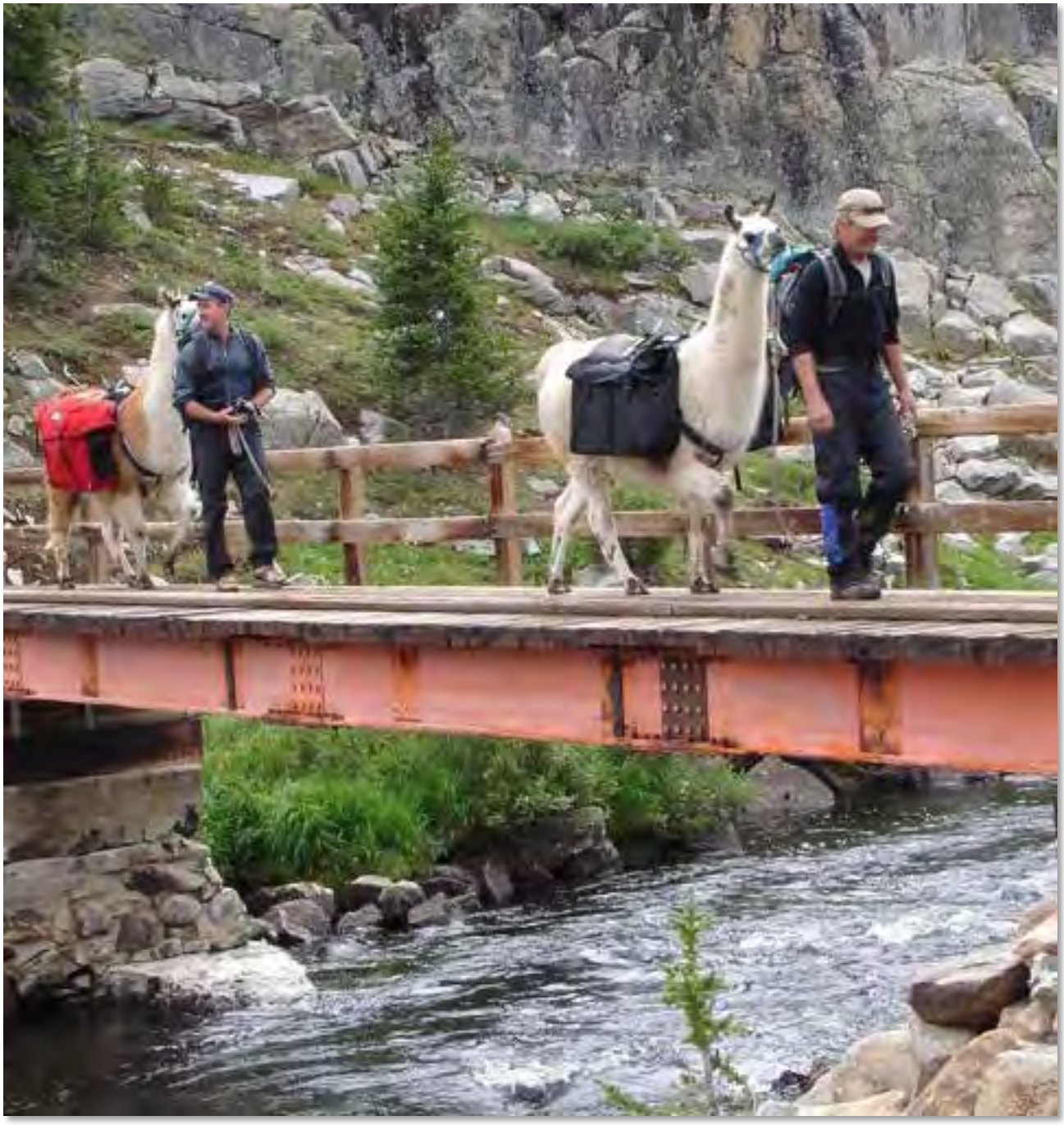
Spring 2025

The Journal of RMLA



Welcome to RMLA!

– – – Mission Statement – – –

The mission of the Association shall be to educate the members and the public as to the breeding, raising, care and use of llamas and alpacas.

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About the Journal

The Journal of RMLA© is a quarterly publication of the Rocky Mountain Llama and Alpaca Association (RMLA). The RMLA Journal Committee and the Board of Directors reserve the right to select and edit all articles and advertisements submitted.

The information in The Journal is not intended to be a substitute for qualified professional advice. Readers are encouraged to consult with their own veterinarian, accountant or attorney regarding any questions concerning their animals or business operations.

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Advertisers in This Issue

Cover Photo Courtesy of Al Ellis: Commander Spock in the lead, followed by Hillview Hugo.

From The Editor

Kathy Stanko, Editor, rmlaeditor@gmail.com

May I indulge you for a moment?

I recently took a trip to Seaside, Oregon, with my two sisters. We talk all the time but we had not seen each other in three years. Seaside, Oregon, is a wonderful place with a wide diversity of family friendly activities. High on my priority list was to take a ride on the old fashioned carousel! It was every bit the fun I remember as a kid.

The time with my sisters was great. The trip home was a nightmare! Mechanical issues on the plane led to a missed connecting flight. I became stranded in Salt Lake City for a night before renting a car the next day to drive back to Grand Junction.

Now the point of this editorial message: Gratitude.

I am grateful to all of the people who guided me and supported me through this huge airport, the baggage issues (of course), the shuttles, hotel, and rental car agency. Thank you everyone.

I extend my gratitude to Ron Baird who has served as chair of the RMLA Research Committee for 25 years!!!! Ron continually scans websites, magazines, journals and newspapers articles of news for members. See pages 11 and 35 for his latest contributions.

I am grateful to Al and Sondra Ellis for their dedication to llamas for all these many years and keeping the ccara llama in the forefront. See part 1 of his article beginning on page 16.

To Judy Glaser who has *made nice* with the powers that be of the National Western Stock Show. Judy has succeeded in making the llama show bigger and better every year. See page 23. For this I am grateful.

Lougene Baird is a founding member of RMLA; she continues to share this history with all of us as the Chair of the newly created RMLA History Committee. For her and the board's creation of this new committee, I am grateful.

I am grateful to the new board who jumped in and stepped up to keep this incredible organization moving forward.

Finally, I am grateful to each of you, our members.

Journal Submission Dates, Ad Rates & Specifications

All of this information may be found at RMLA.com

Ad rates are quoted per issue. Lock in the current rate by purchasing an ad for four consecutive issues and receive a **5th ad for free**. You may change your ad once during the year.

Letter from Your New RMLA Board

Hi to all,

I just wanted to let you know that each of us on the current Board of Directors is open to conversations about anything llama or alpaca. We are all learning the ins and outs of being on a board. There is a lot more to it than any of us thought, and that is an understatement. On the RMLA website you can find the position that each of us has agreed to and the committee liaisons have been updated. (Thank you Kathy Stanko for making this happen.) We are standing by to help you always.

Past and present meet, you can't know who you are unless you know where you've come from. In this light we created the new History Committee to help us navigate this brave new world. Long-time member, Lougene Baird, is chairing this committee to provide the history of our thoughts, ideas, and actions. She will participate, but not vote, in our meetings. Heather Rohlwing has agreed to chair the Youth Committee. Woohoo. This is a program we are all wanting to get going again.

There is a rich history of events and people that we all owe much gratitude to. Each member has skills and knowledge, no matter how big or small, that will always find a place with RMLA to keep us moving forward. Let us know how you want to serve. We look forward to working with many more members this year.

Respectfully,
Judy Glaser
RMLA President

New Members

RMLA continues to grow. We welcome our new members!

A new Youth member from Montana

Upcoming Events

August 11th – 13th, The Rocky Mountain Pasture Show, 2Bit2 Ranch, 5415 CR 59 Guffey, CO A double halter ALSA show A single performance ALSA show. Rustic camping: no hook ups, no internet, but a porta potty. Unplug for the weekend and enjoy the beautiful scenery, cooler temps, and all your llama friends! For more information, contact Jennifer Starr, rowan.starr@gmail.com.

From an RMLA Member

DEAR BOARD MEMBERS,

I AM WRITING TO EXPRESS MY SINCERE GRATITUDE TO THE RMLA FOR YOUR GENEROUS SPONSORSHIP OF THE NOVICE PERFORMANCE BELT BUCKLE AWARD AT THE 2025 NATIONAL WESTERN STOCK SHOW. WINNING THE BUCKLE WAS TRULY A SPECIAL MOMENT FOR ME, AND I CANNOT THANK YOU ENOUGH FOR YOUR SUPPORT OF EXHIBITORS LIKE MYSELF!

THANK YOU AGAIN FOR YOUR GENEROSITY AND FOR MAKING OPPORTUNITIES LIKE THIS POSSIBLE. YOUR CONTINUED SUPPORT IS MAKING A LASTING IMPACT ON COMPETATORS AT ALL LEVELS, AND I AM INCREDIBLY GRATEFUL TO BE ONE OF THE BENEFICIARIES OF YOUR KINDNESS.

JON BARBA...

Calling All Youth!

By Heather Rohlwing, Chair, Youth Committee

My name is Heather Rohlwing and I am the current RMLA Youth Committee Chair. I am excited to be joining the newly elected board as we seek to bolster the RMLA Youth Program.

I am the owner of 99 Pine Ranch in Parker, CO and have been involved with llamas and alpacas since 2014. I have been an active member of various camelid organizations including 4H. As the new Youth Committee Chair, I would love to hear from our RMLA youth!

We are excited for the 2025 season and RMLA wants to partner with our youth and their leaders to grow programs in our regions, provide educational opportunities, and support our members before and during the upcoming show season.

Here is where we need your help!

Would you like to see educational seminar offerings this year? If so, what would be most valuable?

- Obstacle?
- Showmanship?
- Veterinary?
- Fleece?
- Conformation?

Would you like to be able to attend a practice show before the county fairs?

Would you be interested in earning points toward a year-end prize by participating in llama and alpaca events in your area?

RMLA wants to hear from you! You can contact me at heather@99pineranch.com or 303-523-3601. I am looking forward to serving the RMLA youth!

HERD HEALTH

Toenails….Practically Speaking!

By Marty McGee Bennett, CameliDynamics

It would be lovely if we could spend the time to properly prepare all of our animals to accept toenail trimming with complete cooperation. We would also have perfectly clean houses, file our taxes on time and remember everyone's birthday. In a perfect world that is the way it would be. But we and our llamas and alpacas live in the real world.

I have the reputation of being a pretty good handler but sometimes I run out of options too. I just sedated one of my llamas to give him a pedicure, and it was so nice to get it done so easily that I want to encourage everyone to keep that option open if you need it. There is no shame in it. Everyone runs into situations wherein the animal cannot do, reasonably, what you need him to do.

When you are faced with a medical situation, most people don't hesitate to use a sedative. I would submit to you that from the animal's point of view anything scary or uncomfortable is the same. The bottom line for me is using a sedative is safer for both the animal and the handler.

Working with a young alpaca without restraint teaches self-control, safety and makes toenail trimming much easier when it is time.

I often joke that when it comes to trimming toenails that you better have not only a Plan B but a C, D, E, F, G, H and maybe then some! Here is my list of toenail plans for you to pick and choose from.

Work in a pen with several animals and then the old adage of safety in numbers works to your benefit.

A) Start babies with systematic desensitization on each weigh-in day, and by the time it is time to trim toes for many of them it will be no problem. Begin with stroking from the top line down the leg to the knee in the front, hock in the back, progress to stopping your hand just behind the knee in the front and in front of the hock and in the back. Progress to picking the foot up from these spots. Pick the leg up and put it back down a number of times without holding the leg up for more than a second or two. We call this *up down, up down*.

B) Work in a small catch pen no larger than 9' x 9' and pack the pen to 80% full. What I mean by this is that if you look at the pen there is about 20% free space. Trim toes with a helper that can balance for you—NOT hold. The panel is your friend. Before you begin, get the animal right next to the panel; there is no sense in starting the process without the support of the panel.

A llama or alpaca that is in balance: is carrying their

Balancing and animal and trimming toenails without picking up the foot.

weight naturally on all four feet. That would be weight distributed evenly side to side and roughly 67% of their weight on the front legs and 33% on the back. Use the animal's head to help keep the animal's weight distributed evenly on the right and left front legs. Alpacas and llamas carry 67% of the weight on the front legs so keeping the animal in balance in the front does most of the job. If you do not use the corner-grab-hold approach for routine catching, this technique will be supportive not threatening. Skip feet or animals that you can't do reasonably.

If your animal will not stay in balance, ask your helper to support the front end by wrapping one arm around the neck, allowing the animal to rest the head on the forearm and the other hand firmly on the midline of the neck or wrapped around the neck without pulling the animal on to their body.

C) When you are doing a toenail trimming day—keep your ego out of it and satisfy yourself with a bunch of *up-down, up down* on animals that allow you to touch their legs but cannot tolerate holding the leg up for long enough to trim. If you want to be a bit more persistent, you can hold on to the foot but let the animal put it back on the ground. Don't squeeze or fight, just keep your hand attached to the foot. Pick the foot up again when you can. Resort to force and you will be making it harder next time and there will be a next time! Settle for an *up-down, up-down* and you will be setting the stage for better trimming next time.

D) Trim the toenails on the ground. Make sure to nibble small bits off the nail instead of taking bigger pieces. Put your non-trimming hand on the top line WITHOUT PUTTING ANY DOWNWARD PRESSURE ON THE BACK so that you can move the weight onto the toenail you are trimming.

E) Trim toes in the morning after a heavy dew, after a rain or when the ground has been moist. The animals are MUCH more cooperative when the nails are moist. Trimming really hard toenails is uncomfortable for the animals causing the nail to twist and trimming moist nails is also easier for the trimmer.

F) Always take the time to trim toenails on shearing day if you are stretching animals out.

G) Trim toes in a space just big enough for you, the animal and a second person to balance. For me this is about 9 feet long by about 3.5 feet wide.

H) Keep the foot under the body and work with your helper to keep the animal lined out along a panel so the body doesn't twist. This means keeping the body in balance like you were at a show. Head lined up with the neck, neck lined up the body, body over the feet. Once the spine is twisted, the animal is going to rear, lie down or jump to get away.

Work in an area that is just big enough for you and the animals and that includes a rear barrier so you do not have to tie the animal by the head.

I) MY FAVORITE. Load a bunch of animals in a trailer and trim toenails in the trailer!

Use a sedative. Be sure to check with your veterinarian first.

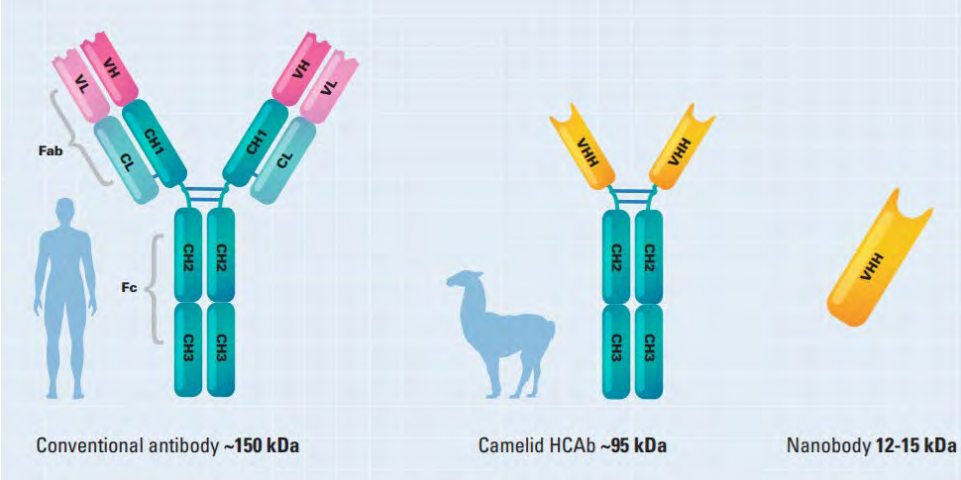
MEDICAL RESEARCH

Our Precious Brothers and Sisters are in the News!

By Ron Baird, Chair, Research Committee

Editor's Note: The Coalition for Epidemic Preparedness Innovation has given RMLA permission to reprint their press release.

Antibodies taken from lamas – in this instance alpacas – are being researched for a new pandemic flu drug in a $42.2 million project funded by the Coalition for Epidemic Preparedness Innovation (CEPI). This is quite timely as the world is beginning to experience human cases of the avian flu virus (H5N1) that has killed millions of chickens and other birds. It is thought to be the first time that **V**ariable **H**eavy domain of a **H**eavy chain-only antibody (VHH antibodies) from alpacas have been used to develop therapies against dangerous viruses. In the trial led by CEPI's commercial partner AstraZeneca, scientists will immunize alpacas with four strains of pandemic flu, extract the protective antibodies the animals produce in response, and use the antibodies to create potential new protective drugs for humans.



In biology, the mass of large molecules is expressed in kilodaltons, kDa. This figures illustrations the relative size of human vs. camelid molecules and the small size of the VHH Nanobody.

The new project aims to overcome the expensive method of using man-made monoclonal antibodies by using VHH antibodies or "nanobodies" which are more potent, more precise, and more stable. VHH nanobodies are derived from a narrow group of animals: camels, llamas, and several species of shark.

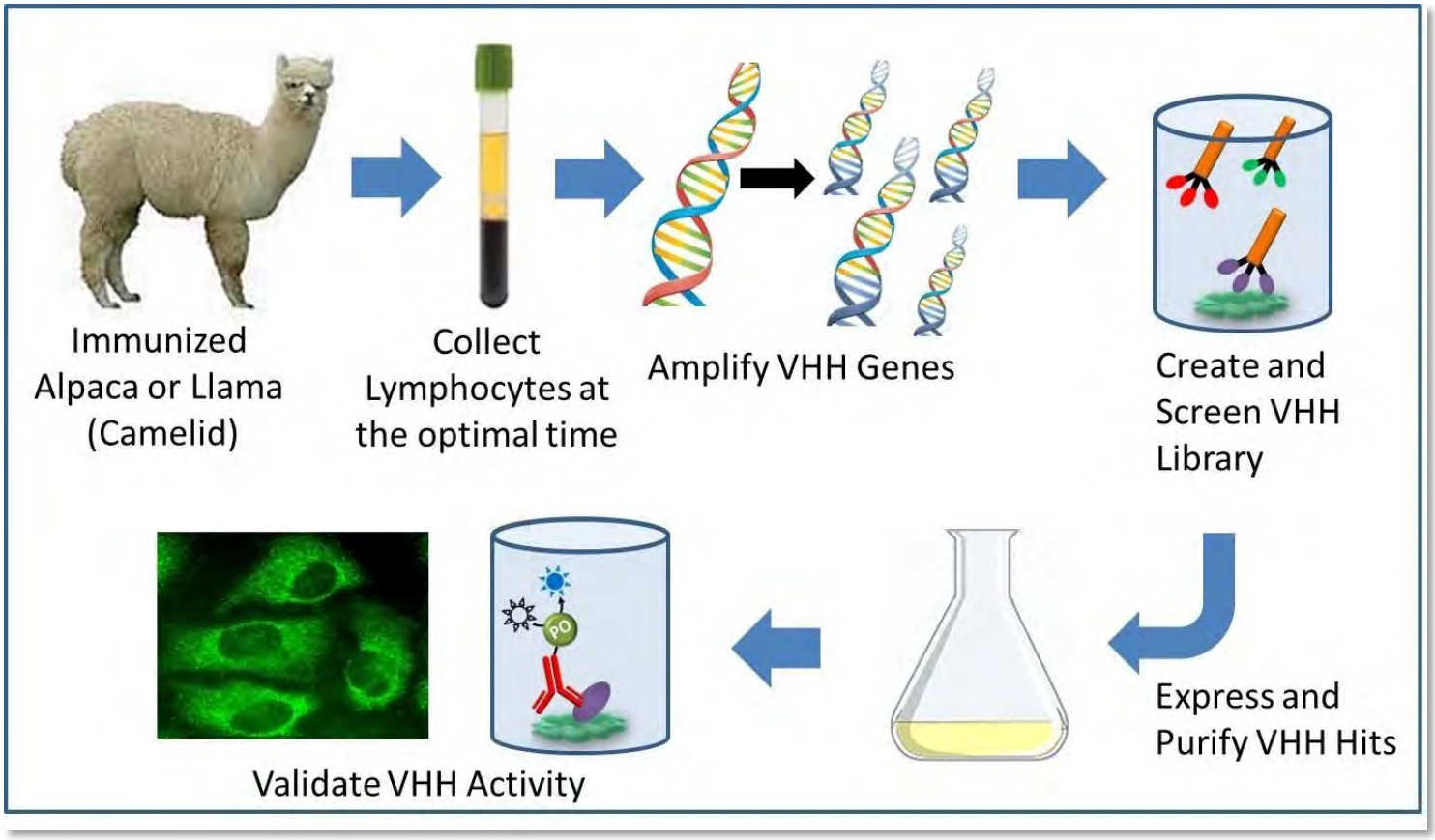
CEPI, headquartered in Oslo, Norway, was formally launched in 2017 at the World Economic Forum in Davos, Switzerland. It was co-founded and co-funded with US$460 million from the Bill and Melinda Gates Foundation, the Wellcome Trust, and the governments of India and Norway and later joined by the European Union and the United Kingdom. It is an innovative partnership between public, private, philanthropic, and civil organizations to advance vaccine development, enable their full trials and emergency deployment in outbreaks, and support the long-term development of epidemic vaccine preparedness within countries most at risk from epidemic threats.

According to the World Bank, total contributions to CEPI are approximately $2,668,000,000.

The remainder of this article is the text of the announcement by CEPI and its industry partner, AstraZeneca, relating to this new potential use of lama nanobodies. It provides a detailed explanation of just how the process works.

"20 Mar 2025; OSLO: CEPI is partnering with AstraZeneca, a global biopharmaceutical company, to advance a type of antibody that could significantly reduce costs compared to existing monoclonal antibodies and increase global access to antibody-driven disease prevention solutions during an emerging infectious disease outbreak. CEPI funding of up to US$43.5 million will support AstraZeneca to evaluate an innovative antibody, known as a VHH (**V**ariable **H**eavy domain of a **H**eavy chain-only antibody), in a preclinical proof-of-concept study through Phase 1 clinical trials.

The VHH is designed to target four pandemic influenza virus strains—H1, H3, H5 and H7—capable of attaching to multiple parts of the virus, known as a multi-specific molecule, potentially increasing the chance of protection. The multi-specific VHH will also be engineered to offer long-lasting protection against infection. Once proof-of-concept has been established for an antibody targeting influenza, the technology could potentially be used to tackle a range of future infectious disease outbreaks.



A VHH is part of an antibody, found in animals like camels, llamas, and some sharks, that recognizes a pathogen and triggers an immune response. Unlike conventional antibodies, which must pair with a light chain to form a complete antibody capable of fighting off a virus, VHHs are able to work on their own. This means VHHs are much smaller and more amenable to being incorporated into multi-specific molecules. As a result, they are easier and cheaper to produce than existing monoclonal antibodies, ultimately making them more accessible.

VHHs are also relatively stable, even in extreme conditions, making them a promising prospect for an outbreak response in areas where transport and storage capabilities are limited.

> "VHH antibodies, like monoclonal antibodies, have the potential to be highly potent medical countermeasures capable of providing immediate protection against viral diseases. Monoclonal antibodies are expensive to produce, however, and their cost limits their widespread use for protection against viral diseases," said Dr Richard Hatchett, CEO of CEPI (ed. formerly of the National Institute of Health). "CEPI's partnership with AstraZeneca on this potentially ground-breaking VHH project could usher in a new era of more affordable antibody-based interventions, meaning that vulnerable populations could be protected from future epidemic or pandemic threats."

VHH technology is increasingly being explored to target chronic diseases such as cancer and Alzheimer's Disease, but this latest CEPI investment is among the first to target an infectious disease and provide protection against four different influenza strains in a single molecule.

Like naturally occurring antibodies or monoclonal antibodies, VHHs work by targeting harmful pathogens and neutralizing the foreign invader. Upon binding to the virus, VHHs can prevent the virus from entering the body's cells. In an outbreak setting, this VHH-based multi-specific antibody could serve as a protective bridge prior to the onset of longer-lasting vaccine-induced immunity. This approach limits the time that vulnerable populations are without protection, helping to swiftly contain viral spread.

> "AstraZeneca is pleased to partner with CEPI to develop VHH-based multi-specific antibodies targeting influenza. This collaboration demonstrates AstraZeneca's commitment to addressing the impact of infectious diseases and to pushing the boundaries of science to bring innovative medicines to the patients we serve**.** – Mark Esser**,** Vice President, Early Vaccines & Immune Therapies R&D, AstraZeneca.

CEPI and AstraZeneca are committed to enabling equitable access to potential outputs of this CEPI-supported program, in line with CEPI's Equitable Access Policy. This includes sharing of any commercial benefits arising from CEPI's funding, a mechanism for CEPI to fund a product for a CEPI Priority Pathogen using the same technology, and a commitment to ensure affordable supply of the product in low- and middle-income countries in the event of an outbreak or increased outbreak preparation need."

ANIMAL SAFETY

You and Your Trailer

For many, the show season is in full swing and our llamas are moving to and from, here and there, with hardly a care in the world. For others, the beckoning wild blue yonder is calling us and our llamas, and after a long, hard winter, many are getting ready for that first of many road trips with animals quite literally in tow. With that in mind, it's time to think SAFETY, and so, below, please find the following article written in 1997 by Gerrit Rietveld, Animal Care Inspector/OMAF, and posted on the Ontario Ministry of Agriculture, Food and Rural Affairs website. Just change the word "horse" to fit the creatures of your choice (mine is "llama"). - Gary Kaufman

Editor's Note: I have used *lama* instead of horse. This article originally appeared in the Fall 2021 issue of The Journal.

Most lama people are very conscientious when it comes to the training, care and maintenance of their lamas; but are they as meticulous when it comes to ensuring that their lamas arrive at the show safely? Transporting llama can be a very traumatic and potentially dangerous experience for both the lama and owner if some practical steps for care and consideration are ignored.

Follow these steps to make sure your show day is a success from the start to finish.

Animal Welfare

Asking a lama to enter an unfamiliar, cave-like structure instinctively tells him that danger must surely lurk ahead, and he should not enter. Spending a few hours a week prior to transport can overcome this fear and result in a lama and handler that are much more relaxed during the trip. A calm lama will perform better than one which has had a distressing trip on the way to a show. Tip: Often spooky lamas will feel more confident traveling with a partner. Suspending a hay net (within reach, but not too close for entanglement) for the traveling lama will provide him with a nourishing distraction for a longer trip.

The interior of the trailer should be free of any projections or holes which may cause an injury to the lamas, as they are often moved about involuntarily during transportation. Partitions, breast and tail bars should be padded for the comfort of the lama.

Reluctant lamas may load easier in a trailer which has a lightly colored interior, rather than one which is dark. Battery-operated interior lights are a good idea and can be obtained at minimal cost.

It may also be advisable to check the insurance policy (if you have one) for your lamas to determine if they are covered while in transit.

Suitability of the Trailer

Trailers come in many shapes and sizes. Select a trailer to suit the type of lama it was designed to carry. Larger or heavier lamas must be transported in a trailer which affords them adequate head room and stall length and width. Tip: Carry all buckets, forks, shoes, etc. in a compartment separate from the lamas.

Points to Consider:

- **Undercarriage**: Check closely each year prior to use for cracks in frame, axle brackets, excessive rusting of components, etc. ALWAYS check, clean and repack wheel bearings twice a season. Replace the seals and any other worn parts. Tip: Carry along a replacement bearing and tools to install it.

- **Floorboards**: Over time, whether a trailer is used regularly or sitting idle, floor boards deteriorate to the extent that they can pose a very real threat to the safety of the lamas on board. Floorboards should be replaced if they show signs of deterioration. Hardwoods, such as oak, are a good choice for replacement. Tip: If a screwdriver or a pocketknife can easily be pushed into the boards more than a quarter of an inch, consider replacing the boards. It is also suggested, as an added measure of insurance, to tack-weld a sheet of expanded metal fabric to the frame of the trailer before installing the floorboards. Rubber matting installed over the boards will help to extend the life of the boards and provide better footing for the lamas. Tip: Always provide bedding to absorb moisture. Clean the trailer upon arrival at your destination.
- **Doors and Ramps**: Regularly lubricate all hinges and latches to prolong their life. Check these prior to departure to ensure they are functioning properly.
- **Brakes**: Some trailers are fitted with their own braking system, others are not. It is not advisable to disconnect trailer brakes, as it is better to have the trailer braking the truck than to have the truck providing all the stopping power for the trailer, potentially causing a jackknife in the event of an emergency stop. Ensure that the brake controller is properly adjusted and maintained. It should not lock up, and it should release freely. Tip: Adjust to suit change in the seasons; i.e. summer/winter.
- **Tires**: Tires should be well matched, properly inflated, and be in good condition. As trailers are often parked for long periods of time, the tires may show good tread, but the sidewalls should be checked regularly for cracking. Tip: Ensure that the spare is in good condition and full of air. Also ensure that all the tools are available to change the tire. A roll-up block is a handy alternative to a jack system for two-axle units. Simply roll the good tire (next to its flat mate) up on the block, suspending the flat tire in the air.
- **Hitch**: Does it lock securely? Are the safety chains heavy enough, well-fastened and in good condition to hold the trailer in an emergency? Nothing less than a two-inch ball should be used. CHECK YOUR RECEIVER for missing or loose mounting bolts, cracked welds, or cracks or sagging receiver assemblies.
- **Lights**: Check all lights prior to departure. Other drivers require ample warning of a trailer stopping or turning. It is crucial that running lights are functioning properly, as often a portion of the journey may be made at night.

Emergency Kit: An emergency kit should include:

- Two flashlights with extra batteries (may be used as tail light if trailer lights fail)
- Lead ropes for each lama
- A 100-foot length of rope
- Flares
- Red warning triangle
- Jack for trailer or roll-up block
- Electrical tape
- Duct tape
- WD-40
- Stockman's knife
- Blocks to stabilize a stationary trailer
- Two well-stocked first-aid kits (humans/lamas)
- Extra blankets
- Food
- Phone and charger

Tow Vehicle: The vehicle chosen to pull the trailer must be appropriate. A well-mated truck and trailer combination will have the trailer riding level to

reduce strain on lamas' legs during transit. A good towing vehicle for a two-, four-, or six-lama trailer should be equipped with:

- Heavy-duty suspension
- Good quality brakes in good repair
- Transmission cooler
- Heavy-duty radiator
- Good quality tires
- Dual gas tanks (or supplementary tank in the back)
- Cell phone with emergency numbers list
- Current registration and license and insurance

And finally, become familiar with backing and driving the trailer when it is empty. Be aware that a trailer containing three or four lamas does not handle like an empty trailer.

Tip: Place a glass of water on the dashboard of the truck and try not to spill a drop while you are driving. This will encourage smooth starts, stops, and corners which your lama will appreciate.

Plan your route before leaving to select the way with the least amount of traffic, starts/stops and sharp corners. Perform a circle-check each time the trailer leaves the farm to ensure that lights, brakes, hitch, safety chains, etc. are in good working order and the doors are securely closed.

Highline Trail Llamas

An Interview with Al Ellis by Kyle Mumford, Part 1

Al and Sondra Ellis

Editor's Note: This article originally appeared in the American Llama Magazine. Thank you to Kyle Mumford and Al Ellis for permission to reprint the interview in two parts.

Al and Sondra Ellis have spent decades raising pack llamas. Al's passion for traveling the high country looking for mule deer led him to get his first pack llamas in 1986. Not long after that they were breeding llamas, and eventually had a herd more than 200 in number. But it wasn't the number of llamas found in the Highline Trail herd that set them apart, it was the quality. Al tested his llamas on the trail, found out what type of llama was up to the task, and selected for those traits unwaveringly. "I probably packed 200 days a year for my first ten years with llamas," Al said. "I was fortunate enough to be retired at that point in time, so I did gain quite a lot of experience in a relatively short amount of time. Tons and tons of it was off trail in the Rocky Mountains. Some pretty challenging country. So I got to see llamas working where they were challenged." You might call Al's llamas classics, ccaras, or light wools; all terms he has certainly used himself innumerable times. But those terms fall short of describing the Highline Trail Llamas produced by Al and Sondra Ellis. They are pack llamas, they are working llamas, they are athletes.

During a span of more than 30 years, while many llama breeders changed their breeding priorities several times over, Al's goals didn't change. Fads came and went for many llama owners: long wool, Chileans, Bolivians, Peruvians, Argentines, suris, and silkies; with astronomical sales prices driving the enthusiasm. But nothing pulled Al away from his

focus. Al and Sondra were a part of a small number of llama breeders who stuck to their style of llama through a lifetime of changes in the US llama industry, and few have matched their breeding successes or industry impact.

I spoke to Al by phone in early 2023. While I had never met him before, I'd seen many of his animals at Sherri and Wil Tallmon's farm and listened to Sherri speak glowingly about her visits to Wyoming. I hoped to hear about Al's conformational preferences and management practices that helped him to breed llamas that packed and bred into their late teens, with pasterns and top lines that seemed to never fail. I came away with so much more, and a desire to ask him a hundred more questions someday soon.

Sir Canad and Woodsend Super Stretch

Al did not grow up around animals; he spent his childhood in the San Francisco area. As he put it, "growing up, livestock was salamanders on an open lot." He pursued a career in commercial fishing, got married to Sondra, and whenever he could manage it, his vacation of choice was to get out in the wilderness. "The love of big mule deer is what eventually took me to llamas," he said.

Al retired early and they moved to Jackson, Wyoming. "We moved to Wyoming in '82 and bought horses," Al said. Then he deadpanned, "And then in '83 we sold the horses and went back to a backpack."

After a few more years carrying his own gear, Al read an article about hunting with llamas in the mid-1980s written by Doyle Markham of Idaho. Al said, "I called (Doyle) and went over to see him, and within about five minutes I was hooked. I wanted to buy some llamas from him. Well, he could put me on a *waiting list* for a *weanling*. So in about six years you could have a pack llama. Maybe, if you're lucky… That sent me on the search."

In his initial herd building, Al was taking what he could find. Ideally, he was hoping to find males that were close to four years old so they could be used to pack more quickly. "We started really looking hard," Al said. "Word of mouth was everything. We subscribed to the llama magazines and looked at the advertisements. The internet wasn't a thing back then, or if it was I didn't know about it. So a lot of finding the farms was just word of mouth. We just took what was available. People would offer you the ones that weren't winning the shows as packers. I ended up buying about 12 weanlings, weanlings to be. And then I finally found a two and a half and a four year old, which were my starter packers. Jasper and Snowball. We did at least 10,000 miles together. I was retired at that time. I pretty much spent the next ten years in the mountains with my llamas. That was the start."

Early Herd Building

Al quickly found out that not all llamas were suited to the kind of packing he was interested in. "The first ones we bought, only one of them turned out," he said. "They were selling them as packers, but back then everything that wasn't a show animal was called a packer. Some of them were nice and tried hard, they were all wonderful personality-wise. I loved them all, but a lot of them couldn't do the job that we wanted them to do."

Before long, Al was out searching for more llamas. He remembered, "I started looking while my guys were still in their prime, because I knew I might have to wait six years before I got another packer when I tried to buy one. Me and my son, we went through all the Western states. I wanted to buy four-year-olds because I didn't want to do the weanling thing again, which hadn't worked out for me. So we went through all the Western states: New Mexico up to Montana, to the West Coast, to Washington, down to California. And I wanted four-year-olds." Then Al laughed as he concluded, "And I came home with one two-year-old from Stan Ebel."

Al added that, "I saw what I was looking for, but they weren't for sale." When I asked what specifically eliminated some animals from consideration he said, "Their structure...They looked like animals that I had previously that weren't able to do what we needed them to do. Maybe we worked them too hard, maybe I asked too much out of them. Honestly for the most part, I know I did. I shouldn't say maybe. We pushed hard a lot of times. Not speed, I'm not a fast walker. Endurance, durability. There were times where we might be going 100 days straight. I had those early animals that I bought and trained to pack, and I started to recognize the types that would reach their exhaustion point first. Not that they didn't want to keep going, or try to keep going. But we were just going harder than they were built for."

Christian

Al didn't find the four-year-old males he was looking for. However, as he put it, "I saw some nice females." He decided that rather than settling for waiting on more weanling males to develop, he would try out packing with female llamas. Al continued, "But before I actually brought them home, I realized, you know, I should get them bred, which started me on my mission."

Al bred his newly purchased females to some males he liked at the various farms he had visited on his buying trips, including Stan Ebel. After the first group of females arrived, he kept shopping for both males and females, who would suit his needs as packers. Al continued, "Not too many years later, we had 200 llamas. I realized they were disappearing. When you search that hard and you can't find what you want, they're disappearing pretty fast. So it became a mission, which I loved."

The Buying Spree

Eventually, Al and Sondra's ranch in Jackson started to feel a bit crowded. "I only had 13 acres. Deep soil, bottom land along the Snake River. High producing grass. I got up to about 40 animals. We had plenty of food, but we were overcrowded as far as manure was concerned. So I realized, 'OK, I've got my pack animals that I wanted. Now what? Do we start selling them, do we quit breeding, or do we move?' And so the answer was obvious, we moved. We moved down to Boulder, WY, where we could buy a lot more land. We couldn't begin to afford more land in Jackson. And the minute we moved, I went on a buying spree."

6-3-0

While Al's earlier buying trips had been to supply his need for pack animals, his goals now were different. He was looking many years down the line and trying to preserve the kind of llama he admired. "I wanted diversity. I wanted to pull my needs together in as diverse of a group as I could because I was afraid these animals were disappearing," Al said. "I was mainly looking for females. I bought 17 females right away. Animals that I knew where they were. Most of them were older. Several of them were 14 or older. But I was hoping I could get one more kid out of them to keep that line alive."

One of Al's purchases in the late 1990's had an outsized influence on the Highline Trail herd. "Here's one of the unsung heroes, Broken B Ranch, up in St. Mary's Idaho, the lady's name was Bea Schoenick," Al said. When Bea passed away her son was tasked with dispersing her llama herd. Among the animals for sale was a young male named Sir Canad, who would go on to become one of the Ellis's most impactful herdsires. Al would also find several females who would form their most important dam line. "Luckily Canad was still there," Al continued. "He was ten months old at the time and I knew I wanted him. He was one of the ones you could look at a young cria and say 'yep, I want him.' We bred Canad before he turned three prior to being tested on the trail." This was a big show of confidence by Al.

Sir Canad sired 43 registered offspring, among them HI TRL 6-3-0, a herdsire for Al and later Mart Borg. Canad's dam, BBR Malinda was also purchased, along with his full sister, BBR Belinda. Malinda and Belinda both lived past 20 years of age, bred into their late teens/early twenties, and produced more than ten live crias. Al remembered, "I went to buy one or two and I came home with five. That was just luck. Bea bred some great animals."

The Perfect Llama

When I asked Al to describe his ideal llama, he immediately mentioned one of his most well-known herdsires, "Commander Spock… He's my gold standard." HI TRL Commander Spock, born in 1998, was sired by Big T, a foundation sire owned by Stan Ebel. Born in 1980, before the ILR was founded, he was in his late teens when Spock was born. His dam, TMF Molly Brown, was bred into her teenage years, producing multiple herdsires and breeding females for Al and Sondra.

Al continued, "Spock had everything. He had the mind, he had the work ethic, he had the attitude. And physically, he was perfect. For a heavy bone, heavily muscled animal, he was as graceful as any llama you ever saw. I never, *never* saw him make a misstep. As far as physical structure, Spock in my estimation was the perfect llama. That's the standard I tried to duplicate."

Spock went on to sire 61 registered offspring, among them were herdsires HI TRL Christian and HI TRL Jack O'Neil, along with numerous breeding females retained by the Ellises.

Conformation

One of the things I was keenly interested to cover during my conversation with Al was conformation. His sustained, focused breeding operation for working llamas gives him a perspective different from that of most experienced llama breeders or halter judges. Starting at the feet, and working up to the ears, I bombarded Al with questions. He never missed a beat; he always had his opinions and ideas ready to share.

Floyd

Frisco

Pasterns
"I've had both very upright, and animals with more angulation in the pastern. Enochi, who is related to Yanaqui, had pretty good angulation in his pasterns, but they stayed like that, they didn't fall farther. They were springy. He used them as part of his mobility. You could see him use them as part of his push off. Whereas other ones at that angle were at the stage of falling. Spock was pretty upright, but I don't want stiff-upright. But some of those work out just fine too. Ideally there needs to be a little bit of cushion built into them and to varying degrees."

Legs
"I like the front knee pretty straight and the rear I like pretty straight. Some people call what I consider proper angulation in the rear post-legged. You have to combine what the leg angles look like with what the stride is."

Size/Bone/Condition
"I like heavy bone. I like heavy muscling. I like to be around that 48" mark at the withers; 425 pounds of solid muscle."

Topline
"I don't want a sway-back and I'm not a big fan of a roach back. Any animal may stand in a funny position at times. But I like a pretty straight top line. I don't too much if they're a little bit taller in the rear. If they're still very strongly put together then they might be an inch taller in the rear."

Neck/Shoulder Junction
"I'm not a big fan of sloping up through the shoulders into the neck. I want the top line to kind of go past the shoulders or maybe even dip a little bit into the neck. When you're sloping from behind the shoulders on up into the neck it makes them measure taller, but a lot of times that makes them not as flexible too. In my opinion, they don't get to use their neck as much. An elk is ideal. I want my neck to look like an elk neck. Where that is giving them their balance point. Forty-five degrees is too much, it's maybe 10 or 15 degrees off of vertical. You can stand them so their neck is upright, but I want their natural stance to be slightly forward. An elk is my example for an extremely athletic animal and the angulation of their neck. An ideal llama isn't that different from ideal elk actually. Except for color."

Color
"I like white for a packer. I like color too, but I want a lot of white in it. For several reasons. It kind of deters mosquitoes. It keeps them cooler when it's hot. It does make them harder to find if you happen to lose one in the snow, but that doesn't happen too often. They do attract more ticks, but we don't travel too much in tick country except for a little bit right at the start of the season."

Ears
"I've never paid a whole lot of attention to ears. I like pretty llamas, but that's not going to stop me from breeding them if they've got the physical attributes I want. We've bred a lot of llamas that had something I wanted really strongly, but they had attributes that I didn't much care for. I would say, 'I want the good stuff out of this one, and we can try to breed out the less-than-ideal traits later.' So, ears I never paid a lot of attention to, other than maybe what they might denote as far as background (alpaca genes). But mostly if they had some attribute I wanted, I would give them a try."

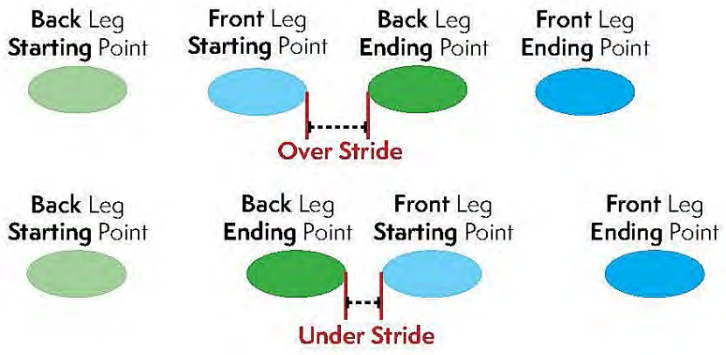
Over-Stride
In addition to my planned conformational talking points, Al took this conversation deeper and wider than I expected. While discussing legs he repeatedly used the term *over-stride* to describe what he was looking for in terms of a stride length. It was not a term I had heard before, and had to piece together his meaning as he described it.

"In a big llama I like to see the rear over-stride the front by about a foot. You can go too far, and that makes them bounce too much. But it gives them a great stride. The ones that over-stride maybe 18 inches, that tips the rear a little too much. It's too much of an angle before they take up the weight on the rear leg."

I freely admitted as we talked that stride length was not something I had carefully scrutinized before, at least not consciously. Not wanting to sound completely ignorant, I repeated some thoughts I had read about the angle of the shoulder playing a role in stride length. "The shoulder does make a difference," he responded. "Long-angled shoulders versus steep-angled shoulders. But it's more than that, in my opinion. There's some pretty steep shoulders that have a great reach. That's because of the flexibility of the upper joint and the flexibility in the shoulder itself. I don't think they have to be long-sloping to have a good reach. And a lot of times with long slopes they don't get that over-stride either."

Over-stride was the first thing I researched more after speaking with Al. Over-stride primarily seems to be a term used in the horse industry, and by Tennessee Walking Horse enthusiasts in particular. Tennessee Walking Horses, as you might infer, are renowned for their speed and smoothness when walking, including their running walk gait. One of the primary traits that allows them to walk faster than other breeds is over-stride.

Over-stride can be measured by marking the starting point of the front foot, as it sets off to take a stride (point A), and the landing point of the back foot, after it completes a stride (point B). If the animal has an over-stride, the back foot will land past the point where the front foot started. If the animal has an under-stride, the back foot will land before where the front foot started. While this is measured using the back foot, the stride length is indicative of a long stride length for the front legs as well. An over-stride indicates that the animal can cover the same amount of ground more quickly than a similar-sized animal with a normal stride or an under-stride.



Over-stride isn't necessarily a universally positive trait, but rather one that a breeder should evaluate for their specific breeding goals. If you take to Google-searching to investigate it more thoroughly you'll see that the first results that come up are in relation to marathon running, where over striding is ill-advised. It is also not a sought after trait in racehorses, or most purebred animal species outside of Tennessee Walking Horses. As Al noted, too much over stride can cause a bouncy gait, so those who focus primarily on the show ring may want to proceed cautiously before emphasizing over-stride in their herds.

Athleticism

As I peppered Al with questions about conformation he often qualified his answers by pointing out that any animal might show you an awkward stance on occasion that could make you think they have any number of flaws. He repeatedly mentioned that it was watching the animal on the move that trumped all of his other evaluation methods. "It's how the whole package is put together," he said. "One of my big criteria for selecting for athleticism is how fast they run and how far they can jump at a full run. When you see these guys running full bore and clear a ten foot ditch without breaking stride, you know they're put together right. I guess my criteria is more in-motion than it is static. I do want them to stand in a certain stance, but more important to me is the speed, the jumping ability, the grace. Animals that can take a few steps on their hind legs, stuff like that."

Commander Spock

Al once again returned to his favorite sire, HI TRL Spock, as he described his goals for athleticism. "Spock used to run at least 20 miles a day around the pasture. We had big pastures then and he loved to play chase. He never was mean. He wouldn't start fights but they would chase each other for a couple of miles. Then he would rest a little bit and he'd go off and start playing again. But I never saw him huff and puff."

Fiber

Fiber, or a lack thereof, is one of the first things that comes to mind when comparing a typical classic or ccara llama to a typical silky or heavy-wool show llama. But fiber was seemingly one of the lowest priority items on Al's mind during my conversation with him. When I asked about the importance of light wool in his breeding and buying decisions he said, "It seemed like the structure I wanted went more with the classic type animal." With Al's unwavering focus on the utility of pack llamas, how much wool they had only mattered insofar as it dictated how often they needed to be sheared. "They were old school llamas. I don't think we called them classics or anything. I don't even know if I was looking specifically for that type, but that's what I ended up with. And that's what worked. I think it might be the length of the leg in relation to the rest of the body more than anything."

I asked Al if he had owned many medium wool or heavy wool animals who met his other selection criteria, and was surprised by the answer. "Probably our most photographed animal on our pack trips was a llama called Chief Gray Ghost. He was a big, powerful, strong boy, and heavy wool. I sheared him twice a year. He was 48 and a half inches, powerful, easygoing."

I do think that Al's focus on light wool animals was more than just happenstance. If you gave him the ability to genetically engineer his perfect llama, I would bet the animal would be light wool with a healthy dose of guard hair. But Al's comments about not letting heavy wool stand in the way of using an otherwise excellent animal were not empty words. His example of a heavy wool animal who was successful on the trail, Chief Gray Ghost, was used at stud and sired several crias for Al and Sondra. (Though it's important to note that his heavy wool was somewhat of a genetic anomaly and he sired light wool offspring.)

Longevity

Aside from size and athleticism, perhaps the most notable trait of Highline Trail llamas is their longevity. The Ellises had most of their animals pack and/or breed into their late teens, and live into their twenties. When I asked Al about selecting for longevity he was quick to deflect credit, "On longevity, that was selected for me to a certain extent because when I went on my buying spree a lot of them were in their teens and in great shape when I bought them."

I asked him if he thought you could evaluate a younger animal to see if their topline, pasterns and the like would hold up to 15-20 years of hard work. I mentioned our oldest female, who is 21 years of age and in great shape, and used the term dumb luck to explain that I had no clue she was special in terms of her longevity until she went past 15 years of age and still looked great. Al responded, "I think they can be genetically predisposed for longevity, that is definitely part of it. But everything for us was dumb luck. The fact that we put the right two animals together and got Spock: dumb luck. The fact that we found Melinda's crew, her mom and sister and Canad up in Saint Mary's by somebody who never advertised: dumb luck. I mean, everything we did was dumb luck. It's better to be lucky than good is what they always say."

Al transitioned the topic from selection and breeding into herd management, something he is equally, if not more passionate about. "I think care is increasingly important. Twenty years old should be attainable by most ccaras or classics under good care. We know how to detect and treat parasites better, we know what vitamins they need."

To be continued in the 2025 Summer issue of the RMLA Journal.

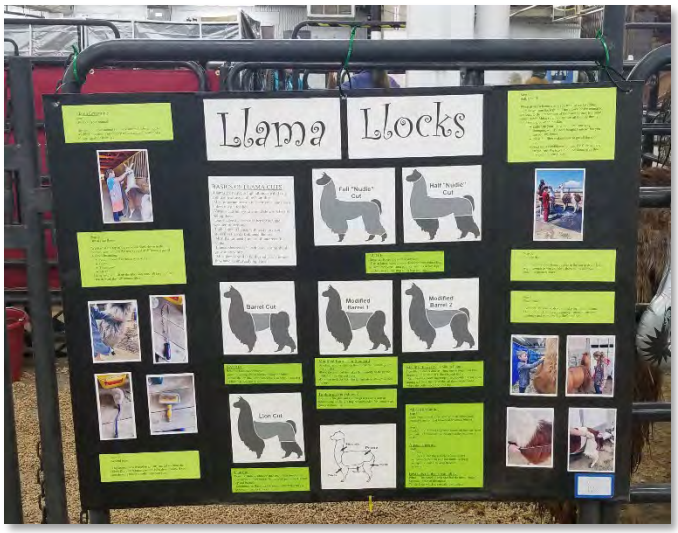
RMLA EVENT

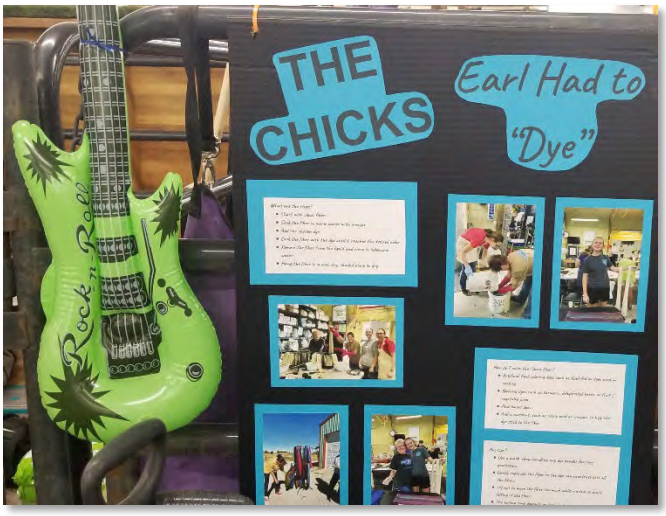
Llama Show at the National Western Stock Show

By Judy Glaser, NWSS Llama Show Superintendent

The first show of the year did not disappoint. It was the last time we all would be in the stadium arena since it opened in 1909. The new facility will be open next year and it is twice as large as the present arena. This is all very exciting!

This year a stall decorating contest brought out very creative and informative topics for the public. The stall decorating contest was judged by all the exhibitors and some of the visitors. The most votes won. First place won a RMLA llama buckle and a bag of llama and alpaca pellets. Second place received a slicker brush and show shampoo donated from Champion Show Supply Ky, LLC. Third place also received a bottle of show shampoo from the same company. The Flinn's display took the first place prize. Second place went to the Rowen Llama Stage Crew and third place to the Romos.





Halter classes ran smoothly on Friday. The Silky Division was a new addition in halter. The Performance classes on Saturday historically bring out many participants, as well as a stadium full of watchers. A mention goes to Kacey Etl for

participating while pregnant. She delivered her son Oscar a week later! The youth got the chance to see what the time spent practicing produced. Our sub-junior participant, Croy Hamilton, won himself a miniature llama buckle from the RMLA. New this year, the novice Champion received the coveted buckle that the youth champions also receive. Jon Barba was the Novice Champion and he was overjoyed to get it!

Here's looking forward to exciting changes and a new facility in 2026!

What Our Members Are Up To

Editor's Note: Russ Felton, who lives in Port Angeles, WA, sent us the following photos and information. We are always happy to see and hear how our members are out and about with their lamas.

Last June found Petunia, Jasmin and myself in Kalispell MT at the inaugural Glacier Classic Llama Show. The event was held at an indoor rodeo arena. The girls did great; Petunia nearly came away with best of show, but she was runner up which is not too bad!

Petunia, two and one-half years

And then in July, the girls and I ventured down to Estacada, OR to drop off the girls' father, Hi Trl Vaughn since he had work to do. Then we took part in the Happy Camper Llama Show. Again, the girls did well at this show also.

This year's Glacier Classic will be held June 21 and 22nd in Kalispell. The Happy Camper Show is scheduled for July 19 and 20 at Hidden Oaks Llama Ranch in Estacada, OR. I will be attending with the younger girls, Camelia and Bellis.

Bellis at five months

Hope to see you at one of these shows. It would be a good time to meet up with new folks.

And to see more of our Ccara llamas, visit Hivalleyllama.com. One of our girls, Bellis, overstride is almost 24 inches. Great Grandpa, Al (Ellis) thought this was fantastic. To learn what overstride means, see page 21 in the article about Al and Sondra Ellis.

TRAINING

Teaching Your Alpaca NOT to Pick Up His Feet!

By Marty McGee Bennett, CAMELIDynamics

Why in the world would you want to teach your alpaca NOT to pick up his feet? I know this sounds like exactly what you don't want to do but read on. No doubt about it, trimming toenails is hands down the most problematic of alpaca management chores. Trimming toenails is a problem pretty much everywhere I go. There must be something that could and should be done differently to make it easier for alpacas to accept having their nails trimmed. If it is broke… fix it!

Figure 1 This is one set up for working with the legs. Notice that there are other alpacas in view and that the size of the pen is just big enough for the handler and alpaca to stand in.

There are a number of possible explanations for the difficulty of toenail trimming.

1) Alpacas use their legs as their primary means of defense – that is, to run from what could be dangerous.
2) Male alpacas bite the legs of other male alpacas as part of a ritualized dominance process.
3) Male alpacas bite the legs of female alpacas to encourage them to lie down for breeding.
4) There is a problem with the way that human beings go about the process of trimming toenails.

We can't change the basic nature of the alpaca in the short term anyway. We could make temperament more of a priority when making breeding decisions, but that is a different article. So it would appear that numbers one to three are really out of our hands, dovetailing nicely with the oft-quoted wisdom - "the only behavior you can change is your own." So, I am going to put my money on number four.

It's Not the Trimming

The actual trimming of toenails is really easy. It doesn't require any particular skill or strength to snip off the extra growth of a toenail. It doesn't require much time or any specialized tools, and it doesn't hurt. But getting the leg and foot in hand and keeping it there long enough to trim the toenails is another matter altogether. An adult alpaca that is determined to thwart your efforts at trimming his nails can be amazingly slippery. Trimming the toenails of twenty or thirty difficult alpacas may in fact be beyond the physical limitations of the very people to whom we are selling the alpaca as a lifestyle… women, older people, and the less-than- physically-fit. My experience is that many if not MOST alpacas are difficult to one degree or another when it comes to having a pedicure. Even the animals that are easy are easy because they don't fight very hard – not because they actually cooperate. I meet very few alpacas that will stand quietly carrying their weight on the remaining three legs without some degree of propping up. Acting as the couch for thirty or so alpacas, much less a hundred is not my idea of a nice day, even if they are not actually fighting.

Trimming toenails is something that must be done on a regular basis, and it is important from the standpoint of both health and aesthetics. It would make a great deal of sense to invest some time in learning to do it well and teaching our alpacas to accept it. And here is the kicker, pardon the pun, I think the major reason that we find ourselves with difficulty trimming toenails is that we do not teach an alpaca to accept having his legs handled BEFORE we attempt to pick up his feet. Or to say it another way we must teach the alpaca NOT to pick up his feet.

Figure 2 This is the bracelet. It is a very useful technique for balancing an alpaca while someone else works on the legs.

Cooperation or Intimidation?

The problem is that we misinterpret fear for cooperation. The alpaca is NOT picking his foot up because he understands what it is that we want and has magically decided to cooperate. He is picking his foot up because he is afraid. We then compound the error by refusing to give the foot back when the alpaca wants it back by being too determined to get the toenails trimmed in that moment. This approach teaches the alpaca to begin using preemptive behavior to keep his feet out of our hands because we have made the process frightening.

This explains why alpacas often get worse about toenail trimming, NOT better. What begins as simply picking the foot up to keep it away from us humans becomes picking it up and hiding it under the opposite leg, followed shortly by sinking down, and finally by cushing to cover up the legs altogether. Once an alpaca has learned this little trick of escape and evasion, it works so well that it becomes a challenge to get him to give it up.

I would submit that the typical way we go about trimming toenails is only reinforcing a very natural, instinctive avoidance response, instead of teaching the alpaca what he really needs to learn and that is, to overcome his instincts and allow us to handle his legs.

Teaching the Alpaca NOT to Pick Up His Foot

Thankfully, the way back is not that hard but it does require a shift in thinking. We must first teach the alpaca NOT to pick up his foot! We must focus initially on helping the alpaca keep his feet on the ground and ONLY after we can run a hand down the leg without an evasive reaction do we move on to actually picking the foot up. When we do pick the foot up, we must give it back almost before the animal asks for it.

The following process is useful for both teaching a young alpaca to accept having his legs handled and having his toenails trimmed. It is also the same process I recommend for rehabbing alpacas that have become difficult. Lessons are very short: three-five minutes and there is no need to work daily or even weekly. If you weigh your alpacas on a regular basis, this can be a good time to work on this too. It takes a longer period of time to change the mind of an alpaca that has already made it up, than to avoid causing the problem in the first place. That is not to say that the process itself is more time consuming.

There are many different ways to approach the physical set up. You can work in a catch pen with a second person; you can work alone in a space just big enough for you and your alpaca, or a slightly larger space with a number of alpacas crowded up inside. If you choose to work with a single alpaca, the ideal pen size is about four to five feet by six to seven feet (see Figure 1.) This area should be near or next to other alpacas. The most important element of the setup is to create a way of limiting movement without tying or restraint. You can use panels to create areas for toenail trimming.

Figure 3 The bracelet in use as a second handler begins the process of teaching the alpaca to accept handling of the front legs.

Working with a Helper

If you are working with a helper, his or her job is to act as a balance spotter – that is, to help keep the animal in balance, not to restrain him. A light support with one hand under the jaw and the other in the groove that is just behind the bottom lip that I have named the *bracelet* is a great technique (see Figure 2). If you are working alone in a small space with a single alpaca, you can hang a bag of hay or offer grain to create some incentive to stand.

With your alpaca in balance, begin by standing next to and facing the rear of the alpaca. Put the hand/arm that is closest to the alpaca across the body (see Figure 3). This will allow you to help manipulate the alpaca's balance. You want the weight on the leg with which you are working. In this way, you can help the alpaca keep his foot on the ground. After all, it is very difficult to pick up a foot when there is weight on it! Remember, this is about teaching your alpaca to keep his foot DOWN, not about having him pick it up. Your alpaca will have to shift his weight before he can pick the foot up. With your hand across the back, you will feel the beginning of the weight shift. Correct it and help your alpaca succeed.

Working on the Leg

Use the back of the other hand to make circular motions, beginning at the upper shoulder and moving down the leg. Don't work slowly. Make one circular motion and then slide your hand down the leg a bit and make another. Each circle may take a second or two – no more. If at any time, you feel the alpaca begin to shift his weight, use your hand across the back to bring the weight back into neutral, AND MOST IMPORTANTLY, move your other hand back into safe territory (see Figure 4).

Your goal is to help your alpaca stand in balance without leaning toward you or leaning against your arm and to teach him that you understand his body language: *Yep I get it – you are afraid and notice I am listening!*

If you insist on moving into scary territory and ignore your alpaca's early subtle indications of fear, then you will leave him no choice but to *talk* more loudly. This means your alpaca will begin practicing the kinds of behaviors you seek to avoid – namely, picking the foot up, cushing, rearing. It is amazing once your alpaca really believes that you will retreat when he is afraid, he will let you do more and more.

Figure 4 The handlers are teaching this alpaca to keep the front feet on the ground as they are handled. Notice that the handler working on the legs has her hand over the back to pick up indications of shifts in balance.

Work with the rear legs in much the same way (see Figure 5). Place the hand closest to the alpaca across the back and use it to shift the weight onto the leg with which you are working. It is more difficult to work alone with the rear legs unless your alpaca is highly motivated by food. Be prepared that progress on the rear legs will come a bit more slowly. Remember that, unless and until your alpaca is willing to stand quietly with your hand/arm resting across the back, you are not ready to move to the next step. Laying the proper foundation for a house goes slowly and doesn't offer dramatic progress at first – it is a dangerous step to skip.

Work on each leg for a minute or so. I like: left- front; left-rear; right-front; right-rear. Move your hand as far as you can down the leg, PROVIDED your alpaca can accept it. There are some animals that, for whatever reason, have trouble with your hand across the body. It may take a few lessons to get past that. Always begin with what your alpaca CAN do and practice only what he can do successfully. A perfect lesson is one in which your alpaca never picks his foot up. I know it is a bit counter-intuitive, but it works!

Happy Handling!

Figure 5 One handler balances the alpaca while another works on teaching handling acceptance of the rear leg. Notice that the alpaca is being balanced and NOT restrained. The handler at the head is using the full length of her arms. This makes the alpaca feel less threatened and at the same time allows the handler to see more of what is going on with the animal's balance.

HEALTH

Ask the Vet:

"Do llamas need minerals in the winter? The same as summer? Why? The same reason or do they use them differently in the various seasons? How do llamas use minerals?"

Dr. Sarah Raabis DVM, PhD, DACVIM, Colorado State University Veterinary Teaching Hospital

Survey studies have been published that show blood mineral and vitamin concentrations in normal camelids within different geographic regions. The ability to relate these data to health and nutritional status is complicated by less data quantifying intake and whether this varies by geography and/or season.

Additionally, mineral availability within an animal's diet is complicated by changes in feed content, foregut microbial populations, age of the animal, underlying disease and overall body condition. Excessively cold and hot temperatures can impact the quality of forages, which can predispose animals to nutritional deficiencies. Providing camelids with access to macro- and micro-nutrient supplementation that has been formulated for alpacas and llamas is crucial for supporting health, reproductive performance, fleece quality and growth of youngstock on your farm.

Llamas and alpacas depend on **macrominerals**, which include calcium, sodium, chloride, phosphorus, magnesium and potassium, for organ function and homeostatic mechanisms throughout the body. In camelids, phosphorus levels are highly correlated with serum vitamin D concentrations. In winter months, vitamin D levels are lower than summer months and younger camelids with dark fleece are especially at risk for deficiency. Vitamin D, a fat-soluble vitamin that is critical for calcium and phosphorus regulation, is an essential micronutrient, especially in the wintertime. Calcium and phosphorus are important for bone health and soft tissue growth as well as cell signaling and overall cellular function. Phosphorus and vitamin D should be included within mineral supplementation throughout the year in North America, but especially in winter months. Higher amounts of phosphorus and vitamin D may be included in mineral supplementation formulated for the winter season to compensate for reduced sunlight exposure and to counteract feeds that have a higher than ideal calcium:phosphorus ratio.

Additional fat-soluble vitamins that function as essential **micronutrients** include vitamin A and vitamin E. Vitamin A is absorbed primarily from plant carotenoids and is crucial for vision and bone development, and vitamin E is an important antioxidant within cellular and subcellular membranes. While vitamin A deficiency is rare compared to other ruminant species, vitamin E deficiency can lead to a range of diseases in camelids, including skeletal and cardiac muscle disorders as well as poor reproductive performance. Year-round mineral supplementation that includes vitamin A and vitamin E is an important prevention strategy, especially if fresh forage access is limited.

The winter season can also pose challenges in maintaining forage quality, such as consistency of fiber content. This can cause changes in the C1 microbial populations that are crucial for digesting forages, leading to a risk of vitamin B1 (thiamine) deficiency. This can present as Polioencephalomalacia (PEM), a severe neurologic disease which consists of blindness, incoordination, seizures and recumbency. Camelids are very sensitive to thiamine deficiency and even with treatment, this disease can result in mortality. Vitamin B12 (cobalamin) is another water-soluble vitamin that is important for gastrointestinal absorption of nutrients. While utilizing trace mineral supplementation that includes vitamins B1 and B12 is an effective prevention strategy, ensuring good quality forages are provided year-round is crucial for optimal nutrition and health.

Trace minerals are crucial for all aspects of cellular function, and deficiencies can lead to significant morbidity. Micronutrients supplemented due to low levels in forages include copper, selenium, iron and zinc. Copper availability in the diet can be inhibited by chelating compounds, such as molybdenum, that reduce bioavailability. Although copper deficiency is not common

in camelids, anemia and poor body condition have been reported in some cases. Younger animals are more susceptible to iron deficiency due to their milk-based diets and can present with anemia and poor growth. Adult camelids often can consume an adequate amount of iron from their diet. Selenium, absorbed from forage consumption, is important for its intracellular antioxidant properties and functions with vitamin E to protect tissues from free radicals. Deficiency has been linked to infertility, recumbency, ill-thrift and neurologic disease. Selenium soil content can vary by region depending on soil pH and the presence of iron or aluminum complexes that may inhibit plant selenium content. Young animals are more at risk of deficiency due to low levels of selenium in milk. They depend on maternal selenium status due to placental and colostral transfer of selenium.

Zinc is important for almost all aspects of metabolism, cell signaling, growth, reproduction and immune function. Deficiency presents as poor growth, musculoskeletal disorders, reduced reproductive performance and is notably associated with hyperkeratosis (skin thickening with adherent crusts). Zinc availability can be inhibited by calcium and copper within the diet and is also interconnected with vitamin A functions in the body. Zinc deficiency can be prevented by providing appropriate supplementation, especially in winter months when forage quality access declines.

It is crucial to work with your veterinarian to evaluate your forage quality and discuss proper mineral supplementation. They can work with you to test animals for deficiencies by testing serum trace minerals and in some cases evaluating liver micronutrient concentrations. Colorado State University offers plant, water and soil testing to understand the mineral content of your forages and soil: https://agsci.colostate.edu/soiltestinglab. This information can be used to understand risk of mineral deficiencies and toxicities in your herd.

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The Magic of Llamas: A Visit to the Llamas of Circle Home

By Susan Rich

Editor's Note: *from the LANA Newsletter; reprinted with author's permission.*

"Working with llamas is all about psychology." George began with this announcement on June 1, 2024, when opening his ranch and sharing his special methodology of working with the speechless brothers and sisters who live with him. "For 7,000 years in the Andes, there was family, harmony and energy with llamas at the center of life."

He continued, "These animals are telepathic. You find one who knows what you want and you let him teach the other llamas."

I watched when he held up a grooming brush and one of his llamas reached out with his nose, smelled the brush, and

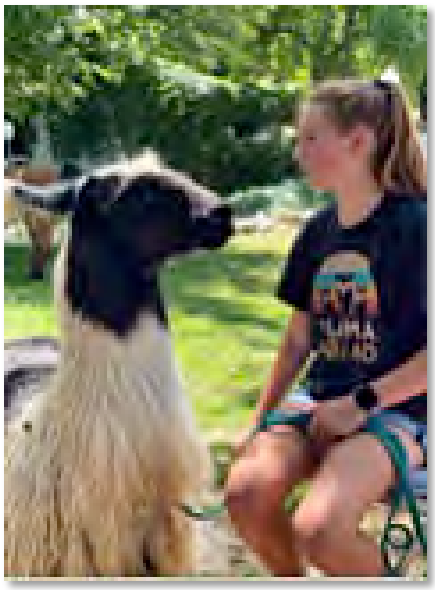
literally asked to be brushed, or asked for some love, as George described the behavior. One animal kushed and literally fell into a trance as the brushing continued. I thought to myself – "Not exactly the reception I get when I break out the grooming bag and present a brush or two."

It is something special to be able to visit with a long-time adventurer with llamas. George Caldwell and Christine Dunham have resided at the Llamas of Circle Home for many, many years. Their place is lovely with a large blue house, decorated with white gingerbread scrolling wood work. There are many outbuildings and several pastures. Males are relegated to one large pasture and females to another.

In addition, for years, the couple has provided a home for developmentally disabled women. And these residents play a part in the unfolding story of llama ownership and lifelong learning about these fascinating creatures. The young women and George practice a form of cooperation with their camelid counterparts every day. The animals appear at the gate of their enclosure and are led out to an open lawn area. There are deeply driven stakes in the ground, and their lead lines are attached to those anchor points. Next comes a rubber Tupperware bin with hay, apples, carrots and moistened llama pellets. And so every leisurely morning begins. There is no chasing, no shouting of llama names; the animals appear as they please and the ritual is quiet and serene.

Having visited the ranch before, I can attest to George and Christine's observation that these women are more confident, more interactive and have more purpose in their lives due to this daily ritual in which they participate.

"George talks about" the individuals in the herd with great insights into their unique personalities. One strikes a stance on the *power mound* in the pasture, and, according to George, announces that God's gift has arrived. Because, alpaca – the domesticated cousins to llamas – were essentially the meat and fiber of the Andes, says George, they are tougher to train and they don't remember well. So, any camelid bad behavior is called out as an alpaca trait. Or he might say that the animal has an *alpaca brain*.



Over the years, George has seemingly done it all. He had a large breeding herd when there was demand and an active market for young llamas. He has visited Peru many times and communed with native peoples to learn more about these animals in their indigenous setting. He has packed with llamas in the back country. He has transported llamas to parks in the Bay Area so that challenged individuals attending *camp* in the wilderness areas there can experience hiking with a llama. He has developed a business of bringing his animals to college campuses during finals weeks as therapy animals to help maintain the mental health of the stressed students and provide opportunities to interact with the animals who have done well with his specialized training. He has literally created ambassadors out of his more social animals.

And George has great stories. Once, he was headed home with animals in the van, and his neck really started to bother him. One of his llama boys crawled up and laid his head on George's shoulder such that he was breathing on his chauffeur's neck. He was joined by another llama boy in the van who took on the other shoulder. And so George continued his drive with camelid therapy underway. No doubt more than one driver on that same road went home with interesting tales to tell about what was going on in the van in the next lane over.

But things change. The market for llamas dropped off. When there were once over 1,000 camelids in Tuolumne County where he lives, there are now fewer than 100. George and Christine no longer breed animals. In fact, they have become a sanctuary for rescue llamas to a certain extent. As roads and automobiles have gained a much stronger foothold in the Andes, the numbers of animals there have dropped, and the camelid-centered culture has shifted. He no longer competes in llama shows, although he is a great supporter of organizations, like LANA, that continue to offer shows.

But probably his favorite activity now, especially in this phase of his life with llamas: he just really enjoys sharing the magic of llamas at his home. He and Christine host visitors to talk about their life and times with llamas and to share what they have learned and are continuing to understand about these fellow sojourners in life. The hospitality afforded us ranch visitors was warm and welcoming. We all left thinking about how we could approach our animals a little differently to tap into the kind of communication and relationships that we saw demonstrated at the Llamas of Circle Home.

FIBER

Using Novelty Yarns for Warp in Rigid Heddle Weaving

By Nancy Wilson, Chair, Fiber Committee

Now that spring is approaching, it's time to think about new colors for weaving projects. Other types of fiber arts, too, although this article will focus on weaving. I'm a rigid heddle weaver with no real inclination to fall down the multi-harness loom rabbit hole.

In Arizona, we have the Arizona Federation of Weaving and Spinning Guilds (aka the Federation) that hosts a traveling teacher program in odd-numbered years. This year we have had the pleasure of having Amanda Robinette teach weaving classes. Amanda's specialty is Sakiori weaving, which is a Japanese rag weaving technique. The Prescott guild contracted with Amanda for a Sakiori weaving class as well as a novelty yarn warp project. The latter topic is what interested me, and I signed up as soon as the workshop was announced.

A Plethora of Novelty Yarns

There are lots of novelty yarns out there, and this class taught a great way to use them in weaving. We started the workshop by shopping for novelty yarns that appealed to us and that worked well together in color and texture.

Starting with what we called the base yarn, we selected three to five additional yarns from our own stash as well as yarns Amanda and other students brought to share. I included a really thick handspun mohair yarn in my warp group. Amanda showed us how to use a *teleidoscope* (a kaleidoscope that doesn't have color) to see how the colors will blend.

Once we chose our warp yarns, we began the process of winding a warp. As a rigid heddle weaver, I exclusively (up until this class) use the direct warping method to warp my loom. This was an opportunity to try winding a warp on a warping board and threading the loom with the individual warp strands. I am glad to have had this experience, but I will stick with my direct warping method. It's much quicker, has less yarn waste, and I don't need the extra piece of equipment (or a place to store it).

I got my warp wound, off the board, and onto my loom. The photo to the left shows what it looked like.

I got my warp wound, off the board, and onto my loom.

My take-aways from the workshop are:

- Direct warping is my friend.
- Novelty yarns can make a great warp.
- I can see using this method with handspun yarn.
- Using a more open warp (five ends per inch vs. eight or ten) could be an interesting way to create a lightweight, soft scarf.

I hope your take-aways from this article are:

- There really are very few rules about what you can combine in a project.
- Trust your intuition about how colors and textures work together.
- Get the dust off your loom and go crazy!

After finishing the scarf, I have a few thoughts about future projects. I will do some sampling by putting on a shorter warp (say just a yard) with the same heddle (a 5 dent) and try it with a thinner yarn for the weft. Perhaps that will make the novelty yarns stand out more. Then I will try it using a different heddle (an 8 dent) and choose warp yarns that are less bulky as needed. The concept definitely deserves more experimenting!

So, what are you spinning, knitting, crocheting, weaving, felting or *other -ing* with your lama fiber? Other RMLA members want to know. Think about this as an opportunity to have a show-and-tell with your own work. Sharing our work, our challenges creating that work, and our ideas for future projects is what inspires us all.

My finished scarf!

Inspiration One

Inspiration Two

Inspiration Three

MEDICAL RESEARCH

Just Released: Lama Nanobodies to the Rescue, Again

By Ron Baird, Research Chair

> "Llama Anti-MERS-CoV RBD Single Domain Antibody (WJ731)(Cat#: MDWJ7329). This product is a Llama single domain antibody recognizes and binds the receptor-binding domain of MERS-CoV. This antibody showed substantial inhibition of RBD interaction with human dipeptidyl peptidase 4 (DPP4).
>
> The product is intended to be used for research purposes." – Creative Biolabs press release

This use of llama antibodies was announced late in March by Creative Biolabs, which has offices in the United States, Great Britain and Germany. MERS-CoV is a viral respiratory illness caused by a coronavirus called Middle East respiratory syndrome coronavirus. The virus can spread from camels to people through direct physical contact. Limited human-to-human transmission is possible. MERS has caused severe respiratory disease in most diagnosed cases, and many of those patients died. Typical symptoms include fever, cough, and shortness of breath.

Most MERS cases have been detected in countries in or near the Arabian Peninsula. However, a number of cases linked to travel have been detected in countries outside this region.

In most known MERS cases, the infected person developed pneumonia. Additional complications such as kidney failure have also occurred. About three or four people of every ten reported with a MERS infection die. Two U.S. patients tested positive for MERS in 2014 after visiting Saudia Arabia.

With the known ability of viruses to mutate and become infectious to humans, research into cures or preventatives for all types of coronaviruses seems to be accelerating. Lama immune system components – antibodies and nanobodies – increasingly are being researched and developed for the benefit of humankind.

Credit: From the National Western Stock Show Llama Show