



The Importance of Hindquarters

By Bev Henry

It seems that the trend in camelid fashion these days is veering away from a sturdy and well structured body, with more emphasis on fibre style and quality. Although I harvest, spin and wear fibre from my working animals, I do not breed for fibre. I would think though, that the first consideration in any breeding program should be to aim for good sound basic structure and proceed from there.

A sound frame is necessary to carry the fibre, and breeding soundness is necessary to perpetuate this fibre. In the frantic race to produce fine fiber, are breeders forgetting these basics?

When assessing overall conformation, no part of the body should be singled out as being more important than another. All parts work in unison to assure a functioning whole.

But having said that, I am seeing a disturbing trend in what is considered acceptable. One thing that is becoming increasingly apparent in some fibre animals is a degree of weakness in the hindquarters. Breeder acceptance of this is having far-reaching effects. As a breeder of Ccaras (the working breed of llamas), I frequently hear stories of the short wool Ccaras being discriminated against in the show ring for their structure. Ccaras are often labeled as being “post-legged” or “under-angulated” in the hindquarters.

Are they really? Or are many of the fibre animals placing in the show ring in fact over-angulated? Is poor conformation being increasingly accepted as ‘normal’? Are sound-structured animals now being viewed as anomalies?

Why should angulation in the hindquarters matter? Is it simply a fashion judgment? Rightly or wrongly, show ring placings have a huge impact on breeding decisions.

Let’s look at the mechanics of motion, and think of the legs as levers that propel the body forward. The front legs bear the

majority of the weight. But the main thrust of propulsion is generated by the hindquarters and is transmitted through the structures of the back. For the greatest efficiency – meaning maximum distance traveled for minimum output of energy – these levers need to be in the right place.

Think of trying to move a heavy rock in your garden with a steel bar as a lever. Putting the bar close to the balance point of the rock will have the best results. Too far to one end or the other will result in wasted energy and little motion. Now, consider the placement of the hind legs under the pelvis (hips) as being the placement of levers that will propel the body.

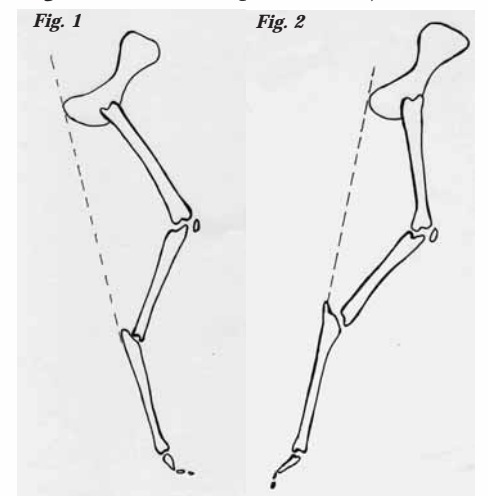
Have a close look at what nature arrived at for South American camelid hock design before we humans decided to ‘improve’ their structure:

Both the guanaco and the vicuna typically have very little angulation in the hock. The effective angulation that gives these animals their superb range of motion (long efficient stride) and

energy-efficient (maximum distance with minimum effort) way of traveling is seen up higher in the hip and stifle joints, and in the slope of the hip itself.

The hock joints in these guys are directly under the hips, which is the best placement for a lever to propel the body. And at any point in their stride, a line drawn parallel to the cannons and extended upwards will come very close to the point of the buttocks (lower end of the pelvic bone). See Figs. 1 & 2.

So these natural athletes have both good placement of hocks, and excellent angulation in the hip and stifle joints.



Good hocks in motion

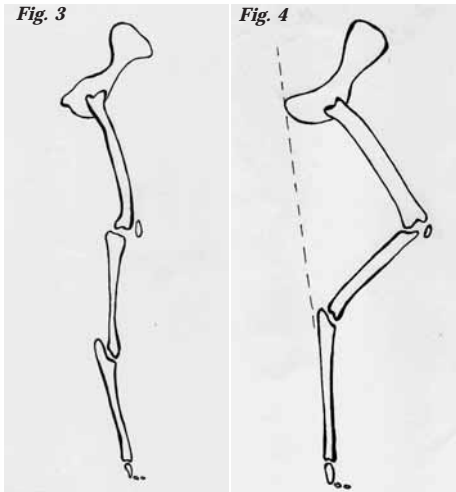
The result is maximum range of motion with minimum energy output. The best of the Ccara llamas have similar conformation, but these magnificent long-striding athletes are being discriminated against in the show ring.

The truly post-legged animal has almost no angulation in the hip, stifle, or hock joints. As a result, the post-legged camelid has a severely shortened stride because it lacks the good angulation which provides for a wide range of motion.

The opposite extreme of post-leggedness (see Fig. 3 & 4) is over angulation in the hocks. This is very commonly seen in today’s fibre camelids and can either be the sickle hocked type of conformation (Fig. 5) or the camelid who is “camped out behind” (Fig. 6). The sickle hocked camelid is unable to fully straighten his hocks, thus reducing the degree of thrust generated by the normal lever action of the hind legs. Sickle hocked llamas typically have a sort of ‘crouchy’ stance behind.

The camelid who is camped out behind can straighten his hocks, but they are





Post-Legged

Normal hind leg

placed so far out behind his pelvis that most of the thrusting energy is lost. The lever is too far behind the point of balance.

Are less than perfect hindquarters a fault in the fibre camelids? I guess this is for fibre breeders and judges to decide. The show-stopping Suri will probably never be asked to carry an 80-lb. pack for extended periods of time in the mountains.

But our judges must be able to recognize strong, athletic conformation and reward rather than penalize such

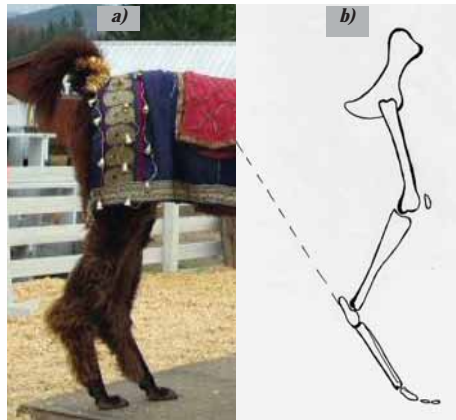


Fig. 5 (a & b) Sickle Hocks

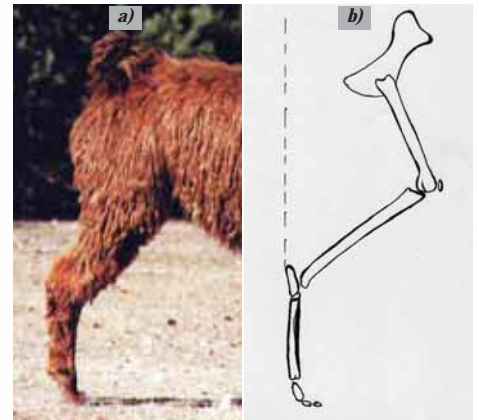


Fig. 6 (a) & b) - Camped out behind

conformation in the show ring - particularly in short wool classes.

More and more llama breeders are going back to the classics to ensure that strong frames and breeding soundness are not lost from their fibre breeding programs. Let us not allow the dictates of fashion to discriminate against the athletes of the llama world.

Let us not lose sight of the basics.

About the Author:

Bev Henry has been involved with pack llamas since 1997 and is now breeding athletic pack stock along with husband Barry in Barrier, British Columbia, Canada. Bev and Barry are focusing on preserving the old style Ccara llamas. Bev comes from a background of a lifetime training and riding performance horses, is an amateur outdoor photographer and an artist who interprets her images in pencil and watercolor.

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