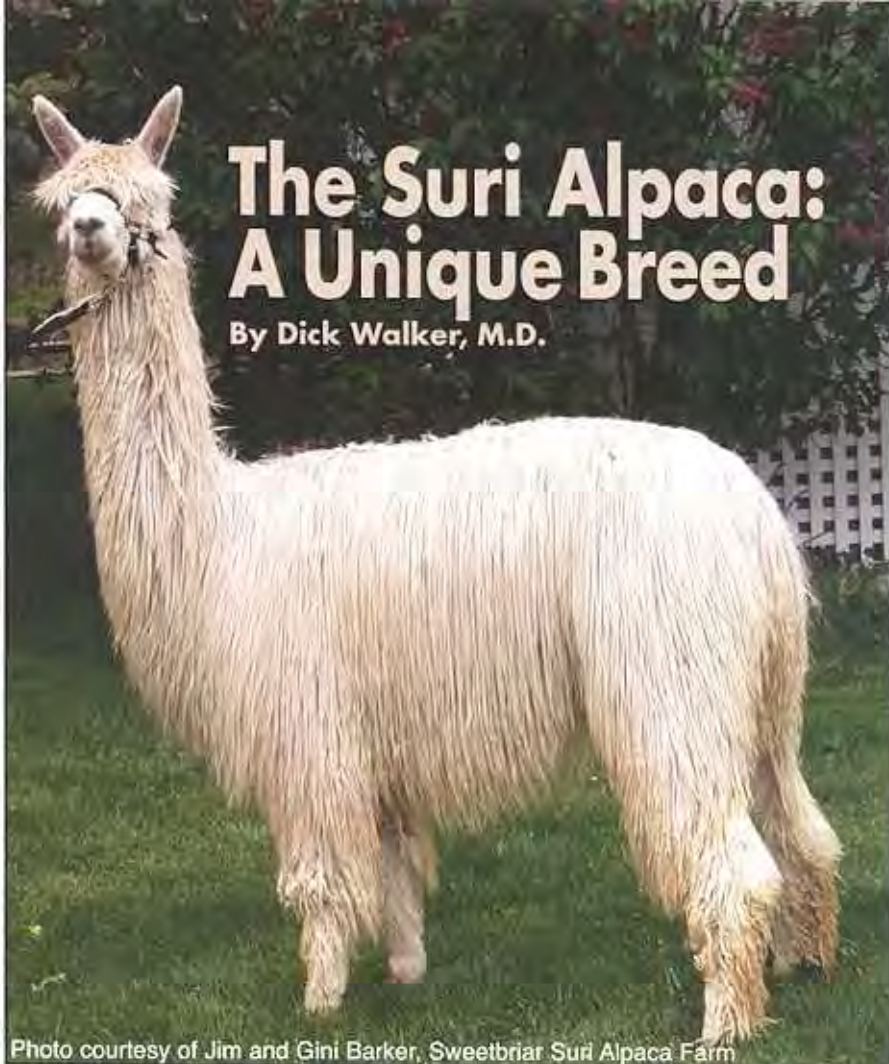


Photo courtesy of Jim and Gini Barker, Sweetbriar Suri Alpaca Farm

ly homogeneous group of alpacas with the phenotypic traits typical of a Suri.

While it is clear that biology allows the production of different breeds within the same species, it is also quite clear that it is the people who dedicate themselves to the production of these animals who determine the specifics of what constitutes a breed. The fact that many distinct breeds of livestock were developed prior to a precise understanding of genetics is testament to man's primary role in this process. Historically man has developed breeds for several reasons. Often the reason is to exploit a particular attribute that will improve the quality and marketability of whatever commodity the breed produces. Sometimes the goal is to create a breed that is better adapted to a particular climate. New breeds are often produced to fill market niches not previously satisfied by existing ones. Sometimes new breeds are established simply because some breeders, for any variety of reasons, prefer a particular look or phenotype. All are valid reasons for employing the creativity of this process.

There are those who prefer a more genetically-based definition of “breed.” Dr. Philip Sponenberg,

D.V.M., Ph.D. gave such a definition in the Spring 2001 edition of "PurelySuri":

"A 'breed' is a group of domesticated animals that are similar enough (usually by appearance, production, or origin) to be logically grouped together and which will produce like offspring following mating within the group. That is, breeds breed true."

This definition is, of course, describing a "pure-bred" animal and does not strictly apply to Suris in North America or, for that matter, anywhere else in the world today. There are several factors that account for this. The seed stock used to establish the U.S. Suri industry was developed in a pastoral culture lacking in the broad application of modern animal science techniques. Jane Wheeler, a leading camelid archaeologist, has come to some enlightening conclusions based on her studies of 700–1300-year-old mummified alpacas from El Yaral, Peru. She was able to identify both Huacaya and Suri Alpacas, as well as fine fibered llamas, all with fiber diameters significantly finer than those found in Peru today. Wheeler postulates a breakdown in controlled breeding and extensive *hybridization* following Spanish conquest of the Inca civilization. According to Dr. Wheeler, recent DNA studies have revealed "alarming levels of hybridization" among camelids across the Andean region. This caused Wheeler to conclude that "we urgently need to identify and protect the few remaining unhybridized alpacas" (Wheeler, 2005).

Another factor at play here was the selection bias that occurred during the importation phase of our industry that disproportionately favored colored Suris, commonly considered to be more hybridized, over white ones. As a consequence of these factors, a narrow definition of "breed" is not especially useful in this context. To those focused on protecting and promoting the *purity* of the Suri Alpaca, continued hybridization of the Suri with Huacaya Alpacas or with llamas seems counterproductive. It would be unfair to criticize the pastoralists in the Suri's native land for this practice without mentioning the ongoing practice of hybridization in the U.S. and Australia.

There are those who have a difficult time grasping the idea that there could be two separate breeds of alpacas simply because this is a new way of thinking. At some time in the past there were undoubtedly people in the cattle or horse industry who felt this same way about different breeds of bovine or equine species. Currently there are dozens of recognized

breeds of both cattle and horses.

The difference between two breeds of livestock is often quite minimal. For example, in Angus beef cattle the differentiating factor is simply coat color, black or red. In the dairy industry there are several different breeds all of which produce the same product, milk. If one were to put Suris, Huacayas, Vicunas, llamas, and camels all in the same pasture, even a casual observer would recognize breed differentiating characteristics amongst each of these different fiber producing camelids. This observer would readily discern the two most obvious characteristics of the Suri fiber: luster and the straight hair-like fiber forming distinctive locks. Taking a little closer look would reveal other phenotypic differences in the length of ears, shape of nostrils, and additional subtle differences less obvious on initial inspection.

If a casual observer can recognize distinct differences, what happens when a closer look is taken? Because luster is the single most important commercial characteristic of Suri fiber, it is very important to look closely at the structural components of the fiber that impart or determine the property of luster. A much closer look was recently accomplished by Andy and Dr. Cheryl Tillman when they utilized the extremely high-resolution imagery of scanning electron microscopy (SEM) to evaluate the characteristics of Suri fiber. In addition these characteristics were

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Huacaya fibers at 990X magnification. MSF 11/100 micron. According to the Tillman's research, the surface structure of Huacaya fiber has a much higher MSF than Suri. It also has a slightly higher scale height and steeper edge angle.

Suri fiber at 1,000X magnification. MSF 5.5/100 micron. Suri fiber is characterized by an indistinct scale edge that is difficult to visualize even with digital measuring tools. This is responsible for its slick, cool handle compared to Huacaya, merino wool, or even cashmere.

compared to those of other specialty fibers. This study determined that: "SEM demonstrated that the cuticular cell length, height, and scale edge angle of Suri Alpaca fiber is measurably different from Huacaya Alpaca, cashmere, wool, and all other members of the camel family" (Tillman, 2005).

This is an important observation as the physical characteristics observed by SEM are highly correlated to both luster and handle. Of all the specialty fiber types evaluated, Suri was most similar to cashmere, only better as the Suri exhibited a much lower scale height. As luster is the most commercially important quality of Suri fiber, these differences, although microscopic, are huge in their implications for marketing Suri fiber. One can only conclude that the closer we look at the Suri the more differences we find from the Huacaya Alpaca. Under the very discerning eye of the electron microscope, the Suri Alpaca truly is unique in the world of camelids. The upcoming SN sponsored fiber study will further define the unique qualities of Suri fiber.

By clearly establishing the Suri as a separate and distinct breed with its own breed standard, the industry can more effectively extol these unique differences to the consumers of specialty fiber. There is no clearer or more effective way to differentiate and promote our product within the textile industry. This will send a message that North American Suri producers are focused on producing exceptional quality fiber. When used to its best advantage, the textile industry should use Suri fiber in many of the same applications as cashmere, silk, and mohair.

Positioning the Suri as a separate alpaca breed is an important step in promoting the future success of our industry. Taking this step now would bring a new level of recognition within the livestock community. It would send a clear message that the Suri Alpaca is not only rare and exotic, but is also well positioned for success in the production of fiber. Being a rare and exotic breed has fueled the initial growth in our industry and this trend will continue as there are still very few Suris in the U.S. Becoming the world leader in producing Suri Alpacas with exceptional fiber qualities, grown on an anatomically and phenotypically correct body, will assure future growth.

Establishing a breed with a clear understanding of what is unique about Suris will focus the industry on the importance of improving upon those unique qualities. Establishing a breed standard will help

focus the industry on breeding for commercially important traits. Conceptualizing the Suri as a breed can unite U.S. breeders around a common goal of producing the most exceptional Suris in the world. By raising the bar and focusing on this higher level of achievement, much more can be accomplished in a shorter time period. If, over time, North American producers develop a purebred Suri Alpaca that consistently produced fine fiber with exceptional luster (6.5 MSF and an average fiber diameter of 18 microns), the world will look to the U.S. as the preferred provider of everything Suri. At that point in time, when the textile industry wants both luster and fineness, they will look to the North American Suri and they will willingly pay a premium to secure that superior quality.

There is yet another reason to look seriously at breed status for the Suri. By the numbers, the alpaca industry is currently dominated by Huacaya producers. In part because of this, there has been little effort to highlight and promote the distinctive qualities of the Suri. Whenever there is a disparity like this in an industry, a number of issues arise. As a strategy, developing a totally separate breed standard for the Suri will help Suri producers and AOBA address many of these issues. Taking this step in no way implies the necessity or desirability of establishing a separate association or registry. This is a step that will strengthen both the Suri industry and AOBA. The SN is committed to facilitating the establishment of a separate Suri Breed Standard and has received the support of AOBA in this regard.

It ultimately comes down to this: Suri breeders and the Suri industry have more than adequate reasons to justify the designation and promotion of the Suri Alpaca as a *separate* and *distinct* breed of fiber producing livestock. This could very well be viewed as a defining moment in the evolution of the Suri industry. ●

Works Cited

- Wheeler, Jane C., Pre-Conquest Alpaca and Llama Breeding, *International Camelid Quarterly*, December 2005, V4, No. 4, pp. 7-14.
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