

The Journal of RMLA



In This Edition

Editor’s Corner..... 4

Letter from Your Board..... 5

The Last Move 6

Ask The CSU VET Team -Teeth! 8

Lama Lunacy Obstacle Course 9

Balance: Human and Animal 10

A **Very Close** Look at Fiber..... 11

Non-Healing Wounds and Cancer..... 14

Life With Older Llamas 15

Mid-Plains Fiber Fair..... 16

Use that Llama Manure, Your Soil will
Thank You! 18

There Are Many Solutions 19

Moths 20

Late Season Rocky Mountain
Pack Trip..... 23

Letter from a Member..... 25

Let’s Plan an Event for 2021..... 26

A Tribute & Congratulations to
Dr. Robert Callan! 27

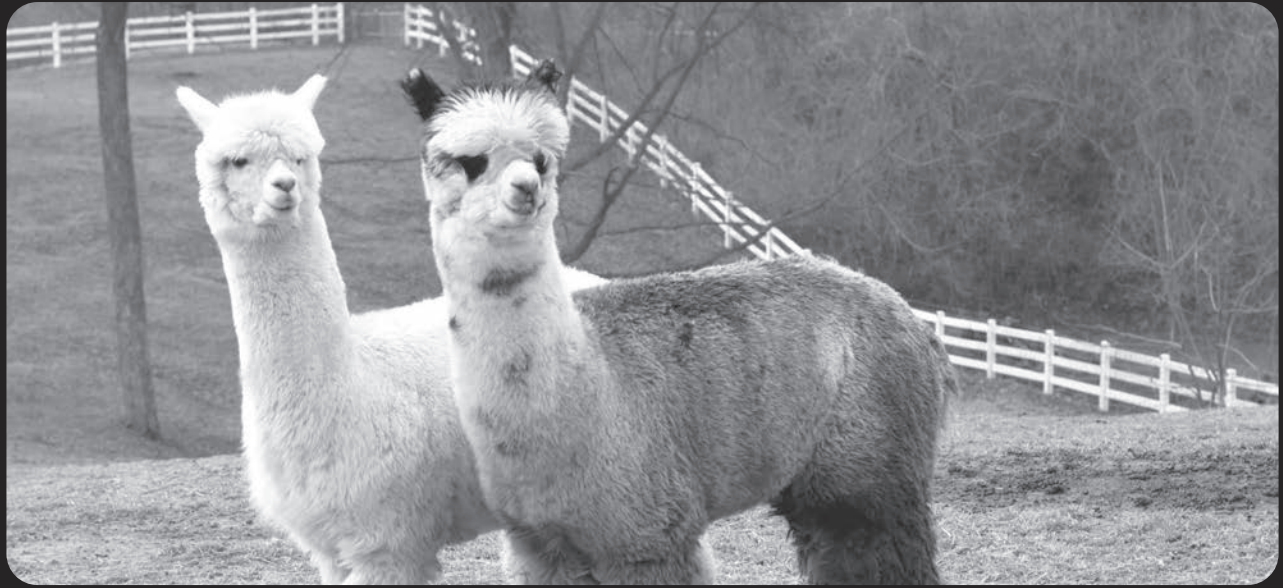
Cover Photo 4

Advertisers’ Index..... 17

Journal Advertising Rates 4



A Very Close Look at Fiber - Page 11



Mazuri[®]

We know why you love them.

For over a quarter of a century, we've partnered with zoo & veterinary professionals to conduct extensive research to improve the nutrition of the most unique animals around the globe.

Our products are proven to support the health, longevity & fiber production of alpacas.



Visit our website
www.Mazuri.com for
more information.

Alpaca Care | Alpaca Performance | Alpaca Complete Life
Llama Chews | Llama Diet High Fiber | Alpaca & Llama
Maintenance Diet | Fiber Enhancer[®] | Vitamin/Mineral Blend 'E'[®]

-- Board of Directors --

President	Vice President	Secretary	Treasurer	At-Large
Lougene Baird 631 Silver Springs Cir Cottonwood AZ 86326 808-747-5023 lougenebaird@outlook.com	Linda Hayes 9660 N. Antelope Meadows Drive Prescott Valley AZ 86315 970-379-4576 llamas@skybeam.com	Nancy Wilson P O Box 853 Camp Verde AZ 86322 928-220-5553 spinllama@msn.com	Geri Rutledge 2209 Rd 9 Waco NE 68460 402-366-9304 buckshollow@wildblue.net	Jon Barba 12540 Racine St. Henderson CO 80640 720-467-2181 jwbarba48@gmail.com

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.

RMLA is not responsible for any losses resulting from readers’ failure to heed this caution. The views expressed by the authors of articles are not necessarily those of the Rocky Mountain Llama and Alpaca Association, Inc., its officers, directors or members.

Reproduction of Journal Articles: Articles may be reproduced (unless otherwise noted) after obtaining written permission from the author. The author and The Journal of RMLA must be given credit for the reproduction of the original work.

-- Chairpersons, Active Committees --

Bookstore Manager- Mary Vavrina 303-726-9694 RMLAbookstore@gmail.com Bookkeeper: Marilyn Arnold Liaison Lougene Baird	Education/Events/Marketing Mary Wickman 719-687-1423 719-651-8871 events@rmla.com Liaison Geri Rutledge	The Journal Kathy Stanko rmlaeditor@gmail.com Liaison Nancy Wilson	Nominations & Elections Christina Abel 620-626-8743 luckyonyx4@hotmail.com Liaison Linda Hayes
e-Communications: Facebook Morgan Barba facebook@rmla.com Liaison Jon Barba	Fiber Kathy Stanko 970-256-7716 rmlafiber@gmail.com Liaison Geri Rutledge	Library Sandy Lockwood dslockwood@wildblue.net Liaison Nancy Wilson	Pack OPEN Liaison Linda Hayes
Website Kathy Stanko 970-256-7716 rmlawebsite@gmail.com Liaison Lougene Baird	Finance Marilyn Arnold 303-841-5126 rmlaaccounting@yahoo.com Liaison Geri Rutledge	Membership Dan Schreiner 307-265-1780 membership@rmla.com Liaison Lougene Baird	Youth and 4-H Morgan Barba 720-467-2181 RMLAyouth@rmla.com Liaison Jon Barba
E-Blasts Kathy Stanko rmlaeditor@gmail.com Liaison Lougene Baird			

Journal Submission Dates, Ad Rates and Specifications

Issue	Submission Deadline	Mailing Date
Spring	February 20	March 20
Summer	May 20	June 20
Fall	August 20	September 20
Winter	November 20	December 26

Ad Type	Width x Height	Member	Non-Member
Business Card	3.5"x2"	\$15	\$18
1/4 Page Horiz.	7.5" x 2"	\$24	\$36
1/4 Page Vert.	3.5" x 4.5"	\$24	\$36
1/3 Page Horiz.	7.5" x 3"	\$35	\$48
1/3 Page Vert.	2.5" x 10"	\$35	\$48
Half Page	7.5" x 5"	\$48	\$72
Full Page	7.5" x 10"	\$78	\$117
Two Page Spread	15" x 10"	\$200	\$300

- **Classified Ads**—Member \$10 for up to 50 words
Non-Member \$25 for up to 50 words. Ads must be related to the Camelid industry.
- 25 cents for each word over 50 for both Member and Non-Member.

-
- Ad rates are quoted per issue. Lock in the current rate by purchasing the same ad for four consecutive issues and receive a 10% discount.
 - **INSTRUCTIONS FOR ARTICLE AND AD SUBMISSION:**
 - Email all text and/or graphics content to: RMLAEDITOR@GMAIL.COM. 'Camera ready' ads and articles should be submitted via email in .PDF, or any text readable by MS Word. Images alone should be submitted in .jpeg(.jpg) or .tiff. Quality photos start at 1-2MB.
 - We suggest ads and article graphics be submitted in color at 300dpi. Both will be converted to grayscale for printing.
 - Send your check, payable to RMLA, along with a copy of the ad to: RMLA - 11483 Ponderosa Ln. Franktown CO 80116 - 303-841-5126 - Payment and ad copy must be received prior to submission deadline. See the table above for dates.
-

EDITOR'S CORNER

The Summer Journal is in your hands! There were times this past month that I was not certain that it would happen. Part of the issue was a lack of content from our members; this has never happened before. Then, as happens, the following article arrived in my in box about two months ago.

There's a Name for the Blah You're Feeling: It's Called Languishing. At first, I didn't recognize the symptoms that we all had in common. Friends mentioned that they were having trouble concentrating. Colleagues reported that even with vaccines on the horizon, they weren't excited about 2021. A family member was staying up late to watch "National Treasure" again even though she knows the movie by heart. And instead of bouncing out of bed at 6 a.m., I was lying there until 7, playing Words with Friends.

It wasn't burnout — we still had energy. It wasn't depression — we didn't feel hopeless. We just felt somewhat joyless and aimless. It turns out there's a name for that: languishing.

Languishing is a sense of stagnation and emptiness. It feels as if you're muddling through your days, looking at your life through a foggy windshield. And it might be the dominant emotion of 2021.

From Adam Grant an organizational psychologist at Wharton, the author of "Think Again: The Power of Knowing What You Don't Know" and the host of the TED podcast WorkLife.

You can find the entire article and suggested remedies on the internet. For me, this article 'hit the nail on the head' and gave me words to put to how I have been feeling and living my life.

But, now it is time to let all of this go and move back into our lives, one step at a time (your lama can show you how to do that!). It is time to sponsor and attend events; we know how to do that. It is time to get moving on the trails and to PR events; we also know how to do this.

And as you step back into your life, please share your adventures with the Journal! We look forward to a full content from our members in the next issue.

Thank you for your support, Kathy



Cover Photo:
Courtesy of Susi Hülsmeier-Sinay, from her vast collection of terrific hiking photographs.. *Thank you*

Letter from Your Board

We hope the beautiful spring weather is upon you; pastures are becoming green and full of happy animals.

Now and then, a member has said that they have an idea or question but do not know where to start. The RMLA organization is easy to navigate.

- Decide what your question is about and what committee to which it would relate.
- Check the list of committees in the Journal or on RMLA.com.
- Each committee should have an active Chair.
- Contact the specific Chair to discuss your question.
- The Chair will contact the Committee Board Liaison.
- The Board, the Liaison and the Committee Chair will work together to answer your question.

For instance, you might wish to hold an RMLA sponsored event. Using the Journal or RMLA.com, locate and contact the Events Committee Chair. The Chair will instruct you on completing an event request form. When the form is complete, return it to the Events Committee Chair who will forward it to the Board for approval.

The Events Chair then works with the Journal and Website Committee to publicize your event. The Events Chair will contact the RMLA insurance carrier to secure a Certificate of Liability for your event if needed.

So! You want to volunteer to help on a specific committee? All Chairs love to get calls from members asking what they can do to help the committee. Contact the Chair and a spot will be found for you to help.

Coming soon will be the new RMLA.com. Work has been going on for several months to build and put into action a new website for member and non-member use. It will be amazingly easy to navigate and fun to use.

RMLA membership year currently begins April 1. So, you missed the date to renew. Several months have gone by and you want to renew mid-year. Good news. The day you join will begin your member renewal date. For example, if you renew September 3, you will receive a notice the following year to renew by Sept 3. When you pay membership dues it will always include a full year of benefits. You might look at it as a subscription.

Also on the new website will be instructions on how to update your new contact number or address. You will always be able to update your personal profile on the website without having to request it be done for you.

And best of all, you will always be on the complete list of current members with current contact information on RMLA.com. The new RMLA.com will become a wonderful way for our members to put their information out there for the public to locate and contact you. Because it is so easy to find RMLA.com using a cell phone no matter how far or where you are, members and the public will be able to locate and contact you.

When we get closer to the launch date you will be receiving a number of eblasts explaining how to set up your personal ID, how to become a featured member, and additional 'How To' when using the updated website. We are excited.

Have a wonderful summer. Hike well and show well, enjoy your animals and the wonders of exploring.



Truly Amazin'
is what the volunteers & contributors of Southwest Llama Rescue can accomplish. *Help Is Always Needed: your time and money go a long way.
*Contact: www.SouthwestLlamaRescue.org or plenaryllama@yahoo.com or 184 Hoofbeat Trl, Kerrville, TX 78028
*Designate SWLR as your charity while shopping online at such stores as smile.amazon.com

STAYIN' COOL

SUMMER

SWLR is a 501(c)(3) non-profit organization supported 100% by donations. Ad paid for by SWLR

Like Us! www.facebook.com/Rescue.Llamas

Come On! - You spend the same... it brings in money for SWLR!

The Last Move

By Linda Hayes – Prescott, AZ

When Linda Hayes aka Llama Linda retired and moved to a townhouse in Prescott, AZ, she had to find homes for her 2 remaining llamas. An old friend from her ranching days came to the rescue. Joanne Richardson had recently moved to the San Juan Islands in Washington state. She was looking for companions for the two llamas she had gotten from Linda years ago. They agreed to both travel part way and make the exchange in Ely, NV.



Left to right Linda Hayes, Deb Anderson MD, Jerry Pitt Getting ready to catch the llamas for their move to Washington

Linda had to move out of her acreage several days before the planned trip. The llamas stayed with a neighbor who had a lovely square acre. The ideal situation would have been to set up catch pens, but they were not available. Although the llamas were gentle, they were not the variety that you could walk up to and put a halter on.

The problem was met by local friends who agreed to become a “people fence”. It was a motley crew. Deb Anderson, MD was on a knee scooter due to a broken ankle. Jerry Pitt was on oxygen thanks to COVID and the others were inexperienced with llamas. Linda



Making the trade off in Ely, NV

knew that if they did anything to panic the animals, she would never be able to catch them in time for the move. Waiting until later was not an option because the new owner, Joanne Richardson, had already left on her journey south.

Linda backed the trailer into the gate hoping to persuade the llamas to enter. She even fed them in the trailer for a week before the trip. All to no avail; the llamas would have nothing to do with it. They knew something was up.

Linda gave her helpers detailed instructions that focused on being quiet and moving slowly. Luckily, the helpers obeyed and listened to Linda’s cues. At one point the llamas did try to breach the “fence” but some directed waving of arms and loud voices made them abort that plan.

The helpers then went back to moving quietly. As the llamas were pressured, they hung together. They finally stopped and looked at Linda as if to say “Hey, Mom, what are you doing? We are getting nervous.” Linda knew they trusted her so she walked up to them speaking softly. The one who was usually the hardest to catch let her put a lead around her neck and then the halter. The other stood close and a lead was attached to him. They entered the trailer easily and acted relieved to finally get away from the line of people. It took over an hour of quietly moving in on the llamas one step at a time, but being patient paid off.



At Their New Home in Washington.

From then on the trip went smoothly and they are now enjoying their new home. The mission was accomplished thanks to the help of friends who were willing to listen to directions and not become frustrated at the time it took.





High Hopes for the 5th Higher Ground Fair

A happy, safe return to a wonderful mix of music, animals, folk arts, workshops, displays, presentations, marketplace & food, agriculture & the great outdoors, learning about and celebrating tradition, culture & innovation in the Rocky Mountain region.



September 18 & 19, 2021 • Laramie, Wyoming
Wyoming Territorial Prison State Historic Site

Llama & Alpaca Performance, Youth, Fleece & Fiber Arts Shows, Workshops, Vendor and Display Space

~ Affordable and Fun! • ALSA Sanctioned • RMLA Sponsored ~

For more information: www.highergroundfair.org
or contact Gayle Woodsum directly at gayle@highergroundfair.org or 307.399.3815

Ask The CSU VET Team: Do You Know What's In Your Llama's Mouth?

By Rachael Lyons, DVM

Colorado State University Veterinary Teaching Hospital

Dental disease is common in both male and female camelids of all ages and management conditions. Dental problems include tooth root abscesses, infection of the bone of the jaw (mandibular osteomyelitis), uneven wear, tooth overgrowth, and tooth fractures to name a few.

The dentition of llamas and alpacas is designed for grinding forages similar to other herbivores. They have incomplete sets of teeth at the front of their mouth near their muzzle with three lower incisors on each side, but only one upper incisor per side.

In male camelids, the permanent upper incisor and the upper and lower canines are referred to as fighting teeth and are used as weapons during fighting other males. Females and castrated males may or may not have permanent canines.

Looking farther back in the mouth, llamas and alpacas have premolars and molars which are referred to as cheek teeth. There are no first and second premolars in camelids, and the third premolar is frequently absent in many individuals. The fourth premolar is always present but may be smaller than the molars. Llamas and alpacas typically have three molars. The dental formula for these animals is provided in Table 1.

The eruption dates of the teeth are variable in camelids. The deciduous incisors and premolars are erupted at birth in full term crias, and unerupted incisors are a sign of prematurity. Please refer to Table 2 below for permanent eruption dates of llama and alpaca teeth.

The mandibular (lower) and maxillary (upper) cheek teeth do not completely align and contact each other. The mandibular teeth are located closer to the tongue, while the maxillary teeth are positioned closer to the cheek. Therefore, over time wear on the cheek teeth is uneven with enamel points forming on the cheek side (outside) edge of the maxillary cheek teeth and

TABLE 2: PERMANENT ERUPTION DATES

Incisor 1	2-2.5 years
Incisor 2	3-3.25 years
Incisor 3	3.1-6 years
Canines	2-7 years (most by 3.5 years)
Premolar 3	3.5-5 years
Premolar 4	6-9 months
Molar 1	6-9 months

the tongue side (inside) edge of the mandibular cheek teeth. However, this type of wear is often mild and does not require routine “floating” of the teeth to a more level conformation as in horses. Regular reduction of these enamel points is not recommended, however, the incisors and canines may require routine trimming by your regular veterinarian if they become overgrown and/or sharp as described later in this article.

Signs of dental disease may include focal swelling along the jaw or sides of the face (this swelling can be soft and fluctuant or hard and boney depending upon the timeline and progression of the disease), discharge from a draining tract, pain while eating and grazing, an abnormal chewing pattern, pain on external palpation, malodorous nasal discharge, and potentially even anorexia and weight loss. A thorough physical examination including a sedated oral examination and dental radiographs (X-rays) are often sufficient to diagnose dental disease in camelids.

Depending on the underlying cause, medical treatment with long-term use of an appropriate antibiotic, surgical treatment such as tooth extraction and debridement, or a combination of these treatment modalities may be necessary to fix the problem. Most chronic dental conditions such as tooth root abscesses require surgery, so consulting with a veterinarian soon

TABLE 1: DENTAL FORMULA

		Incisors	Canine	Premolars	Molars	Total Teeth
Deciduous	Maxillary (Top)	1	1	2-3	-----	x 2 = 8-10
Deciduous	Mandibular (Bottom)	3	1	1-2	-----	x 2 = 10-12
Permanent	Maxillary (Top)	1	1	1-2	3	x 2 = 12-14
Permanent	Mandibular (Bottom)	3	1	1-2	3	x 2 = 16-18

continued on the next page

Lama Lunacy Obstacle Course



RMLA is hosting the free Lama Lunacy obstacle course for children at Burro Days in Fairplay, CO on Saturday, July 24th. Each child who completes the course will receive a ribbon and a coupon for an ice cream cone at the Silver Scoop Creamery. What a deal: free fun and a free ice cream cone for the kids.



SILVER SCOOP CREAMERY

456 FRONT ST. – FAIRPLAY, CO



Ask The CSU VET Team: continued

after any of the aforementioned signs of dental disease are recognized is important in a successful outcome. Colorado State University Veterinary Teaching Hospital is honored to have board certified large animal veterinary dentist, Dr. Jennifer Rawlinson, on staff to address these specialty cases. Dr. Rawlinson's appointment and surgery schedule can be booked up to months in advance, so we recommend coordinating with your regular veterinarian and our Dentistry Service as soon as possible after a dental issue has been identified so that we can address your camelid's needs in an efficient manner.

Multiple radiographs (X-rays) are necessary to definitively diagnose and localize dental disease in llamas and alpacas. Sedation is often required to obtain good quality films that can be used for diagnosis and interpretation, as even minor motion can obscure subtle abnormalities. The mouth will need to be held open in certain views to allow for evaluation of all of the teeth, tooth roots, and surrounding bone. In order to minimize anesthetic risks, such as bloat, regurgitation, hypersalivation, and aspiration (inhaling feed material into the airway) it is very important that camelids be adequately fasted from feed and water prior to sedation or anesthesia. At CSU's Veterinary Teaching Hospital, we recommend holding llamas and alpacas off feed for 24-36 hours and from water for 12 hours prior to your scheduled appointment time. If you are unable to fast your llama or alpacas appropriately before coming in, we can provide that service for the cost of hospitalization.

Tooth root abscesses are the most common dental condition affecting camelids. Any tooth can be involved,

but mandibular cheek teeth are more commonly affected than maxillary teeth, incisors, or canines. Most animals with tooth root abscesses are 5 years of age or older, but this form of dental disease can be seen at any age.

Overgrown mandibular incisors are another common problem in camelids, and they can protrude beyond the lips which may result in difficulty prehending food. Incisors should normally contact the front of the dental pad and not extend much beyond this level if they are of appropriate position and length. Mandibular incisors and fighting teeth should be routinely evaluated by your regular veterinarian and trimmed as needed for the comfort and safety of the animal, herd mates, and human caretakers. There are many proposed causes in the development of dental disease in camelids, including but not limited to genetic predisposition, diet, and other management factors. Good prognosis for dental disease depends on early diagnosis and treatment, so if you have any questions or concerns about your llama or alpaca's mouth don't delay and have your veterinarian involved right away!





**Antelope Alpacas
Fiber Arts Center**
303-646-YARN (9276)

Fiber Arts Resource Center
Yarns, Fiber, Clothing, Blankets
Fiber Arts Supplies & Classes
Knit, Spin, Weave, Crochet, Felt

360 Main Street
Elizabeth, CO 80107
AntelopeAlpacas@aol.com
www.AntelopeAlpacas.com

Balance: Human and Animal

By Marty McGee Bennett - CameliDynamics

Editors' Note: After a long year and the winter season, we are once again able to get out and about with our animals. Perhaps some of us need reminders of our handling skills. Therefore we are reprinting Marty's article, Remember to Take That Step, from an earlier issue. Enjoy and remember.

One of the basic tenants of my teaching is to 'help an animal find his balance'. I have been taking a variety of new aerobics classes as part of the Mayor's Fitness Challenge and am keenly aware of balance and form. Actually, I have been marveling at how I can be so balanced in one aspect of my life and struggle so mightily in another...

You would think balance is balance! NOT! However, it is true that keeping your balance IS what it is all about. You cannot adequately help an animal with his balance unless you are secure in your own. Especially when working with difficult animals, the moments when you are not in balance are the moments when your animal will choose to move, jump, or change direction. This is not a coincidence. When you are not in balance you either lose the light connection that you have with your animal or you end up using the animal to keep your own balance. In both of these cases you provide or provoke an animal that is intent on avoidance or escape the opportunity and motivation to do one or the other. A lack of balance is usually a contributory factor to any difficulty in handling, and remembering to take a step at the right moment in a training or handling process is a sure way to success.

The easiest and best way to stay in balance is to keep your weight over your feet. This means that when you reach out with your hand, take a step with the foot on that side of your body. In other words: reach out with the right hand, take a step forward with the right foot; reach out with your left hand take a step forward with your left foot.

Here is a partial list of tasks that require that you take that step! I am sure you can think of more once you start looking at your balance with more intent.

- Getting ready to put the nose band over the nose. It is common for a handler to forget to move forward to actually put the nose band on the nose. Staying behind the eye is useful for many tasks but to put the nose band up in front of the nose and remain in balance as you put it on requires that you step forward to the front of the

animal. Not moving forward means that you will likely put some amount of pressure on the animal with your RIGHT hand causing the animal to pull to the right and away from you. Many handlers assume this is because the animal is resistant to the halter when in fact it is a reaction to the pressure applied with the right hand.

- Putting the crown piece over the neck. Once you have the nose band on and you put the crown piece under the jaw and over the back of the neck with the left hand remember to take that crucial step forward with your left foot. Again, if you don't take the step, the tendency is to use the animal's neck for balance by either leaning on the neck with your right hand or pushing down on the head with the left. Taking that step will help you avoid this common tendency.

- Catching an animal with the wand and rope. To use the wand and rope for catching, remember as you reach out with the wand (usually with your right hand), step forward with the right foot. This will help you get the wand far enough past the neck that you don't hook an ear or move erratically as you try to keep your balance.

- Teaching an animal to lead. When teaching an animal to lead, remember that when the animal takes a step forward you must take a step back not only to keep a safe distance between you (from your animal's point of view) but also to keep yourself in balance.



A Very Close Look at Fiber

By Kathy Stanko and Nancy Wilson

The authors of this article are both fiber enthusiasts, with different backgrounds and different directions. We recently came across the research from 2005, by Andy and Dr. Cheryl Tillman: Surface Scanning Electron Microscopy of Suri Alpaca Fiber and Other Members of the Camel Family. (Alpacas Magazine Spring 2006). We were amazed!

This study is a detailed look at the source of our fiber: the cuticular cell. The cuticular cell determines what characteristic the scale on each fiber has: length, frequency, height and edge angle. All of these characteristics combine into how fiber enthusiasts talk about fiber when using different fibers to spin, weave, dye, etc.

Andy and Cheryl were, among other things, breeders and importers of Suri Alpacas (1991 – 2007). They undertook this research primarily to educate breeders about the fiber structure of their animals. With this information llama and alpaca owners could gain a sense of how and where to the market the fiber.

The SEM (Surface Scanning Electron Microscope) micrographs provide detail not obtainable with a conventional compound microscope. An optical microscope uses visible light of a wave-length of several thousand angstroms (Å). Such an instrument is actually a photon microscope, since a ray of light is a beam of photons. An electron microscope uses a beam of electrons instead of a beam of light. (p. 160)

SEM scanning demonstrates that the cuticular cell scale length, frequency, height, and scale edge angle of suri alpaca fiber is measurably different from these other specialty fibers and other members of the Camel Family. Cuticular scale length is expressed as the Mean Scale Frequency (MSF) per 100 micron (μ) field of view as measured by the SEM. High-luster suri appears to be most similar to cashmere, though it has an even longer and lower scale height. This study has important implications for the alpaca industry, including AOB and the AFCNA. Suri alpaca breeders can now claim to produce a natural fiber which has luster that is equal to or greater than cashmere. Due to its very low cuticular scale height, both suri and huacaya breeders can explain why their products have superior handle, compared to wool of similar average fiber diameter (AFD). (p. 158)

We encourage our readers to check out the full article; the link and QR code can be found at the end of the article. We want to thank Andy and Dr. Cheryl Tillman for the opportunity to present our thoughts. We, the authors, take full responsibility for the following thoughts and insights.

From Nancy & Kathy

While being a scientific research paper, we found several gems of information for today's spinners, weavers, and fiber enthusiasts. We would like to share with you our discoveries. Many types of fiber were examined, from suri alpacas to silk.

In general, camelid owners who are also fiber enthusiasts have heard the terms luster, lock, and scale height. The Tillmans' research takes this knowledge to a new level.

Luster *Luster is the primary, and probably the only, reason the textile industry purchases suri alpaca fiber. Suri can be used in many of the same applications as silk and cashmere. It is frequently blended with merino, silk, or cashmere to add luster to the fabric used in men's suits.*

The end-use of suri alpaca fiber is substantially different than Baby Huacaya, which can compete for fineness with some grades of merino wool. Suri is more likely to be used in a semi-worsted or woolen manufacturing process and huacaya in a worsted yarn like merino. Our study of eight huacaya alpaca samples demonstrated that huacaya breeders can selectively breed for enhanced brightness in their fleece. (p. 161)

Lock: *It would be premature to assign value to one lock type over another until a more thorough SEM is made of suri alpaca fiber.*

The authors had hoped to identify some correlation between lock types, which naturally occur in the suri alpaca and the length of scale which is highly correlated to luster. Our sample size was too small to conclusively identify a trend. However, it is probably accurate to say that a straighter fleece is more likely to have a very low MSF than a twisted lock. A literature search suggests that some lock types may actually inhibit perceived luster more than others.

For instance, a high frequency of crimp in cashmere does adversely affect the perceived luster of the fiber.

Our SEM study did not identify any correlation between a twisted lock and luster. If anything, they may be inversely proportional. In this study, the relatively

continued on the next page

A Very Close Look at Fiber continued

straight fleeces, and those with a narrow straight lock usually had a longer and lower scale height than animals with twisted locks. (p162)

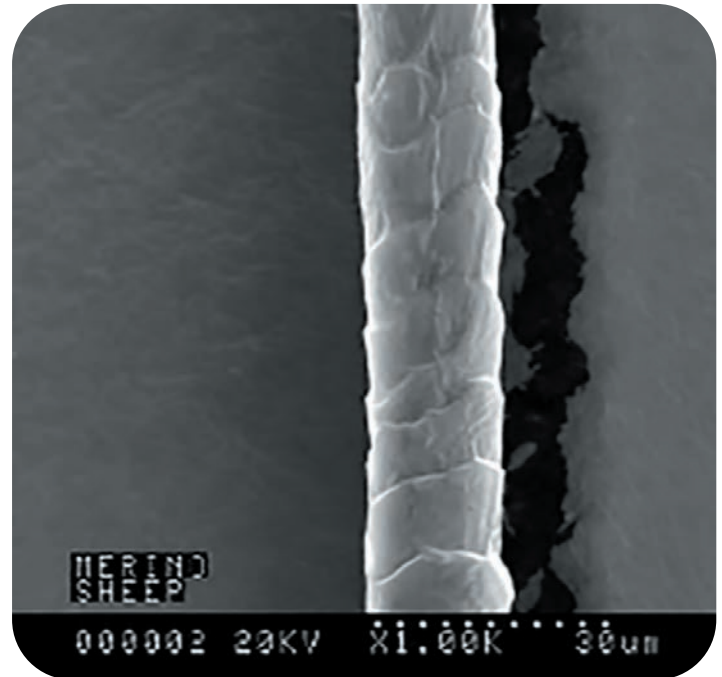
Scale Height *The scale height of suri alpaca fiber was almost impossible to measure, even with digital imaging tools. It is essentially a mono-filament, like silk.*

The height of scale on suri alpaca fiber was almost impossible to measure, even with digital Image-J software. This characteristic is probably as significant to the textile industry as suri's very low MSF. The scale height of both suri and huacaya fiber has not been accurately reported in previous scientific literature, which is probably due to the fact that an optical rather than SEM has been used.

Huacaya fiber had slightly taller scale height than suri, but was still typically under 3/10 μ . The most highly evolved Soft Rolling Skin (SRS) merino fiber like that analyzed in this study had a scale height of 3-4 micron, and most merino is <8 micron. Bruce McGregor, in the Australian Farm Journal 2003, explained the importance of scale height and length when he wrote:

"The greater the directional friction effect due to the wool fiber cuticle scales, the harsher the handle." (p. 162)

The SEM images on the following pages are just a sampling of what is presented in the original article. The debris in the background is dandruff.



SRS Merino – MSF 8.6. While half the scale height of other sheep breeds, SRS merino is still more than 10 times greater than huacaya or suri alpaca.




MSF5.0 Suri is nearly as bright as mohair but has a much lower AFD.

continued on the next page

The original article appeared in Alpacas Magazine, Spring 2006, "[Surface Scanning Electron Microscopy of Suri Alpaca Fiber and Other Members of the Camel Family](#)"

Link to The Original Article:
Look for it under Fiber Articles on rmla.com



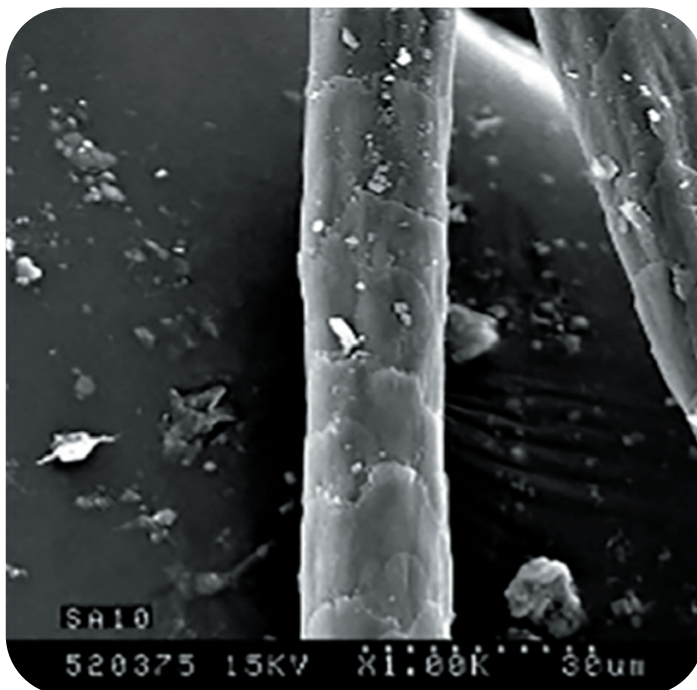
QR Code:
Read with your computer, laptop, cell phone or tablet



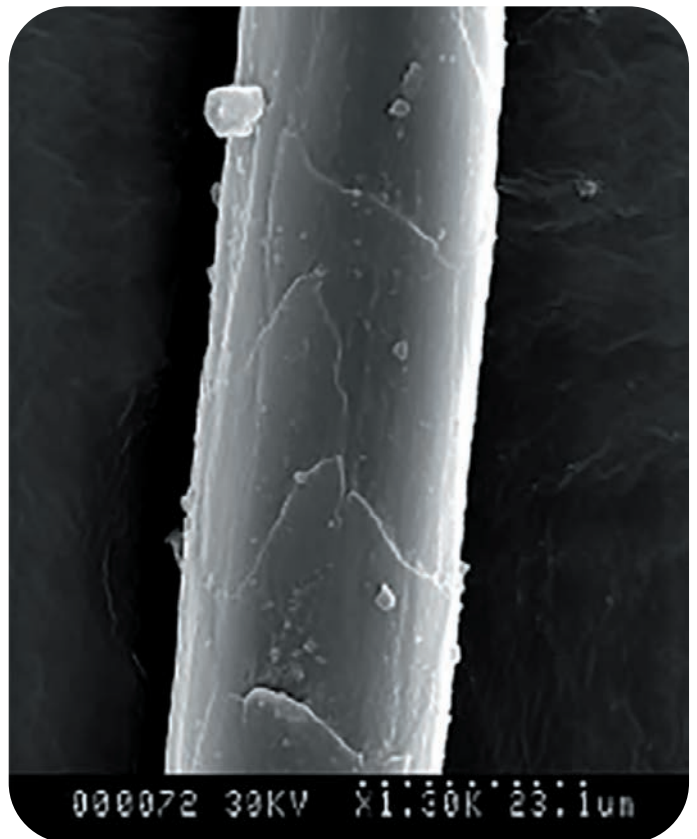
Undercoat of the double-coat llama is much finer (24 microns) than its guard hair. The undercoat is similar to a 'sheepy' huacaya alpaca.



Bombay Silk -AFD 10-12 microns. Silk does not have a cuticle scale since it is reeled together from 4-20 filament ends from the silk worm.



Long Smooth Scale of suri fiber can clearly be seen in this micrograph. Average scale length is 16.25 microns.



MSF 4.25, AFD 32 microns. Mohair is bright but coarse.



Non-Healing Wounds and Cancer

By Niki Kuklenski, NKK Llamas

As camelids age, we provide various things to comfort them and keep them going. They are living longer with improved feeding programs, blankets, teeth floating and more. Because of this, I would venture many owners see their animals experience cancer if they don't die of natural causes.

One of the things I have seen is squamous cell cancers which originate from a wound or scar.

My experience started with a friend of mine who had a llama with an open wound on her stifle. The initial veterinarian assessment was a severe fly strike. After months of treating it with no change in the wound, it was finally determined to be cancer. The female was euthanized after six months of various treatment methods. This was my first experience seeing an open wound that would not heal. This girl was 20 when she died.

Fast forward several years. Our herd matriarch, who was 26 years old, suddenly had an open wound between her front legs on her chest. My husband had noticed some blood on the rubber mats and upon further inspection discovered her open wound. We treated it daily and it finally closed up. We thought she was healed and considered our treatment a success. One night a few months later, while feeding, my husband called to tell me that she was down and not only that, once he removed her blanket he found the wound bloody and open again. At this point when I went out and we both spent time with her, we knew this was the end.

The wound had come back with a vengeance and there was no way she was going to recover. We called the vet out and he confirmed our diagnosis. She had cancer and it was at the point of no return, we had her euthanized.

After these incidents I discussed with my veterinarian about the fact that we had now seen numerous animals with open draining wounds that would not heal. They always seemed to be on a joint or area that is hard to heal.

The vet pointed out that cancer is what gets all older animals if they don't get slaughtered or put down before they are elderly. With the advent of better care, food and veterinary services, llamas and alpacas are living far longer than they ever used to. Because of all this, we now see a fair number of animals with cancer.

An October 1997 article in the Canadian Veterinary Journal describes such a cancer. Neoplasms, or abnormal growth, associated with scars and chronic ulcers are well-documented for humans, and comprise approximately two percent of all human skin cancers. Abnormal growths on scar tissue is also



well documented in veterinary literature, with cases in dogs, horses and cattle. The document's authors Kathleen Rogers, George Barrington, and Steven M. Parish wrote: *"Reports of neoplasia in camelids are uncommon, with only eight reports in the last 25 years, at the time of the article's publication. While other cancers have been reported, squamous cell carcinoma associated with wound scarring has not been described before."*

In August 2014, our best packer female was covered in maggots. When we had bought her originally many years before, she had a crusty growth on her back right on the spine. She had always loved having this particular spot scratched and rubbed. My veterinarian looked at this growth on several occasions and finally just removed it in 2012 and had it biopsied. The biopsy came back negative for anything and eventually the growth grew back. The growth returned and was removed again in 2013. Finally in 2014, another doctor friend thought it should be taken off too and removed it again. But this time it did not heal as it had before and instead stayed open and draining.

By March 2015 the following year, she had another maggot outbreak. The vet determined it was a squamous cell carcinoma originating from a cutaneous scar on the llama and removed it.

We improvised a system of cleaning the wound, putting medicated gauze pads on her back, then covered that with a cotton side down doggie piddle pad (that you use for puppies) and duct taped down the corners. This allowed her to be outside in the nice weather with her baby without the threat of flies getting onto her wound. Our system has worked well and prevented future maggot outbreaks. We changed the bandages about every two days. By Fall 2015 this wound had grown up again and had to be removed and burned. During this process another sore was discovered and the initial wound had spread. The vet informed us that there was nothing else he could do for her. Up to this point, the female had done well and kept weight on and even finished nursing her baby. We kept her comfortable until we could no longer maintain a quality of life for her.

continued on bottom of page 17

Life With Older Llamas

By Sheila Fugina,
Shady Ridge Farm

We lost two of our older girls this past summer, a friend lost her 17-year-old stud this fall, and another friend has lost several of her senior llamas over the past couple of years. Senior caretakers with senior llamas - it could be a depressing scenario, but it doesn't have to be.

Over the years these dear old friends have given us companionship, babies, fiber, memories — a myriad of wonderful gifts — and we owe them the gift of comfortable senior living right through to the end. And, like us, they need regular check-ups and healthy diets. One of the biggest concerns with aging llamas is their teeth. For some reason I sometimes forget to check my llamas' teeth on a regular basis even though I've dealt with a variety of tooth issues over the years. Maybe it's because it's not quite as easy as body scoring or other routine health checks.

A few years ago I noticed a couple of older girls getting a bit thin and another who was "only" 12 even thinner. Suspecting teeth issues, I scheduled my vet for a dental day and we checked four females (one 18 years old, two 15 years and the youngest one 12). Two hours later we had pulled teeth, filed teeth and made plans for future dental work on the 12-year-old who had a mouth with problems beyond getting older.

I couldn't believe what an amazing difference those two hours made in the comfort level of the four girls. It was easy to notice the difference in the way they ate and the way they chewed their cud — their increased gusto at the feeders was a delight to watch because it was so different from the way they acted only a few days ago when mealtime was simply a nonevent. It definitely improved their quality of life and perhaps it extended their lives as well. Two of the four females needed a change in their diets too, because their teeth no longer enabled them to get what they needed from the hay. Your vet should be able to help you figure out a diet that meets the nutritional needs of your llamas as well as their ability to chew.

Shearing is another area of special concern for older llamas. Their fiber doesn't grow back as quickly as when they were younger, so I usually hand shear my senior llamas because it always allows more control in the length of the fiber. I only take off what they really need to keep cool in the summer. I also have blankets at the ready for winter in case they're needed. Being a frugal sort, I have thrift store assortment of wraps and



straps to keep the seniors cozy and stylish when our Wisconsin winters are particularly brutal.

Something that has bothered me since we first got into llamas is when owners breed older females in order to sell them. I saw it early on when some of the breeders with big name studs bred them to their old girls so they could sell them to newbies and others who wanted a "Super Stud" cria, but couldn't afford pricey bred females. Some older females might be in good physical shape for their age and able to carry a cria safely to full term (though not as easily as in their prime), but breeding an 18-year-old female is pretty much NOT a good idea no matter what shape she's in. The ability to provide adequate nutrition for herself and an unborn cria, plus produce a good supply of milk once the baby is born, is certainly not the norm for an old girl.

The practice of breeding older females just prior to putting them on a sales list still goes on. I've gotten frantic calls from new owners of senior llamas who need help with a newborn cria because the mother died giving birth or the mother had absolutely no milk to give the new baby and for some reason the seller doesn't seem

continued on top of the next page

Life With Older Llamas continued

to return their calls. Even if they manage to have an old female provide them with a healthy baby, it's likely the last one she'll ever have. Now they have an old llama to care for that they've only owned for a year.

What happens when an old llama dies, what do you do with the body? We bury our llamas when they die, we have a connection with them that prompts us to handle their bodies that way. We learned early on to have a hole ready ahead of time when they happen to die in February. The grave site is tucked safely in a grove of trees where no one can accidentally slip into it. Some people in our area used to call a renderer when their llamas died until a year or so ago when it was no longer legal to do so. It's good to know what the rules are in your area and be prepared ahead of time so you have a plan on how to handle the bodies of your animals.

Having older llamas is certainly not all gloom and doom. Our senior llamas have a connection with us, a sort of mutual admiration society, if you will, that the younger ones haven't yet developed. We read each other's thoughts and can enjoy just hanging out being quiet together.

Though we've downsized as we ourselves have become "more senior", I still like to breed for one or two babies a year. It's an important part of my life and also adds energy to the herd. I've watched older females join in the fun as young ones suddenly race and leap for the sheer joy of it — maybe not as fast or as high as the youngsters, but with every bit as much joy. It puts a spring in my step too.

Reprinted from The GALA Newsletter, November 2020, Vol. XXXVI, No. 4.



Mid-Plains Fiber Fair

Geri Rutledge
Waco, NE



It happened! People came out and we had a fiber fair in York, NE. Twenty fiber vendors set up. We had fiber animals in the barns. And we offered many classes led by Karen Kinyon and several other fiber enthusiasts.

People were excited (perhaps 'starved') for an event. Saturday was very busy with lots of families, kids in strollers, grandparents with grandkids. Everyone was just taking their time to look around and enjoy the sights. And animal lovers in the barn shared their babies.



A crocheted roving rug. Size 13 needle, and round single stitch pattern.

(The color of the ribbons are purple!)

Vendors were happy with sales. And it seems natural fiber rugs are a hot item this year. Four were sold and a crocheted rug received the Grand prize.

It's a sign that 2021 will bring us back together in person. We learned that online is good, but that personal connection and hands on learning are so much better.

Thank you to all of our volunteers; they make having a show possible! And thank you to RMLA for sponsoring the event. We are all hoping to see more events this year.



Karen Kinyon at the spinning wheel



LLAMA GEAR AND ACCESSORIES FOR SALE

3 METAL CROSSBUCK PACK FRAMES

With Cinches - Used - Sold with Paniers Below

3 SETS OF CUSTOM COVERED PANIERS

\$100 FOR 3 SETS

\$50 FOR 1 SET

3 HANGING LLAMA BAG FEEDERS

\$40 TOTAL FOR ALL 3

\$20 FOR 1 FEEDER

items above need cleaned again

8 FIBER HAND CARDERS-like new

SETS OF 2-\$30

8 DROP SPINDLES

SETS OF 4 \$10

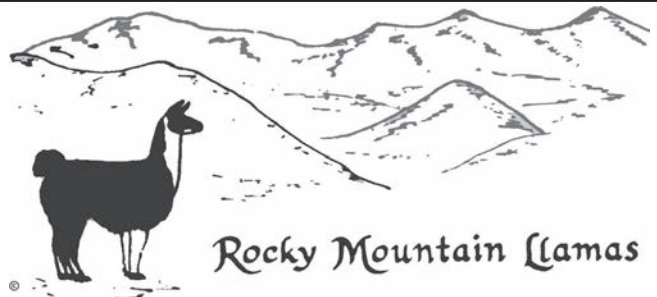
1 Training pack - \$50

1 Cria Blanket - \$20

All on first come basis

Freight payable to Silver Sage Llamas

lamadan@aol.com 307-265-1780



Rocky Mountain Llamas

Halters, Leads, Packing Supplies

Timberline Pack Systems

Books, DVDs, and more

All Our Gear is Trail-Tested, Llama-Approved

www.rockymtllamas.com

303-530-5575 Niwot, Colorado

Outfitting Llamas Since 1980

Advertisers in this Issue

Antelope Alpacas Fiber Arts Center	9
Bear Track Farm - Jerry Dunn	22
el Zorro Colorado Alpacas.....	25
Higher Ground Fair	7
Lothlorien Llamas - Williams.....	18

Mazuri Exotic Animal Nutrition.....	2
Rocky Mountain Llamas	above
Silver Sage Llamas	above
Southwest Llama Rescue.....	5

Non-Healing Wounds and Cancer continued from page 14

Rogers, Barrington and Parrish write that while squamous cell carcinoma cancers are locally invasive, but may metastasize to the lymph nodes, any wound, scar, or skin abnormality should be monitored, and biopsy specimens should be obtained for examination. Early definitive diagnosis and treatment may improve prognosis by avoiding spread to other organs.

Resources: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1576865/?page=1>.

Reprinted from *The GALA Newsletter*, Nov. 2020, Vol. XXXVI, No. 4. q



Note from Robert Callan, DVM: Yes, this is a real thing and we see it with some frequency. For many of these wounds at the time we see them it is hard to tell if the SCC caused the wound or if a wound then evolved into the SCC. These SCC lesions are more common in non-pigmented skin, but with wounds as an initiator, they can happen in pigmented skin as well. The synopsis from the above referenced article follows.

Rogers K, Barrington GM and Parish SM (1997). "Squamous cell carcinoma originating from a cutaneous scar in a llama." *Can Vet J* 38(10): 643-644. A nonhealing wound associated with a laceration in a 12-year-old llama was evaluated. Initial attempts at closure were unsuccessful and biopsy revealed scar tissue. Subsequent biopsies, 18 months later, revealed squamous cell carcinoma with regional metastasis. This report describes squamous cell carcinoma, secondary to a traumatic wound in a llama. Pub Med # 9332750.



Use THAT Llama Manure – Your Soil WILL Thank You!

By Morgan Barba - Chair, RMLA Youth Committee

“What do you do with your llama manure?” I know many camelid owners who tend to answer that they throw it away or let it pile up at the back of their property because “what are you supposed to do with it?”

Little do they know that those “llama beans,” as they are



affectionately called, serve a purpose as potential compost for your soil! I have always heard that camelid manure is an excellent fertilizer, but I never truly understood why. I had the opportunity to take a soil science class this semester through our local community college, where I learned more

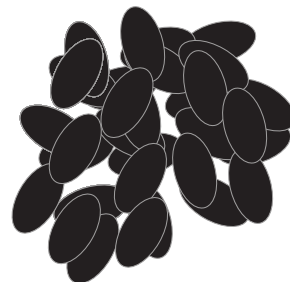
about the concept of organic fertilizers, such as llama manure, and how they can benefit the soil in the long run.

Llama manure is used as potassium, nitrogen, and phosphorus-rich organic fertilizer. Organic fertilizers are those fertilizers that are naturally produced and contain carbon. Organic fertilizers are compost either made from animal or plant residues that are rich in natural by-products. Applying organic fertilizers, such as llama manure, relies on soil organisms to break down the organic matter, so the nutrients are released slowly.

This slow-release method is hugely beneficial. It reduces the risk of nutrient leaching, which is a soluble chemical or mineral being drained away from the soil, ash, or similar material by the action of percolating liquid, especially rainwater. Many people use inorganic fertilizers, synthetic chemicals, and minerals manufactured because they are cheaper and potentially provide more rapid results. However, the concentration of nutrients being applied all at once may burn the plant and leach the nutrients deeply into the soil and water table where plants cannot access them.

Llama manure can also help to improve soil structure. Soil structure is defined by the way individual particles of sand, silt, and clay are assembled. It is determined by how individual soil granules clump, bind together, and aggregate, resulting in the arrangement of soil pores between them. Soil structure has a significant impact on water and air movement within the soil, biological activity, root growth, and seedling emergence. Llama manure can help improve the soil structure by increasing its ability to retain water (water holding capacity), increase cation exchange capacity (this influences the soil’s ability to hold onto essential nutrients and provides a buffer against soil acidification), and prevent nutrients from being lost, thus making plants more vigorous and healthier in the long run.

Llama manure is also extremely Earth-friendly and reduces our carbon footprint by recycling a part of nature. Organic fertilizers only use a limited amount of fossil fuels in production, which means that greenhouse gas released into the atmosphere is lower than it would be in inorganic fertilizers. Organic fertilizers are also less likely to have a high build-up of toxic salt concentrations in the soil, like inorganic fertilizer does, due to the organic material having the ability to decompose fully.



While it still feels like a lot of work when I am shoveling, through my experiences this spring, I now have a greater appreciation for llama manure. I am not just cleaning those pens, I am also shoveling an organic and earth friendly fertilizer that promotes sustainability and improves soil quality and structure!

hw

www.HowToCatchALlama.com

Animal rescue site for people who need to catch llamas and alpacas.

Designed for people who know absolutely nothing about llamas and alpacas.

Lothlorien Llamas

Dick & Jeanne Williams

P.O. Box 1070

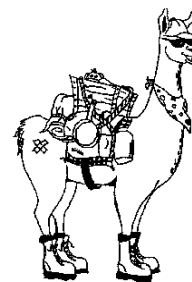
Plains, MT 59859

(406)826-2201

bcllama@blackfoot.net

Packing & Raising Llamas

Since 1983



There Are Many Solutions●●●●●●●●●●

By Lynda Liptak, Albuquerque, NM – Southwest Llama Rescue

I received this voice message on my phone last month:

“Hi Linda, I got your phone number from the Southwest Llama Rescue there in Tularosa. They informed me to give you a call to contact you in regards to a llama that is right outside my community in the giant open field that’s been there for five days. I don’t know what to do I was just looking for someone to help and I was referred to you.”

After following up with a return call, I determined this was a concerned citizen calling about a male llama alone in a field with no food or water in sight. She offered and he drank 5 bottles of water (12 oz) from her dog dish over the fence. She said he was there for 7 days now and no one was taking care of him.

Almost immediately, I coaxed my husband Frank to join me and we drove out with my trailer and my llama rescue kit. In about 40 minutes, we approached the large field that the caller directed me to. I saw a beautiful approximately 400-pound male guarding the stretch of fence that has a lot of traffic due to the traffic “T” on Meadowlake Road and a subdivision of homes. He was aggressive and clearly an aberrant behavior syndrome (ABS) llama. I gently interacted with the large male to assess his health which seemed to be very good in spite of the very aggressive behavior.

There were about a dozen cows in the background and as we were pouring water into a bucket to see if indeed he was lacking water, he made a lot of aggressive noises and reared against the barbed wire a few times. He was not thirsty as much as he was defensive of his territory.

The owner, (*name withheld*), arrived within 5 minutes of our arrival and explained he had to put his llama out in the field away from his kids because of Mr. Llamas’ violent ways. “I believe this llama was hand fed at a young age?”, I asked (he nodded a little remorsefully at the question). He said, “This is what you call a schizoid llama!”

Mr. Llama is now there guarding the cows in a huge field and I am glad he has a place to be. The only advice I had was that he may want to add a sign ‘Beware of Guard Llama’ as he is at a popular intersection and people are stopping for a photo. “He may bite,” the owner said.

So, if you hear about a llama needing rescue - it may not be true. It may be that he is just where he should be.



Editors’ Note: Marty McGee Bennett (camelid trainer) refers to Aberrant Male Syndrome as Novice Handler Syndrome. This may indeed be the case with this guy who was hand-fed at a young age. Raising and handling a male cria is tricky and caution is needed to avoid future problems.

Donate to SWLR!... see their ad on page 5



MOTHS

A Flock of Sheep, a Murder of Crows, a Fluttering of Moths

By Allison Judge (Reprinted from Spin-Off, Winter 2014)

Mention of clothes moths strikes terror in the hearts and minds of those of us involved to any extent with fibers but most especially to those of us who purchase fiber in raw, cleaned, or spun form. If you have never encountered these busy beasts, count yourself among the lucky; if you have encountered them, you may understand what a true vendetta is, as I have. They are very, very good at what they do. Their range is the temperate portions of our planet, i.e., Europe, North America (introduced), the southern coast of Greenland, Australia (introduced), and the temperate climates of South America and Africa. Although research has shown that they enjoy a humid environment, my 5% to 20% humidity climate doesn't seem to slow them down.

Clothes (or wool) moths are represented by three species: *Tineola bisselliella* (webbing clothes moth), *Tinea pellionella* (casemaking clothes moth), and *Trichophaga tapetzella* (carpet or tapestry moth). All of these moths are very small. *Tineola bisselliella* and *Tinea pellionella* have wingspreads of about 1/2 inch and body lengths of 1/4 inch, and *Trichophaga tapetzella* has about a 3/4-inch wingspan and body length of 1/3 to 3/4 inch.

Knowing what these insects are attracted to and repulsed from is vital for keeping them under control. Complete eradication is just about impossible, so vigilance is key to keeping damage to a minimum.

***Tineola bisselliella*, the webbing clothes moth**

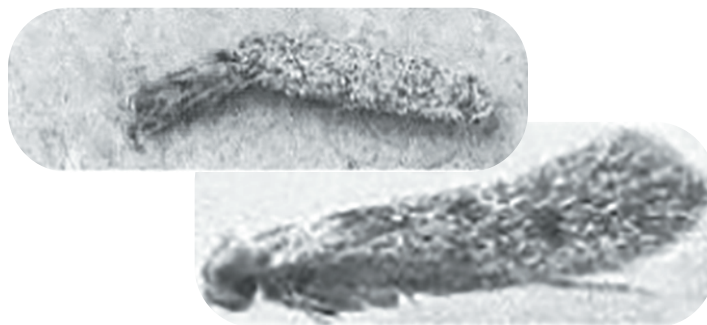
Larvae: 1/2 inch long when mature, and clear to creamy white with tan heads. They weave patches of silken webbing (casings) to hide and feed under. These casings are not portable. The casings can incorporate fiber and frass (excrement). The fiber they are living off of is great camouflage. It is easy to assume you have an errant bit of fiber or thread on the article they are feeding off of when it is actually a casing or some webbing. **Adults:** Light tan, tiny moths.



***Tinea pellionella*, the casemaking clothes moth**

Larvae: Smaller than *Tineola bisselliella*, with dark heads. The first thoracic segment is also dark. They live in portable silklike

casings that they carry along with them while grazing. **Adults:** Tiny moths with spotted wings. When caught in traps, they may appear black because their color has rubbed off in the trap, but untrapped moths are bronze/black.



***Trichophaga tapetzella*, the carpet or tapestry moth**

These moths are much less common than the casing and webbing moths. **Larvae:** Prefer bird nests, hair, and fur, as well as clothing and floor and furniture coverings made of animal skin. **Adults:** Bicolored forewings that are brown with dark areas toward the base and small dark markings by the wingtips. In the United States, they are found in eastern coastal and southern gulf areas. Once common in the United Kingdom, they are now relatively rare, presumably because of central heating.



BEHAVIOR

First of all, clothes moths are photophobic (they avoid light). They like dark places, and if you see them fluttering around, it will most likely be at dusk and later into the evening. Revealing a hiding place with bright light (in a closet or drawer, behind a wall hanging, or under a floor covering) will send adults scurrying. Adult males will fly; adult females creep and hop as they cannot fly. Flying moths are tricky to catch because their flight pattern is erratic. The females are unbelievably quick at creeping and hopping along a shelf or wall. Unlike larger, more common moths, they are not attracted to artificial light, but my experience has shown that they can occasionally be found in the early morning near a dim night light left on overnight.

continued on the next page

The adults are often the first indication of an infestation. If you see the adults, understand that they are the reproductive part of the moth's life cycle. Adults do not have functional mouth parts, so it is the larvae that do the damage, and they can be very hard to see. The only actual larvae I have seen had dropped by happenstance into a sticky trap I'd just put out. It was about 1/16-inch long.

Clothes moth larvae are most often attracted to protein fibers. They rarely feed on silk or cotton, but these can be a part-of their diet if there is nothing else to feed on. My experience has shown that they go for the darkest fibers first. Cashmere and alpaca seem to be favorites. Soiled garments/yarn/fiber are preferred over clean.

CLUES TO INFESTATION

About twenty-five years ago, I attended a wool festival as a new spinner. I purchased some luscious black-as-black-can-be natural alpaca. Like many of us new to spinning, I didn't want to spin up this fiber before I felt I was worthy. So I stored it in my burgeoning fiber stash in the closet, still in the brown paper bag it came in.

When I had the confidence to spin it up, I lifted the bag out of the closet and heard a sickening sound – a rattling. I knew this was frass sifting to the bottom of the paper bag. I had the wherewithal to not open the bag and to enclose it in a plastic bag and throw it into the trash. I didn't want to see what I knew was in there, nor did I want a fluttering of moths to escape.

If you see a moth flying at around dusk or dark in your house, purchase a clothes moth trap or two and put out pantry moth traps as well. The moths are very similar in appearance (pantry moths are slightly larger than clothes moths but are still quite small). The clothes and pantry moths are attracted to different pheromones, and by setting out traps and observing what is caught, you will know which moths you've got in your home.

Examine garments, yarn, and raw fiber. Around the time of the alpaca disaster, I pulled a ball of yarn out of the same closet. As I was knitting with it, it kept falling apart as the yarn was pulled out of the center of the ball. Moth larvae had drilled into the ball and through every layer of yarn. I couldn't pull a length of yarn that was more than a yard long without it coming apart. I did not see a creature, but it was clear I had moths.

When examining garments, look for small holes, channels (created when moths graze along the fabric), casings, and webbing. I was once paid for repairing

holes in a client's cashmere sweaters. He was fortunate enough to have many sweaters but unlucky to have attracted moths. I insisted he dry-clean the sweaters before bringing them into my home for repairs.

CLEANING

Dry cleaning will rid garments of all cycles of moths. Scouring fleeces will take out most of them. Moths do not like cleaned fibers (the larvae depend on soil and spilt liquids for their fluid needs). But no matter how clean exotic fibers such as cashmere, mohair, and alpaca are, the moths love them. I wonder if these fibers store more moisture in their shafts than a cleaned sheep's wool?

Vacuum regularly, making sure to get down and dirty at the edges of carpet and wall. Pull up area rugs and vacuum both sides. Whenever possible, move heavy furniture. Clothes moths love those dark places, and pet fur (which clothes moths also feed on) may collect under furniture. If there is a serious problem, take area rugs outside into the sun. Using a lint roller over smaller hangings and garments will pull off casings and webbing.

PREVENTION

Good housekeeping practice will go a long way toward keeping these pests at bay. If items are expected to be stored for a length of time, clean and place them in sealed containers. Don't put off scouring that prize sheep's fleece you bought at the state fair. Move your stash around a lot! Not only will this expose the moths to the light and disturbance they don't like, but it will give you the opportunity to examine for a possible infestation.

Placing items in plastic bins and plastic bags that zip closed will prevent moths from entering, ruining, and wrecking your precious stash. (In a humid climate, there is a worry that this prevention may cause felting.) By isolating your items, you will also prevent existing moths from moving on, as they will be trapped inside the container.

Finally, if your best buddy from the guild is destashing, and has mentioned moths, be very reluctant to accept any fiber without first examining it closely. Quarantine and/or freeze new acquisitions and observe. During summer months, clothes moth eggs may take 4 to 10 days to hatch, and they hatch in up to 3 weeks during the winter. Depending on humidity, moth development time (from egg to adult) may be 1 to 3 months, or in very dry climates, up to 3 years.

continued on the next page

I have been surprised at the infestation I've witnessed since the fall of 2012. Sadly, I have thrown out a tall trash can full of very expensive yarn and fiber twice. Sometimes that is the only solution. Keeping it would have been a threat to the remainder of my fiber.

Pay attention to the flutterings.

TREATMENT OPTIONS

Pheromone Traps These are sticky traps made of cardboard and folded into a triangle. They are placed in dimly lit areas and where moths are expected to be present. They use a female moth pheromone to attract the flying males. If you have flying males, they have developed from foraging larvae. The traps will capture moths, somewhat interrupting the reproductive cycle, and will give you a good idea of just how bad an infestation might be. I have used two brands, Safer and Pro-Pest. I couldn't find them at my big-box hardware store but was able to order them online. The traps are perfectly safe to have around food, children, pets, and spinners. There is no environmental impact from the pheromone, and they are safe to put into landfills.

Freezing Putting items in the freezer is an easy way to kill larvae and adults – a temperature of 0°F is recommended. As it so happens, this is normally what freezer temps are set at since food expirations are based on these numbers. Not all eggs may be killed, so remove the items from the freezer for a few days and then return them to the freezer: this will give eggs the chance to hatch and the larvae to emerge and then freeze again before more damage is done. Alternating with direct sunlight will be even more effective. Dry ice is an excellent method of treatment. Put the items into a trash bag with dry ice (but don't allow the ice to touch the items). Cinch up the top of the bag leaving enough of a hole at the top for the nitrogen (off-gassing from the dry ice) to escape or else your bag will explode. Lack of oxygen and cold will do the job. Follow safety procedures when handling dry ice as it will burn your skin.


Light Because clothes moths avoid light, placing your infested items in direct sunlight will cause them to flee. I live in a climate with very intense sunlight and have found this works well. Some studies report that this is more effective than freezing. Of course, you run the risk of light damage to fibers and nonlight-fast dyes. I was careful to turn the items often and to leave them outside for just a few hours in the morning. I also shook them vigorously when turning.


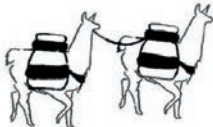

Natural aromatics These are repellents and will serve to deter moths but won't cure an ongoing infestation. Aromatics include cedar, lavender, dried mint leaves, cloves, thyme, ginseng, and rosemary. Aromatics require replacing several times per year. Make sachets and place them where moth-prone items are stored. Chests made of cedar and closets lined with cedar are effective repellents, but the potency of cedar will diminish over time.

Mothballs Mothballs are a chemical repellent combined with a pesticide. Naphthalene was used in years gone by, and many of us associate the aroma with our grandmother's closet. However, naphthalene is extremely flammable. The chemical in use now is 1,4-dichlorobenzene, which is somewhat less flammable but still thought by some scientists to be a carcinogen. Mothballs come in ball form and evaporate over time, releasing a vapor that is toxic to moths and silverfish. They are effective in a sealed container; which is the only situation in which they should be used as they are extremely toxic when ingested by people or their pets. As there are many other (albeit a bit more labor-intensive) ways to rid yourself of clothes moths, the use of chemicals should be considered only as a last resort. Never mix old naphthalene moth balls with newer ones, as the combination will form a liquid that will damage clothing.

Allison Judge lives in Reno, Nevada, where she wages battle against clothes moths. She is currently on a "fiber diet" so as not to bring in too much fiber until these little critters lives are dealt with once and for all.




Jerry Dunn
Bear Track Farm
Llama Training Center
 303-277-1129 BTllamas@outlook.com

 **PACK'EM**
  **STACK'EM**
  **DRIVE'EM**

Late Season Rocky Mountain Pack Trip

By Leigh DiNatale
Boulder, CO

I'm sitting in camp on a hill, my shoulder to the mountain behind me overlooking open meadows in a 180 degree view. I concentrate on what Mother Nature is offering today. She is calm and congenial. This is just what I need to let go of all the things buzzing around my mind. She is forever my therapist and my church.

The sun is warm, even hot and so welcome after a cold, cold fall night. There is a 40 degree difference in temperature between now and last night. Did last night really happen? I am now down to my shirt sleeves on this fall day at 10,000 ft. elevation.

Below me a stream meanders lazily on its way through the meadows. Somewhere along that stream

my husband is stalking some very spooky trout. The llamas are grazing peacefully on meadow grass. It grows in tufts among low shrubs that dot this hillside. They too feel the contentment of this fall day. A breeze blows occasionally. The view is expansive. Here and there, close to the forest edges is the bright golden yellow of the changing aspen leaves. The dark green of the pine trees, the wheat color of the now dried grasses, the blue sky and grey of the rock outcroppings all add to a view that is candy to my eyes.

Yesterday we parked our llama van at the trail head after a long drive down a bumpy dirt road. The three llamas were saddled up, panniers attached, cinches checked.

Tomichi, the youngest, just turned four last week. Looking around and watching what we are doing, he is excited to be part of another trip. He readily accepts his pack. He is a small but mighty llama. This is his

third trip overnight in the wilderness and he has been a natural, full of curiosity and self-confidence. He takes what comes along as some new fun thing, loves water crossings, walks through mud and jumps huge logs. When staked out he makes a game out of untying himself. Engaged and eager on the trail, he has no

trouble leading everyone else into the great unknown. These are things that you can't train. Some call this heart.

Zano is four years and four months old. This is his second summer packing. He is a gorgeous dark brown with short classic wool that takes only minutes to brush out for the pack. He fidgets as the pack is placed on his back. A simple "Zano, stand" brings him to a halt. The saddle is easily cinched and adjusted. This llama is calm, ready to do most anything once he understands what you want. His long legs and athletic build keep him going for miles. He takes heavy loads like he can't feel them at all.

Santana is a companion of many years. He's 12 now and has been on the trail with us since he was two. Of course, during those early days he did not carry weight, but in his time has carried 75 pounds routinely. Gentle, calm and willing there is nothing he

won't do for us. He is my soul mate. We have traveled many wilderness miles together with plenty of tricky situations along the way. He is a sure bet.

We have done this hike many times and so have two of the three llamas. Heading down the trail into this beautiful spot starts with a stream crossing. There is no hesitation by any of the llamas, only by the people who don't want to get their feet wet. But they are saved by a two log bridge. The llamas enjoy the cool water on their feet and legs and a couple of mouthfuls of lush stream-side grass while the humans cross the bridge. Moving down the trail with Santana behind me, we feel as one.

My life and my mind have been so busy. It has been a difficult, strange summer. The pandemic and all the anxiety around it, caring for my mother, and house projects all crowd my mind.



DiNatale's llama is ready for a late season pack trip.

continued on the next page

"I concentrate on what Mother Nature is offering today. She is calm and congenial. Just what I need to let go of all the things buzzing around my mind. She is forever my therapist and my church..."



After a mile or so, I notice that my breathing has settled into rhythm with Santana's breath as he steps quietly behind me. It is soothing and I try to focus on it. The trail is familiar and comforting. This is not intended to be an adventure but a few days of respite. We are very familiar with this area and know exactly where we will set up camp. Santana has been down this trail numerous times. He seems to sense my need for calm as we move along.

Tomichi has never been on this trail. He follows easily on a loose lead eagerly looking around, excited for a new adventure, looking all grown up wearing his pack.

Some people on the trail step aside to let us pass. They are fascinated with the llamas and we field a few questions. "Are those alpacas or llamas?" "My mom loves llamas!" "How far are you going?" I'd love to answer that one - 'forever'!

Soon Zano stops and steps to the side of the trail. He has to "go" but doesn't. This llama is funny. He is never sure where to "go" without a pile. Soon one of the others "goes" and he is relieved in more than one way!

On we go as trees seem to wrap around us like Mother Nature's arms. I think about the rocks and dirt of the earth under my feet. Mother Nature is enveloping me and I could hike forever like this.

In some miles meadows start to open up and the trail comes to a junction. We find our way across the meadows toward a knoll on the other side. Again we cross the stream. This time the people have to wade with the llamas, but that's okay as camp is just up the hill.

We debate filling our water containers but decide to come back later and enjoy the stream for a bit after we have settled. My husband wants to look for fish.

Once we stop, the llamas are relieved of their packs and staked out. They eagerly begin to graze, lifting their heads occasionally to check on each other and the view. Their work is done for today. They must think us silly with all our gear to set up. We look around for the best tent spot and get down to the task of setting up camp.

Later we go back to the stream with all three llamas. While we fill containers with water the llamas enjoy standing in the crystal clear water of the creek, cooling their feet and munching the rich grass. Fish are scoped out. They are small and quickly disappear when sighted. The now full water containers are put into Zano's panniers. We climb back up the steep hill to camp. Tomichi charges right up and Zano seems to have no awareness of the heavy load of water he is carrying. Santana stops to leave some beans giving his huffing, puffing person a needed rest.

Soon we are gathering around the stove for dinner. As it cooks, the llamas get offered more water, salts and minerals and a couple mouthfuls of Equine Senior feed. This is an evening routine when we pack. The Equine Senior is

some extra calories for them after a hard day on the trail. They don't get this at home and so look forward to it. They are watched carefully to make sure they chew the senior completely before having more. It is a really good energy food, but the pellets can cause choking. We give them small amounts at a time.



The view and air have been working their magic on my mind, but now I notice that I'm beginning to get hungry for lunch. My husband returns as if reading my thoughts.

continued on the next page

He has stories of fish caught and fish getting away. Over lunch he tells me about his adventures. These are spooky little brookies and he has had to crawl up to the edge of the stream in order to keep from spooking them. I picture him stealthily crouching behind bushes like a spy in a cartoon.

After lunch we hike down a box canyon nearby. It is a magical place with a stream bubbling and tumbling over rock. We weave our way over logs, under fallen trees, across parts of the trail on steep slopes next to the water. The llamas follow through this natural obstacle course without hesitation, alert to the forest around us and what is ahead. It gets more narrow until there is a boulder pile from one side to the other side of the canyon. The llamas and I wait while my husband climbs the boulders to see what is beyond. The sunlight is trickling through the trees, fall is in the air. Soon winter will settle in...

That evening the temperature begins to drop with the sun headed behind the mountain to the west; I looked up and saw a bull moose coming through the woods. He

ambled into our camp with a “never-mind” to us. The llamas were grazing on the other side of camp where there was meadow grass. The moose caught their scent on the bushes where they had been staked out the night before. He blew out his nose. I don’t think he cares for llama scent.

The llamas looked up and saw him, taking a tall alert stance. Santana, who normally alarms whenever there is moose in the area, was alert but quiet. I was surprised. Tomichi wasn’t too sure about this and carefully watched Santana’s reaction. The moose with his large rack of antlers seemed to be headed somewhere else. He ambled up the hill to better smelling places passing the area where Zano was staked. A nervous Zano paced on his stake line. Moose are big animals and they can charge. We tried not to give him eye contact. The moose left, but the llamas were on alert for a long time afterward.

Tomorrow we will hike to the top of a low pass. We lost Santana once and found him at the top of that pass. But that is another story...

*Originally published in the GALA Newsletter,
November 2020*



NEW RMLA Members

RMLA IS ALWAYS GROWING

Wendy Wolsleger	Durango, CO
Beverly Lyon	Florissant, CO
Sandra Schilling	Chino Valley, AZ

Additional information, phone, address, etc. can be found on the website under MEMBERS.

NOTE: Before youth members under the age of 18 are listed, a signed release is required from a parent or legal guardian. You can find a link for further instructions and that form at the top of the MEMBERS by Name page on the website. *Thank you*

Letter from a Member

I enjoyed reading your article, ‘Camelid Fiber from the Ancient Past’ in the RMLA Journal. I shared it with a weaver friend. CHAVIN culture was much earlier and in the north, although art styles did appear in the south.

Glad to be a RMLA member again, Chris Switzer.

Editor’s Note: We are always delighted to receive comments about the articles we include for you. The article that Chris refers to (Winter 2020) came about accidentally – the daughter of a member saw the photo on Facebook and passed it on; eventually the photo landed in my inbox. I had to follow up with some research!



Ron Hinds and Elizabeth Cline
5704 Canyon Trail
Elizabeth, CO 80107
303-646-1320
Ron’s cell 720-648-8302

*WHERE QUALITY, COLOR AND
PERSONALITIES ARE BLENDED WITH
PRECISION.*

*BREEDING - HEALTH - CARING
BOARDING - FIBER, AND ANSWERS*

www.elZorroColorado.com
alpaca@elzorroc Colorado.com

The World Is Re-Opening!!

Let's Plan an Event for 2021

By Mary Wickman - RMLA Event Coordinator - Woodland Park, CO

With much of the pandemic behind us and vaccinations happening for those who want them, it is time to get out and PLAY with each other and our animals. RMLA is certainly ready. Don't let the RMLA Event Application intimidate you. It is very easy to complete. But first just give me a call and we can discuss how to get started. 719 687-1423 or 719-651-8871. The application takes only about 15 minutes to complete.

1. Go to RMLA.com. On Home page, left side, hover over Events tab and select Event Planning.
2. Read the 1-page Event Planning Packet/Checklist. There is a wealth of information here that may or may not be applicable to your event.
3. At the bottom of this page, select the appropriate MS Word document to download and save it to your computer.
4. Please read this application/contract completely. If you need help, call me.
5. Once you have read the instructions and the agreement, you can just fill in the application right on your computer!
6. Save the application/contract and email to mwickman1@gmail.com to get the process started.
7. Last step: print, sign and mail hard copy of your application to Mary Wickman, PO BOX 216, Woodland Park, CO 80866.

When I receive your e-mailed application, I forward it on to the RMLA Board of Directors who, in turn, vote to approve your event. This takes a couple of days for the e-mailing back and forth. I notify you of approval and you are on your way. Very simple!

Now you may be asking 'why do I need to send a signed paper copy'? The signed 'event' paperwork is considered a contract between RMLA and an event coordinator. Among other things, this contract is to show good intent on RMLA's behalf that the event will be conducted in a safe, low-risk way for all participants. Putting on safe events is something we all do normally, but the company that underwrites the RMLA liability insurance still requires an original signature. Having RMLA liability insurance is a great benefit to you and your event for just a bit of additional paperwork.

Another benefit of an RMLA sponsored event, is that your event is listed on the RMLA website calendar and included in the e-mail blasts that go out. What a great way for everyone to learn of your event!

The contract you agree to and submit requires you to post in a highly visible location the RMLA banner and 2 or 3 liability signs. These are also provided to you by RMLA. I can help you get these from one of our three members who keep them handy for others to use.

The final part of the contract asks that the event sponsor (that's you) send 'something' to the Journal. This 'something' can be just a photo with a caption or a couple of paragraphs or a more complete description of your event. It is your choice. We know that after preparing and having the event, the last thing you may want to do is write an article and send photos. But, did you know that is a great way to share the fun you are having with your llamas?

Have fun and sponsor an RMLA event.

**Problems, questions?
Call me!
719-687-1423**



A Tribute & Congratulations to Dr. Robert Callan!

The relationship between CSU Veterinary Teaching Hospital and RMLA began with the Winter 2008 issue of the Journal. Spearheading the work from the CSU side for these past 12+ years has been Dr. Robert Callan.

RMLA began the Ask the Vet column as a way to address the questions from our members on current veterinary practices and issues. The CSU Veterinary Teaching Hospital is a hospital, a research facility, and a training ground for future veterinarians. It has access to the latest and greatest

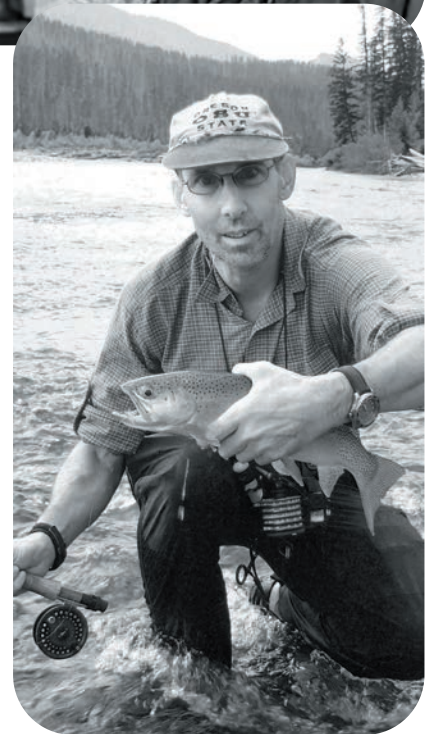
For more than 12 years, Dr. Callan and his team of interns and students in camelid medicine have answered our questions ranging from water consumption, eating, pasture and forage, medical treatments and more. In the beginning, these articles were picked up and reproduced by other camelid publications – then these organizations began their own columns with their local vets.

In addition to the articles in the Journal, Dr. Callan:

- has spoken at our conferences,
- hosted an annual meeting at the hospital,
- found us a vet to be on-site at the Fairplay Llama Event,
- helped us sort out the on-going research of the unique characteristics in llama blood with respect to medical research including a Covid vaccine, and
- provided factual information on Colorado Initiative 16.

Dr. Callan is retiring this August...he is retiring to fishing, skiing, woodworking, and whatever else he decides he wants to do. Somewhere in there will be veterinary work because he loves it.

We can only begin to thank Dr. Callan for the work he has done for RMLA and for the camelid education he has provided to our members. So here is the first Thank You from our members.



hw

Postscript.....

“You may not have saved a lot of money in your life, but if you have saved a lot of heartaches for other folks, you are pretty rich.”

~Seth Parker

Rocky Mountain Llama and Alpaca Association
6778 Kannah Creek Rd.
Whitewater, CO 81527



RMLA Events Calendar

July 24, 2021, Llama Lunacy, Fairplay, CO in conjunction with the Fairplay Burro Days. Educate children and adults about llamas by having children take a gentle llama through an obstacle course. The Llama Lunacy Course for children is free and opens around noon. Each child who walks our gentle PR llama through the small obstacle course receives a ribbon and a coupon for an ice cream cone at the Silver Scoop Creamery. Note: If we have enough llamas we may set up an obstacle course for adults (a timed event).

September 18 & 19, 2021, Higher Ground Fair, Wyoming Territorial Prison State Historic Site, 975 Snowy Range Rd., Laramie, WY. Llama and Alpaca Performance and Fleece Shows; Fiber/Fleece Vendor Space; Camelid-Related Displays and Presentations. For more information, contact Gayle Woodsum: gayle@highergroundfair.org or gmwrites@icloud.com

Event Planning:

Do you have an event you are planning for 2021 but don't have all the 'paper work' completed? Send the name, date, and location of the event to rmlaeditor@gmail.com and we will put you on the Save the Date calendar. For more details and live links, go to www.RMLA.com, select Events and hover on the boxes. From here you can complete the event registration.