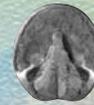


The Horse's Hoof™



In this Issue:



Indra's X-Rays (cont.)	2	Barefoot and 50 Miles	16
From the Editors	3	Questioning Your Farrier...	17
Karen Rohlf (cont.)	4	Happy Horses Update	18
Parade Horses	5	Liberated Horsemanship..	19
Osteoporotic Coffin Bones..	6	The Frog Pad.....	20
Hoof Rehab Protocol	8	Endurance Horse.....	21
The Live Frog	10	Order Form	21
Navicular Rehab-Boots... 12		Hoofcare Resources	22
Barefoot at the Biltmore . 14		Healthy Hoof X-Rays	24

www.TheHorsesHoof.com

News for Barefoot Hoofcare

ISSUE 35 – SUMMER 2009

Karen Rohlf: My Journey to Barefoot

by Karen Rohlf

When Yvonne and I discussed that I should write an article for *The Horse's Hoof*, I was excited to contribute. Then I sat down to write, and was humbled by the immense amount I still need to learn on this subject... but I can share with you my “journey to barefoot!”

Perhaps I should briefly introduce myself first: I have been training and competing in dressage for 25 years (or so). Then, (to make a long story very short), through a series of interventions from the universe, I found myself re-thinking just about everything I was doing. I ran off to immerse in Parelli Natural Horsemanship, and then revamped my philosophies and strategies regarding training, managing, and being with horses. Now I do what I call: “**Dressage, Naturally**,” and it is less about a “new way of riding,” but instead a way to create stronger partnerships and healthy biomechanics through combining the principles of natural horsemanship with the art of dressage.

My journey to barefoot probably started with a



Karen with her beautiful Lipizzan, Monty—strutting his stuff in a piaffe.

All photos courtesy Karen Rohlf



Karen poses with some of her barefoot herd's tootsies! Left to right: Monty (Lipizzan), Karen, Atomic (National Show Horse) and Ovation (Holsteiner/Paint).

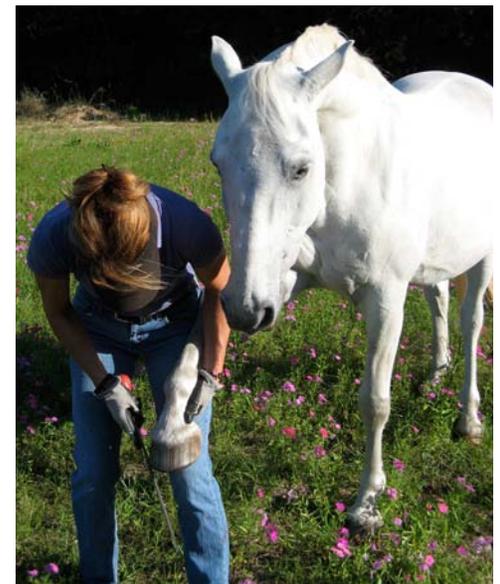
horse named Vivaldi, a Hanoverian trained in dressage. When he came to me at age 11, he had many “issues” (he was completely desensitized, stiff, heavy and unmotivated), but soon he was schooling Grand Prix, and competing at Prix St Georges. One of his major issues was his feet. He wore shoes and would be okay right after being shod, but as the weeks progressed, he would become increasingly uncomfortable. I used the “best” farrier at the farm, and when I went to all the CDI competitions, I would always seek out the show farrier to ask for his advice. I always got the same answer: “oh, he has terrible feet, your farrier at home is doing the best he can with him.”

The only person who ever told me she could change his feet was a veterinarian named Judith Shoemaker, (<http://www.judithshoemaker.com/aboutJMS.html>) an expert in complimentary veterinary medicine and therapy. But, of course, like most people who had not been exposed to more “natural” techniques, I resisted doing the dramatic change she described. Vivaldi was uncomfortable, but not “lame” (according to the eyes I had back then), and I didn't want to risk making things worse doing a strange technique that no one else around me did!

Then he finally went very lame, and the x-rays

showed that his heels were so under-run that his pastern and coffin bones looked in hyper-extension when he was just standing still (the back of his coffin bone was essentially sitting on the ground). I was ready (as well as horrified)

(cont. on page 4)



Karen hard at work, rasping Monty's toes. He seem to be enjoying his pedicure!



Barefoot Health

Indra's X-Rays

How our trip to the vet turned out to be a great experience!

by Catherine Chandler

My 7 year old mare Indra is a Thoroughbred/Clydesdale cross, a rescued PMU from Canada. When she came to me, her feet were an appalling mess—not only were they long, but greatly imbalanced. I've always had a hard time reading her feet. She's never really "shed" material, like my other horses. She tends to grow very packed-in material along her collateral grooves.

Well, one day while picking her feet, I came across a soft spot on her left front frog. It was located just in front of the cleft, basically the very center of her frog. I started picking at it, and at that point blood came out (this was your typical nice, regular blood, no abscess or thrush material at all, in fact the frog was smooth-looking). I was really baffled—her frog wasn't passive to the ground, and looked like there was too much frog there, but then I scrape down a fraction, and solid red blood comes out.

I automatically called my vet and told him what happened. He had never heard of anything like it, especially in that area of that frog. My vet ended up calling the top veterinary clinic in Arizona (Cave Creek Equine), where they told him that she could possibly have cysts on her coffin bone, causing breakage underneath. They suggest x-rays, to make absolutely sure. The treatment would either be freezing the cyst (risks include freezing too much or not enough, and what temperature to freeze) or using a laser to remove it. Of course, both have serious risks—I already know what the hoof capsule is made of, and how strong and yet delicate it is. Any surgical procedure would be a risk.

So I took Indra to Chaparral Veterinary Clinic to get her two front hooves x-rayed. Before the x-rays, the vet did a typical vet check. She did flexions on Indra, palpations on her tendons, and, of course, trotted her off after each one. The vet said she was amazed at how flexible and supple she was, and how super sound she was (Indra was only off about a week before I found the blood).

The vet examined her feet, and automatically said she had a lot of frog and secondary sole that needed to be removed. But since blood was involved, we still went ahead with the x-rays. When the vet finally had us come in her office to see her x-rays, all I could think of the x-rays were "well, those look good to me" but I'm no vet, of course. The vet looked at her x-rays with us and said, and I quote, "they are perfect x-rays"—she had a perfect coffin bone. The vet said most horses her age have some changes,



Catherine was worried that early jumping may have had a negative impact on Indra's bones...



...but there was nothing except a healthy hoof showing up on her x-rays! The vet said, "they are perfect x-rays."

but she didn't. She pointed out her joints were completely smooth, again Indra didn't even show changes that were considered "normal" for her age group.

Then she showed us her navicular bone (at this point, I was holding my breath—I hear constantly about navicular changes, and what's normal and what's not, and Indra has never worn shoes, but her feet were a mess when she came to us, so I wasn't sure what to expect). The vet, again and I quote, "that has to be the MOST PERFECT navicular bone I have ever seen"—at that point, I felt like saying "thank you, that's all I needed to hear." What I realized later is that, even though Indra never had well-trimmed, well-balanced hooves, she was barefoot, nonetheless.

I think that shows what shoes (metal) do to these animals. When you get x-rays on a horse that has had severe imbalance, overgrowth, etc., you expect some damage. But I now realize that she never had a metal, shock-creating,

non-expanding, non-bendable, object on her foot. I think it is truly sad that this vet had never seen such perfect x-rays. I seriously owe these perfect x-rays to God and natural hoof care.

I will add that Indra is not a pleasure pony. This mare works hard every day: she is a dressage horse, jumper, trail horse, etc. She is physically worked hard everyday, she lives on, literally, rock-hard ground, is turned out 24/7 in a herd, and constantly doing something. Actually, I was worried about her x-rays because I felt like I had jumped her too hard at a young age in the beginning, and, at the time, she was working on hard ground, without good footing (we only recently installed good footing about 2 years ago).

And if you're wondering what the diagnosis was, well it's what we can compare to a human blood blister, I guess. Her frog had compressed so much material that it's causing pressure on the internal structures, and causing this pocket of blood to form (which is what I hit while picking her feet). She must be soaked regularly in water, and occasionally in water/iodine or vinegar—this will help her to shed material properly.

I loved having so much more information to learn; this experience taught me so much. I've been trimming my own horses' feet using the natural hoof care methods since 2004, and I've always had a hard time with Indra. She never sheds sole the way my other horse do, she never sheds frog, she doesn't even get the typical cracks that my other horses get, that at least tell me the frog and/or sole is trying to shed. Indra builds layer upon false layer of sole and frog. I have always been cautious about taking too much off, so when I hit blood, you can imagine my automatic "sick to the gut" first thought was that I over trimmed her! But it was actually the opposite case, this time.

Since our vet trip, Indra has popped one last blood pocket (which, if you know how to look, can be spotted on one of her x-rays) and seems to be back to her super-sound self. I am trimming her frog down gradually, feeling more confident now with x-rays to guide me, and she is soaked for a couple hours every other day to help hoof shed more naturally.

Turn to the back cover to see all of the x-rays, plus photos of Indra's hooves.

About the author: Catherine Chandler lives in Wickenburg, Arizona, where she is a full-time horse trainer/instructor. She writes: "I love how much I am learning with Natural Hoof Care, and how much it has helped my horses' performance. I trim my own horses and few of my clients' horses. We show throughout the Southwest in Jumping and Dressage."

(Photos continue on back cover)

All photos courtesy Catherine Chandler

The Horse's Hoof™

Barefoot Hoofcare Magazine

Issue 35 – Summer 2009

©2009 by The Horse's Hoof. All rights reserved. No part of this publication may be reproduced by any means whatsoever without the written permission of the publisher and the author.

The information contained within this magazine is intended for educational purposes only. Readers should seek advice from their veterinarian and qualified help from a barefoot trimmer/farrier before attempting any trimming of hooves. Opinions expressed herein are those of the authors and do not necessarily reflect those of the publisher.

Editor/Publisher

Yvonne Welz

Technical Editor/Publisher

James Welz

Contributors

Karen Rohlf

Catherine Chandler

Candace Clark

Robert M. Bowker VMD, PhD

Tara Calvert-Jackson

Debra R. Taylor DVM, MS, DACVIM

Ivy Ramey

Pete Ramey

Chris Adderson • John Trend

Cheryl Henderson

Steve Karshner • Cathie Hook

Darolyn Butler

Jackie Fenaroli

Eleanor Van Natta

Dorothy Marks

Bruce Nock, PhD

Ann Corso

Ove Lind

Theus Badenhorst

Frances Guthrie • Sabine Kells

Editorial Office

The Horse's Hoof • P.O. Box 40

Litchfield Park, AZ 85340-0040

(623) 935-1823 • Toll-Free: 1-877-594-3365

website: www.TheHorsesHoof.com

email: editor@TheHorsesHoof.com

Subscription Rates

The Horse's Hoof is published quarterly. Annual subscription (4 issues) is \$25 US/Canada, \$40 Foreign, and \$15 Online PDF. Please send payment in American currency by check or money order, or Visa, Mastercard, Discover and AMEX.

Editorial Policies

Submissions are encouraged, including photos, articles and stories about barefoot horses. If you would like to contribute, please contact us. Material that is published **does not reflect endorsement** by *The Horse's Hoof* or any of its staff.

The Horse's Hoof is a **generic barefoot resource** that supports all hoof care which creates functional, healthy hooves. We believe technology can be useful, and we believe in compromise. We advocate more natural living conditions for all horses. We encourage all styles, methods, and techniques of hoof care that promote healthier hooves. *The Horse's Hoof* is a division of **Wishing Welz Equine, LLC**.

We respect privacy. **We do not sell** or distribute any subscriber information. If you would like to contact a contributor or author, please send your contact info to *The Horse's Hoof*, and we will forward that on to the appropriate person.

From The Editors

Roads to Rome?

One of the greatest criticisms of the barefoot movement in recent years is that there is no consensus on how to trim. In a report for "The Horse.com" concerning **The Barefoot vs. Shod** table topic session at the 2008 American Association of Equine Practitioners convention, Steve O'Grady, DVM, writes, "The other interesting fact that came out was that the barefoot trim has never been defined. Many in the audience were asked, 'How do you perform this trim?' No one could give a reasonable answer. Furthermore, the various barefoot groups all appear to have a different type of trim."

This is quite interesting, and something of a double standard, since there is no general consensus among farriers as to how to properly trim or shoe a horse, and there are various farrier methods that differ greatly from each other. Our conclusion is that there will always be different ways and different methods—for shod horses, and for barefoot horses. It is human nature.

I often like to compare hoofcare methods to training methods. There are endless different methods of training and riding a horse, each with a different focus, but the REAL question remains, is there more than one road to Rome? One of my favorite authors, **Paul Belasik**, writes in his new book, *A Search for Collection*, "The longer I train horses, the more I believe there are not infinite methodologies that will produce a sound, collected dressage horse. In fact, because of the evolution of the horse's body—which has been more or less at a steady state throughout the history of riding—and because the relationship between the rider's body and the horse's body presents certain biomechanical requirements or challenges, *very few will work*." Interesting thoughts, especially in light of how they could be transposed upon the trimming of the hoof.

It is our goal with this magazine to bring all the various hoofcare ideas together, and force us all to reflect upon what we do, and why we do it. It is important to share good ideas and constructive criticism, and to understand why others do things the way they do, even when it is vastly different from your own way. Is there more than one road to Rome—the barefoot Rome? Time will tell.

On the Homefront...

We are working hard on **Hoof Help Online**, and hope to have it launched (www.HoofHelpOnline.com) by the time this printed issue is in the mail. It is an overwhelming project, but mostly we are waiting for James to finish up all the techie-stuff that needs to be done! Hoof Help Online will be a site that builds upon itself every single month, so the site organization is crucial, and lots of time and energy have been spent on its structure. The initial material will be introductory—but with so many new ideas, it will apply to both beginners and advanced trimmers. We promise, this is NOT the same old barefoot info!

Here are some recent photos of our horses below. One notable change is that I recently began using the **Equine Challenge Supplements** (now in the THH Store), which are formulated by Dr. Mackie Hartwig, a chiropractor and nutrition expert who is also an avid barefoot advocate. I have been very happy with the results, and the supplement is economical, too. My horses' coats look glorious.

All photos ©The Horse's Hoof



Above: 10 yo **Kendra** is just big, blonde and gorgeous! Right: Kendra modeling her new **Simple Boots**, courtesy of Cavallo Horse and Rider, Inc.



Below: 6 yo **Belle** (Gezebella) is an extremely gifted athlete, but she has been quite a challenge for me because of her very interesting personality. For those familiar with the **Parrelli Horsenality Chart**, she is a classic Right Brain Introvert (RBI). Which means she can look like she is 100% calm and quiet, but then the next minute, she is leaping wildly into the air! I have to read her *very carefully* whenever I take her away from home. She is a total sweetheart, and at home, she's quiet and obedient, and is making wonderful progress.



Left: She is also doing very well in her jumping sessions with James, several times a week.

We hope you have a fabulous summer—enjoy your horses!
—Yvonne Welz



Karen riding Vivaldi in his prime.

(cont. from cover)

and embarrassed). So we went the 4.5 hours from NY to Pennsylvania to visit Dr. Shoemaker and her blacksmith, Mark Agostinelli. It was there that I received my first true education in what a horse's hoof was really supposed to look like, and how it was designed to function. I cried when I saw that in one trim, they were able to restore close to perfect angles, on a horse that every other farrier said couldn't be helped.

They still recommended shoes at this point, set way back, and with frog support, as a lesser of



Karen trimming Vivaldi. She writes, "At 25 years old and with no cartilage in his fetlocks (one is completely frozen), it is pretty uncomfortable for him to stand on only one front leg. I get creative, and find a way to trim him so that he doesn't have to lift his foot. I have him stand on the edge of a landscape timber, hanging different parts of his hoof off the edge, so I can get the file underneath (unfortunately, I was a little late recently and he got a crack)."

All photos courtesy Karen Rohlf

the evils, and as a transition to a healthier foot. We reshod him every two weeks, and very soon my "crippled" horse was sound. Over time, the hoof grew more balanced. I was able to ride him for a few more years, and today, he is barefoot, 25 years old and happy. I had been told at one point that he was not retire-able; that he would need to be put down. There is more to that story, but let me jump ahead for a moment.

My Lipizzan, Monty, came to me barefoot, and I was lucky that he had such good feet that even though I still didn't have a good barefoot trimmer in NY, he managed to be fine. But one summer, I brought him to Colorado, where the footing was harsher, and so I was advised to put shoes on him... and I did. He was fine, but when we came back to Florida (where I now was living), I took them off. Then I noticed his angles got very strange. His front feet started growing more upright, the hinds longer, and the perfect little feet were now becoming warped. I wondered if just wearing shoes for a few months could change the dynamic of the foot that much.

Again, I was being told by the farrier that he was doing the best he could. Well, now I knew not to be satisfied with that, and I finally became convinced that there is a BIG difference between trimming a hoof with no shoe, and doing a barefoot trim that improved and preserved the health of the hoof. I began my search for more information, and started to educate myself even further—learning the basics of the barefoot trim principles, and starting to pick up a rasp myself (too chicken to try the nippers or knife at this point!) Then I met Gordon Adair. (<http://www.adairmag.com/gordonadair/>) Gordon is not only good at doing a natural trim, but he is also good at teaching it. So with his guidance, I became more confident with the rasp, knife and nippers. He taught me how to look at the shape of the hoof in order to assess the ground dynamics, and how to use feel. Luckily, I have an artistic eye, and have a fairly easy time seeing lines of movement and shape, and I treated the hoof like a living sculpture.

At first, I would simply rasp and try to maintain the shape he created, still having him come every 4-6 weeks to check on me; he usually found I had still let the walls get too long. Then I got brave and would "do" their feet the day before he was scheduled to come. Soon he was giving me good report cards, and I would have him come less frequently, every 3 months or so, or if a foot started looking odd.

It is so empowering, and just makes so much sense to learn how to maintain feet on a daily basis, instead of letting them go 4-6 weeks, then trying to clean up the mess. The day Monty's toe cracks disappeared was one of my proudest moments! I had a horse come in for



Karen suggests that it makes so much more sense to maintain your horse's hooves on a daily basis, rather than cleaning up the mess after 4-6 weeks.

training, and he would balk and buck at the canter, and refuse to jump even the smallest log. I convinced the owner not to put shoes on, as her farrier suggested, and he came and just trimmed him. I still didn't like how they looked, and so got brave enough to re-do them myself; helping the break-over and the general balance of the hoof. Just using the rasp, I made the horse so much more comfortable that his bucking was "cured" and he happily started to jump. Now that I can see the difference, I find it near impossible to watch or consider riding a horse with unhealthy feet. All my horses are barefoot now, and I maintain them myself. They are a range of breeds: Lipizzan, National Show Horse, Holsteiner, Hanoverian.

Now to go back a bit and fill in the rest of the story between Vivaldi and now: soon after Dr. Shoemaker helped Vivaldi, I immersed in Parelli, and re-evaluated my entire connection with horses. It is difficult to break the cycle of doing what everyone else around you is doing. The system, when you are in it, makes sense. Horses DO go lame if the footing isn't perfect. Horses DO go lame if you take their shoes off. Horses DO run away or get unsafe if you don't control them all the time. They DO run around and hurt themselves when you turn them out. This is true in the context of horses that are shod, kept in stalls, and taken out only to work. It is difficult to make only one change in your strategy. I am glad that all this information came to me at a time when I was able to change everything, and was freer to experiment. My horses proved to me what worked. Barefoot, turned out 24/7, and trained with more consideration for their state of mind, I observed my horses becoming healthier mentally, emotionally and physically.

There is one principle that I never will change, though. It is the principle that biomechanics and riding dynamics are equally important, and as much as the hoof can change the way of the horse from the ground up, the biomechanics of movement can either help or hurt this. The fundamentals of dressage teach healthy biome-



All photos courtesy Karen Rohlf

Comfy, natural feet for everyone at Karen's Tenemos Fields in Ocala, Florida!

chanics. When a horse is moving with balance, calmness and a supple spine, there is less concussion on the joints and the feet. A tense back, lack of engagement and brace all decrease the ability of the body to absorb the pressure of hitting the ground. It puts all the strain in the leg joints, and puts more weight on the forelegs and feet. You don't have to be a dressage specialist to see a benefit. I have students who have done endurance, reining, jumping, even cutting see improvements in their horses through understanding how to create harmony and balance in the body through the basics of dressage.

I think we must balance the teeth (and TMJ) and the feet, then ride in a way that frees the horse's top-line and helps them recover from the lack of balance we cause them by sitting on them. Breeders also have a responsibility to create horses with genetically strong feet. Unfortunately, many modern domestic horses are limited by what they were born with and get

caught in a vicious cycle of damage and "holding things together" with shoes, in order to keep them on the show circuit.

Of course, the most important thing is education and awareness, but we have to be very careful. When I brought Vivaldi home from Pennsylvania, even though he was now sound (and moving better than he ever had), my original farrier was furious with me, and he told everyone at the stables how I was crazy and hurting my horse. I did not confront or try to convert him, but I did enjoy trotting Vivaldi past him every chance I got!

I experienced the same thing when I started doing natural horsemanship. It angered and confused the dressage people. But I could relate... I used to think that the only people who did "natural" stuff (natural horsemanship, barefoot trimming, alternative medicine) were people who didn't really compete or do "seri-

ous" training. I thought it was only for backyard people and hardy little Quarter Horses.

Through publications such as this one, people can begin to understand the science and logic of it, and can see that this "alternative" is really the only way a horse was born to be. Most shoeing is, at worst, the poor alternative and at best, an attempt to manage a situation that has already (either through genetics or management), failed the horse. But the change will come through living proof, and from everyone being of the attitude that it is less about being right or wrong, and more about being observant of what the horse really needs, with an openness to all the resources available. ●

About the author: Karen Rohlf trained for over 20 years in dressage with Anne Gribbons ('O' dressage judge, International Grand Prix trainer and competitor) and studied Parelli Natural Horsemanship directly with Pat and Linda Parelli. Karen has trained horses and students to the upper levels of dressage, represented the United States 4 times on the Young Riders team, passed her USDF 'L' judge test with distinction and was accepted into the USEF 'r' judge program. She now divides her time between traveling the world giving clinics, and training at home at her Temos Fields in Ocala, Florida.

Karen has an instructional book/DVD set, as well as other instructional DVDs. Please visit her website at: www.dressagenaturally.net for more information, to purchase products and to sign up for her monthly e-newsletter.

Barefoot Parade Horses!

Cowboy Culture Celebration Parade in Dublin, Texas??? Being an English rider, my first thought was no—but then I remembered that I have a grey horse, and my neighbor has a Paint. From there, the Lone Ranger and Tonto idea came to life.

"Silver" is actually a 22 year old Arabian gelding named Cricket Orzell (Oz). Oz is ridden and owned by Candace Clark, aka "Lone Ranger." In his previous life, he was a successful dressage horse. At about age 20, I retired him from dressage and pulled his shoes. I quickly discovered that he actually moved much better without them (the things I wished that I had learned years ago!). I discovered that Oz loved trail riding and required very little time adapting to barefoot status. Two years later, he is happily fox hunting barefooted, as well. Parades are our latest barefoot escapade.

"Scout" is actually a 26 year old Paint/Draft cross named Tiny. Tiny is ridden by and owned by my neighbor Jenni Day, aka "Tonto." Jenni rescued Tiny on a Thanksgiving Day, several years ago, from an older couple who could no longer care for him. In his previous life, he did it all, from barrels to pulling a cart. He



Photos courtesy Dublin Citizen



Lone Ranger and Tonto! Grey Arabian, Oz, and Paint/Draft cross, Tiny, were barefoot in the Cowboy Culture Celebration parade on April 25, 2009 in Dublin, Texas.

"Lone Ranger & Silver"-Candace Clark & Oz and "Tonto & Scout"-Jenni Day & Tiny won Best in Parade!

has now been barefoot for almost two years, and as the town of Dublin can testify, he walks across pavement or gravel with ease. Jenni describes Tiny as irreplaceable, unshakable and a one in a million. She and Tiny enjoy parades,

trail rides and just hanging out, all barefoot, of course.

We rode in the parade on April 25, 2009, and both horses handled the gravel and pavement parade route with no issues. Because they were both barefoot, we had no slipping and sliding issues, even when we briefly trotted. We also won "Best in Parade" for our Lone Ranger & Tonto theme. When asked by the parade organizer if we would return next year, I had to say, "A fiery horse with no iron shoes, just hard barefeet, and a hearty Hi-Yo Silver!" Stay tuned... —Candace Clark

Osteoporotic Coffin Bones

Osteoporotic Coffin bones: An unrecognized reason for needlessly burying our horses??!

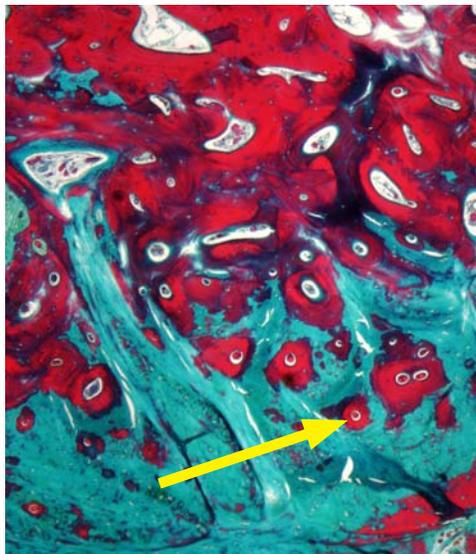
by Dr. Robert M Bowker and
Tara Calvert-Jackson

The demands placed upon the equine foot are greatest during loading of the limb and during certain disease states, such as laminitis, and over the years there has been extensive research effort towards understanding the biology of the foot during these movements and conditions.

From “Equine Foot Biology 101,” our general understanding is that the hoof wall is the main support structure of the horse, and also provides protection for the more internal tissues, i.e. the coffin bone and palmar foot. Such a support mechanism occurs via the extensive inner lining of the hoof wall: the vertically-oriented sheets called epidermal laminae [lamina (singular) and laminae (plural) is Latin for “sheets”]. These laminae, consisting of approximately 600 vertical sheets, extend around the wall into the heels and bars along the solar surface and project towards the coffin bone. This anatomical arrangement of the inner hoof wall has long been known from the microscopic examination of the inner hoof wall in the previous, and most likely, earlier centuries.

Such an anatomical arrangement provides a large surface area, seemingly to provide a primary function of support of the horse. This interpretation of the laminar function seems to have merit when the foot is **peripherally-loaded**, either with a shoe, or when the hoof wall extends a significant distance beyond the sole surface and the horse is standing or moving on a firm surface. Under these conditions, common sense tells us (and from imprints of a standing horse) that much or most all of the horse’s weight must be supported through the hoof wall when it contacts the ground surface (for example, 75-100%).

However, in the real world of many pastured domestic and of most feral horses, the hoof wall does not appear to significantly support the weight of the horse, but only a relatively small amount (i.e., 5-15% to 20%) due in part to the **dirt plug** present under their foot, or to the **conformable surface** (small rocks, lava rock, etc.) that they may be walking or standing on. Under these conditions, the majority of the weight is distributed over the sole via the earthen plug, with a much smaller percentage (for example, 5-15%) being placed upon the hoof wall. In these two extreme examples, the tissues of the foot will adapt to these loading paradigms, and their responses of each tissue will be different, as



Palmar Processes of coffin bone next to sole (bottom): Arrow points out isolated bone (Haversian system) becoming osteoporotic with invading connective tissue (green).

certain tissues will adapt and become THE primary support tissues, while other tissues will have a more secondary or perhaps even more tertiary support function.

Furthermore, the direction of the physical forces being applied to these tissues towards the foot tissues will be different in each instance: (1) with the peripherally-loaded foot, the forces will be more **tangential** to the inner foot tissues of the corium and particularly the coffin bone, while (2) in the second scenario (dirt plug/conformable surface), the physical forces of a solarly loaded foot will be more **perpendicular** to the corium and coffin bone, while a smaller tangential force (forces being applied to along the bone surface) will be applied to the dorsal cortical bone surface, serving as a secondary support tissue. How, and to what extent, these tissues respond will differ, and will depend upon the direction (and quantity) of the loading forces (vectors) being applied [i.e., forces being perpendicular to tissue (compression) or at an angle to the same tissue (strain and torsion) of the loads].

In terms of biomechanical stress, which is defined as load (weight) per unit area (load/area), the tissues of the internal foot “sees” or experiences less of a load when the same load is spread over a larger area (i.e. **sneaker mode**), in contrast to a peripherally-loaded foot with a smaller surface area (i.e. **high heel mode**). In order to conceptualize the importance of load and surface contact area during weight-bearing in determining the biomechanical stresses within the foot, an illustration may help: for example, when you have a 1000 pound horse with approximately 60% of the load being on the forelimbs,

it means that about 300 pounds are distributed to each forelimb (i.e. half of the 600 pounds). If the bottom of the horse’s foot is approximately 1 square foot for easy math calculations, such a contact area would result in the biomechanical stresses on the foot and the internal tissues being about **300 pounds per one sq ft**.

On the other hand, if, in the same horse, the area of ground contact with the foot became smaller, such as, for example, $\frac{1}{2}$ sq ft, when a shoe is applied to the foot, or the owner cleaned out the foot of a barefooted horse and walked the horse on a cement walkway, the effective biomechanical stresses on the foot and tissues would begin to increase, as now this load is 300 lbs per $\frac{1}{2}$ sq ft or equivalent to about **600 lbs per one sq ft**. Thus one can see that by just reducing the contact area, the stresses in the foot can increase.

Also, the direction of how the vector forces are applied to the foot (i.e. perpendicular vs. tangential) differs in these two examples, which, in turn, will effect how the hoof wall and bone tissues respond. Thus, one can see that this relative percentage of solar versus hoof wall can vary from foot fall to foot fall, depending upon whether the dirt plug falls out, or remains intact within the solar surface of the foot, and what their next step is, and what surface will they be stepping on, etc.! This relationship between area of support and the internal stresses within the foot is important, considering that horses spend much or most of their time standing around or walking, rather than running up and down hills and valleys!

These stresses are similar to wearing “sneakers” and “high heels,” and we are confident that most people will appreciate that the “sneaker-condition” is more comfortable than wearing high heels. With greater stress, internally the tissues will begin to be affected over time. In THH Issue 34, we wrote about the horse being “**comfortable**” (Fingers, Frogs and Toes: Common Features). Well, these biomechanical forces during loading are directly related to the stresses on internal tissues and to the “degrees of comfort”; generally with greater loading areas, the foot tissues have decreased stresses, but have greater comfort!

Now several questions come to mind regarding the above discussion, and the effects upon the coffin bone: 1) How is the coffin bone affected by these differences in biomechanical loading of the foot? 2) Do we have any evidence for such an idea of loading differences and effects upon the coffin bones? 3) Why do we think that it has importance in the horse?

We believe that by preferentially **loading the solar surface**, rather than loading the foot more peripherally via the hoof, **more and more bone**

All photos courtesy Dr. Robert Bowker

will be deposited within the coffin bone (or, more conservatively, will not be lost). This will result in greater bone density, which is better able to support the weight of the horse, and hence better to insure the long term health of the foot—rather than the opposite, of a gradual bone loss and eventually having to euthanize the horse, due to chronic foot problems. While this is just basic bone physiology—the so-called Wolfe’s law in action, we have some very preliminary evidence supporting this idea, (i.e. we choose to call the data preliminary, as we have only examined more than 300 coffin bones obtained from necropsy, and another group of horses involving all four coffin bones from more than 50 horses of known ages and breeds, and are slowly putting the data together.)

A brief summary is as follows: we have found that: 1) different bone densities exist in the coffin bones of horses; 2) a range of bone weights and densities of the coffin bones exist, with the forefeet having a wide range, as compared to a more narrow range of hind foot bones (*Question: maybe this difference is related to more problems with the front feet?*); and 3) the structural variations in coffin bone morphologies (weights and densities) may be related to the overall health of the foot (hoof, coffin bone and conformation) and of the horse. We are pretty confident of this idea, as age and breed and weight of horse do not appear to be factors in varying of bone densities (see example below!)

We believe that with time and proper foot support, more bone may be deposited within the coffin bone. Finally, a dense and structurally robust coffin bone is important in the overall health of the horse, as we do believe that **significant bone loss does exist**, and is not recognized in many of the foot problems in clinical practice! (NOTE: we realize that this is a bold statement, but we are coming to the conclusion that most horses examined at necropsy have varying degrees of **osteoporosis in the coffin bone**. In those horses with obvious foot problems, such as navicular syndrome, the coffin bones are severely osteoporotic (AAEP Proceedings, 2003). Furthermore, few “good-footed” horses are presented at necropsy.)

Osteoporosis, a multifactorial disease in humans, is characterized by a reduction in bone mass and in the structural architecture of the bone. In the U.S., the disease is present in more than half of the people over 50 years of age, with a smaller percentage being affected clinically (i.e. microfractures and pain to obvious hip and limb fractures). (Regarding horses, please reference “Bone Remodeling of the Equine Distal Limb” by Mark Fischer M.D. and Sheri Fischer R.N., B.S.N., in THH Issue 26.)

Bone undergoes constant remodeling of trabeculae and bone cortices throughout the life of the organism, due to both “proper” and “improper” loading, along with hormonal influences

(Wolfe’s Law). With “proper” loading our bones remain straight, robust and healthy. In the horse, the coffin bone also continues to remodel, and we believe should be balanced to produce a symmetrical foot and internal coffin bone with good structural support. Although most trimmers and farriers would agree with this statement, one can appreciate that the asymmetric foot (steep and flared sides) is far too common when examining feet, suggesting that **a balanced foot may be an uncommon occurrence?**

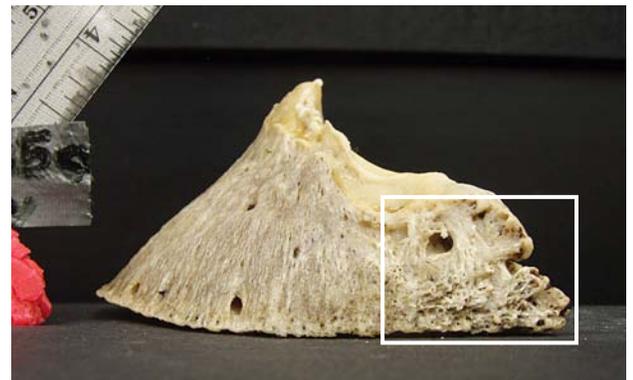
When the loading becomes asymmetrical (or uneven balance), then both the hoof wall and the bone begin to adapt and respond, by depositing more horn and bone on one side of the foot, and actually removing horn and bone from other side of foot. Such an imbalanced loading and unloading of the bone will eventually become “clinically significant,” as the cortical and trabecular bone become less dense on one side of the foot, until it can no longer support the load of the horse, especially during exercise or workouts.

Historically in women, it was believed that when the bone was weakened by significant bone loss, injury occurred when the woman fell, causing the fractured hip joint. However, more recent evidence suggests that microfractures or microscopic fractures through the cortices and the trabeculae are present first and actually contribute to the injury, as the bone is no longer able to support the person’s weight, and hence the woman falls, creating even more fractures that can now be seen using radiographs. We hypothesize that a similar process (i.e. **microfractures**) is occurring in the forefeet and coffin bones of domestic horses, and is at present unrecognized, unless one is aware of the more intricate details of the coffin bone structure. We are presently trying to develop a field procedure for detecting this condition in live horses.

In the two lateral views of these apparently “normal” coffin bones (photos above), they are considered to be reasonably good coffin bones, as they have greater density and fewer changes than the majority of bones. For the purposes of illustration, we are showing that this 4 yr old coffin bone is less dense than the 31 yr old coffin bone, and would likely have clinical problems later in life. We have found at least five different “descriptive markers” on the bones that we use as “indicators” of how much bone loss there may be in these feet: the more markers that are present, the greater degree of bone loss we are finding. We are initially examining feet of horses of known ages, breeds, etc., by radiographing them,



4 yr old coffin bone: moderately-sized pores on Palmar Processes (PP) and extends along bone in front of attachment of collateral ligament of coffin joint, > 1.5 cm length of PP, thin cortical PP bone, begin ossify of lateral cartilages.



31 yr old coffin bone: less porosity of PP, not extended towards front of coffin bone, begin ossify of lateral cartilages.

describing and measuring external hoof features and then harvesting the bones and examining them histologically, and trying to correlate the hoof observations with the radiographic information and the coffin bone morphological descriptors, as well as with the history of the horse, if possible. Obviously, a very long and tedious process, but we are proceeding forward with this goal.

Today, we will briefly present one of these markers—the **changes in the palmar processes (PP)**—and show you why we believe that osteoporosis is a common but unrecognized occurrence in the general horse population, and that the structural support of the coffin bone is critically important to a healthy foot. As we have mentioned before, the elongation of the palmar processes is analogous to putting “outriggers” on a small boat, as one attempts to stabilize any uneven loading that may exist. In the horse’s foot, we think that the coffin bone is also attempting “to balance and stabilize itself.” All changes in the PP that we have found to date indicate greater problems with the foot and greater degrees of osteoporosis of the coffin bone: **increased porosity** (greater number and size) of the PP (normally very small micropores are present); **increased length** beyond 1.5-2.0 cm upwards to more than 3.0 cm from the coffin

(cont. on page 9)

Hoof Rehabilitation Protocol

Debra R. Taylor DVM, MS, DACVIM
Ivy Ramey AHA Member
Pete Ramey AHA Certified Farrier

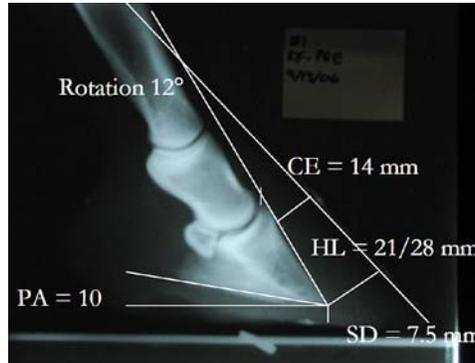
Introduction: We are fundamentally against attempting to “sell” or Trademark a particular method of equine hoof treatment. Any successful hoof care and rehabilitation program must allow the practitioner significant latitude for adapting to the individual needs of the horse and to the situation presented. The sole purpose of drafting this Hoof Rehabilitation Protocol is to identify and describe the materials and methods we use to treat the hoof problems presented for our rehabilitation and study.

Summary: This hoof rehabilitation system is based on the guiding principle that many equine foot diseases that result in lameness can be resolved simply by doing everything possible to increase overall hoof health. The combination of routine corrective trimming, veterinary care, environmental stimulation, therapeutic protective devices and detailed dietary management are used collectively to improve the foot health of horses with **acute or chronic laminitis, hoof wall infections, wall cracks and caudal foot pain.**

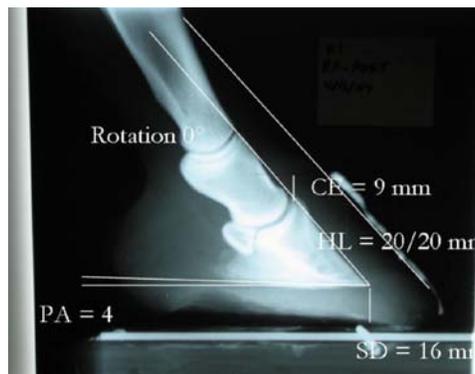
Laminitis, lamellar separation and coffin bone rotation: The primary mechanical force working to separate the laminae is considered to be the weight of the horse combined with peripheral loading (forcing the hoof wall, rather than the sole, to bear most of the weight). Peripheral loading has the effect of suspending the weight and impact force from already weakened laminae. Additionally our therapy of laminitic horses is based on the concept that tension of the deep digital flexor tendon cannot result in stress to the laminae if the toe wall is not allowed to bear weight at impact, stance or during breakover. While tension of the deep digital flexor does exert a rotational force on P3, this force cannot **oppose the laminae** if the hoof wall is passive to the sole.

When acute laminitis or lamellar separation is present, our protocol calls for reducing or eliminating weight-bearing by the hoof walls (with the exception of the heel buttress) during the first 3-5 months of treatment (duration determined based on connection of new growth, sole thickness and comfort). **This immediately stabilizes the dermal/epidermal laminae by removing mechanical separational forces, prevents additional rotation or sinking, allows new growth of well connected hoof walls, and can reverse distal descent of P3.**

We believe that the sole resides in the optimum position to support P3, but successful support of P3 through the sole requires that the sole be unloaded during hoof flight. This is critical to



Case 1: Right front – pre-treatment, Sept. 2006.



Case 1: Right front – post-treatment, April 2007. Rotation went from 12 degrees down to 0. For more information on these cases, please visit: hoofrehab.com/AuburnUvetschool.htm

prevent blood flow restriction and thus prevent solar corium injury.

When the sole thickness is < 12mm and/or when weight-bearing by the hoof wall is eliminated, excess pressure on the solar corium can result. Our system addresses this excess pressure with one or more of the following methods of solar protection:

- Applying hoof boots with foam rubber pads and/or dental impression material.
- Applying hoof casts to cover pads and/or dental impression material that are applied to fill the solar concavity and collateral sulci.
- Glue-on hoof boots with dental impression material filling the solar concavity and collateral sulci.
- Barefoot on yielding terrain including soft ground free of rocks, loose beds of 4” deep pea gravel (1/4 inch diameter stones) and/or 2” deep sand.
- If a solar perforation or defect occurs or if the sole under the tip of the distal phalanx is thin (i.e., < 5mm), an air space is established under this region of sole by cutting material away from the hoof pad or impression material. Barefoot turnout is eliminated until adequate sole is grown.

All photos courtesy Pete Ramey

Our primary requirements for laminitic hoof protection are: Little or no weight bearing by the hoof wall or laminae, and no rigid attachment to the hoof wall. With each method used the sole is protected, but pressure to the solar corium is released during hoof flight.

The following dietary restrictions are recommended for each laminitic case:

- Elimination of fruits, vegetables and other sweet or starchy treats
- Elimination of grains and/or processed feeds (excluding concentrated vitamin/mineral supplements)
- Partial elimination or complete restriction from pasture grazing (varies according body condition of the horse and size or health of available pasture)
- Constant access to grass hay tested to 10% NSC or less (in some cases reduced to smaller, multiple meals as needed)
- Mineral supplementation provided to balance nutritional content of hay/grass to meet NRC recommendations.

Heel height: Established subjectively using the following guiding principles:

- 10mm maximum change [relative to the toe] to heel height at one session
- Heels trimmed at (or beveled to) a 5-10 degree positive slope from a plane parallel to the solar plane of P3
- Healthy (12+mm) callused sole thickness always preserved
- Height and shape of the heels sculpted to prioritize caudal foot comfort and heel first impact
- Approximate, eventual target of positive 5-10 degree P3 solar angle to the ground plane (exceptions readily allowed for various conformation issues)

Turnout and daily in-hand exercise are encouraged when laminitic horses have been trimmed, stabilized and have a heel first landing in boots. Riding in padded hoof boots is encouraged when **all** of the following are achieved:

- When the horse walks or trots comfortably in padded boots
- When the proximal half (new growth) of the hoof wall becomes well connected as indicated by physical and radiographic appearance of the hoof.
- When the sole thickness exceeds 8mm (as indicated by radiograph)
- If the booted horse moves comfortably and all feet impact heel first with the added weight of the rider.

Wall cracks and ‘shelly’ or weak hoof walls:

We consider these problems to typically be the result of subclinical laminitis, dietary imbalance/excess/deficiency and/or inadequate hoof care. In short horses with these problems are treated identically to horses with acute or chronic laminitis cases as stated above. Additional treatment for fungal or bacterial infection of the hoof wall and epidermal laminae may be required.

Caudal Foot Pain: The relatively easy lifestyle horses enjoy in domestication typically does not foster complete development of the lateral cartilages, digital cushion, sole or frog corium. This in turn can cause both chronic heel pain and also a less severe ‘sensitivity’ that leads to toe first landing common in domestic horses. It is often the compensative toe-first landing that leads to lesions of the navicular bone, deep digital flexor tendon, coffin bone, and ligaments attached to the navicular bone [Robert M. Bowker VMD, PhD].

Under our Hoof Rehabilitation Protocol caudal foot pain (with or without radiographic evidence of disease) is treated as internal weakness or developmental deficiency of the caudal foot. Our working theory is that additional damage can be prevented by allowing/encouraging a heel-first impact. This is initially achieved by:

- Prioritizing the treatment of any painful frog sulcus infections
- Preserving natural frog thickness and callus
- Trimming the heels as stated above with an eventual target of positive 5-10 degree P3 solar angle to the ground plane (exceptions readily allowed for various conformation issues)
- Keeping breakover in a position [relative to the dorsal aspect of P3] that would exist with perfect wall connection and sole thickness.
- Providing hoof protection that decreases foot pain to promote a heel first landing and

meets the requirements stated above.

Once comfort and heel first impact are established, the internal development of the foot is encouraged by:

- Keeping the horse barefoot (for turnout) and the feet routinely (every 3-6 weeks) trimmed/balanced.
- During exercise/riding, hoof boots with pads are used for protection. Our working hypothesis is that the vertical flexion of the boot promotes lateral cartilage flexion/development, and the foam rubber pads stimulate development of the solar corium, frog corium and digital cushion. Barefoot riding is allowed only when comfort and heel first impact is achieved on the given terrain, but is then encouraged, as it tends to accelerate foot development.
- Pea gravel loafing areas are provided in stalls, around gates, shade or watering areas the horse frequents. This stimulates and calluses the bottom of the foot while providing vertical support to P3 through the sole.
- Turnout with pasture mates as much as possible to maximize movement, and thus maximize the stimulation of internal foot development.

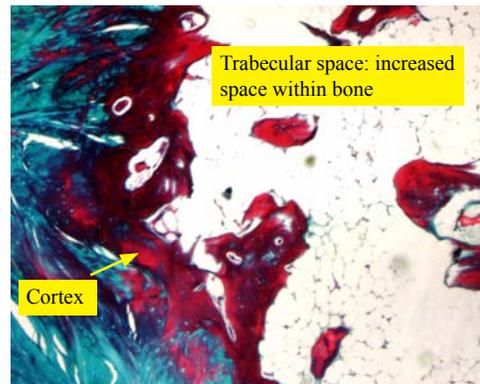
The realistic goal is not to reverse the navicular pathology presented, but stop its progression and to complete the development of the caudal portion of the foot. This typically results in a wider, stronger ‘more able’ foot and a comfortable horse. The distinguishing advantage to this system for horses with caudal foot pain and ‘navicular syndrome’ is that soundness and usability typically increase over time and the need for protective or corrective devices decreases. 🐾

For more information on the Hoof Rehabilitation Protocol and the Auburn University Case Work on Laminitis horses, please visit:
<http://hoofrehab.com/AuburnUvetschool.htm>

John Trend of Newfoundland, Canada, drives his **barefoot Fjord horses** everywhere in their Marquis Hoof Boots. John writes: “Four years ago, my Fjord mare, Tessica, developed a split in her right fore hoof, running from the coronary band right to the hoof edge. Although she wasn’t in pain, it was obviously a situation that needed correcting. In spite of a lot of hard work by the farrier, the split wouldn’t heal, and I eventually decided to remove her shoes and go with a barefoot trim. Much of my driving is done on the road, and I felt some protection was necessary.” Marquis boots have been the perfect solution. Look for John’s full story in a future THH!



Photos courtesy John Trend



Under the microscope, the PP has more osteoporotic bone with a thin cortex and increased trabecular spacing of the PP bone.

(cont. from page 7)

joint collateral ligament (normally want a short <1.0-1.5 cm length of PP); contributions to the **ossified lateral cartilage**; **microscopic cortical bone thinning**; and **increased trabecular spacing**, to name a few. These changes merely are indicative of progressive bone loss in the coffin bone in horses.

In these two photographs, one (4 yr old LF) has a greater porosity in the bone (more micropores, with some being up to a mm wide) and has less bone density than coffin bone of the 31 yr old horse. When similar bones having these changes in the PP are examined under the microscope, the PP has more osteoporotic bone with a thin cortex and increased trabecular spacing of the PP bone, as well as in other areas of the coffin bone (photograph). Clinical relevancy of active and potentially pathological remodeling may be occurring when positive hoof tester responses are present over heels. These increased porosity bone changes are evident in routine radiographs, indicating that such remodeling changes are extremely common in the domestic horse in the US. Future study should help shed some light on these questions regarding the coffin bones of horses!

These changes we are beginning to see in the coffin bones merely show that we have much to learn about the horse’s foot, even though we have made great strides during the past few decades. That is why I often use the lines of Robert Frost, the New England poet, from the poem “Stopping By Woods On a Snowy Evening” to indicate some of our goals: *And miles to go before I sleep, And miles to go before I sleep.* There’s lots to do!!! 🐾

About the authors: Dr. Robert Bowker has spent the past few years studying the functioning of the equine foot in health and disease at Michigan State University, and is now working on his rehab center—Corona Vista Equine Center in Michigan (www.coronavistaequine-center.com). Ms. Tara Calvert-Jackson is pursuing studies this fall at MSU, and will actively be studying and researching the foot.

The Live Frog

by Cheryl Henderson

A hoof care provider will attempt to solve heel pain with a balanced trim to the hoof. However, sometimes a balanced trim will not result in a pain-free foot, because damage caused by disease in the live frog cannot always be repaired by trimming alone. When disease affects the health of the sensitive frog, it also compromises the ability of the back of the hoof to function without pain. Thus, hoof care providers must include in their trimming protocols, a strategy for determining the health of the live frog, and for creating conditions that encourage healthy growth in this important area of the hoof.

The hypothesis of this article is that disease in the live frog changes the support of the digital cushion and strength in the back of the hoof. The article also attempts to establish that there may be one common debilitating cause of pain in the hooves of horses exhibiting the signs of “navicular syndrome.” It is possible that movement difficulties, toe-first landings, short strides, and common hoof contraction are all caused by disease in the live frog. The goal of this article, then, is to inspire hoof care professionals to consider disease on the inside of the hoof when treating lameness.

The Live Frog and Digital Cushion

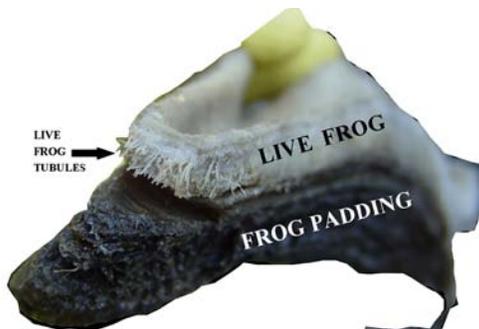
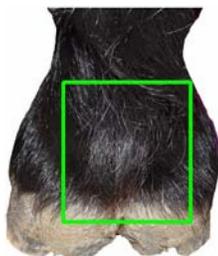


Photo 1: The live frog.

What is this live frog? What makes it different than the visible frog? And where is it in perspective to the sole? First, let's distinguish the live frog from the callused padding clearly visible on the bottom of the foot (Photo 1), separating the upper growing structure of live frog, made of intertubular and soft keratinized tubule horn with a thickness of 3/8 to 1/2 inch. This structure provides a unique base covering, supporting and protecting the digital cushion and the structures above it in the hoof and limb. Providing heel comfort, energy distribution, and support for the back of the foot, a healthy live frog has enough firm elastic strength within its growing tubules to endure the



All photos courtesy Cheryl Henderson

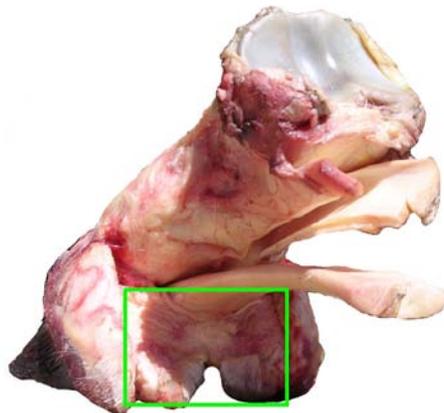


Photo 2: Dissection with the internal hoof intact, without the capsule.

loading and unloading of the hoof, and to support the pastern as it pushes down into the protection of the digital cushion. When the health of the live frog is compromised by disease, it sags under the weight of the horse, causing pain, and frequently lameness, in the back of the hoof.

Before further expanding a description of the live frog, some discussion of its relationship to the digital cushion is necessary. Triangular in shape and located between the lateral cartilages, the digital cushion functions as an expansion joint and the hoof's shock absorber. This dense cushion, made of fibro cartilage and micro vessels, acts as a thick gel pad, cradling the upper structures from strain and concussive damage. Its presence affects all structures that make up the so-called “hoof mechanism”: the deep digital flexor tendon (DDFT), the pastern bones, and the parts of the hoof in the navicular area within the capsule. (Photo 2)

The lining over the back of the digital cushion is a tough unique periople skin, while hide covers the top. (Photo 3)

The underside of the digital cushion's triangular shape consists of a thin skin-like covering of papillae corium called the “sensitive frog.” These hair-like projections are the roots of the soft, keratinized frog horn. (Photo 4) Healthy frog padding to the outside of this structure protects it and prevents damage to the thin “sensitive frog” corium. Bruising is frequently seen in this area when the frog's external padding is unhealthy or pared too thin during trimming, exposing this vascular

Locating the Digital Cushion

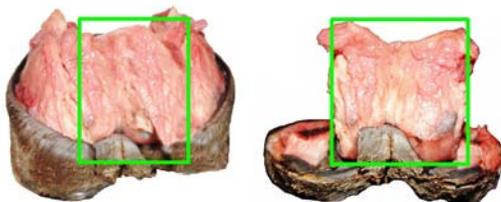


Photo 3: The digital cushion is highlighted in green.



Photo 4: The belly of the digital cushion lined by the sensitive frog's papillae corium. Note the natural deep cleft of the sulcus.

region to damage. The strong, healthy, and undamaged frog tubules begin to fold into consistent and natural layers. The unhealthy frog produces an outer padding of easily stained, disorganized clumps, which provide only weak protection to the lower area of the limb.

Dissection to Reveal the Live Frog:



A solar view, showing the frog being lifted from the sole.



The frog in the whole.



The inside top area of the newly developing live frog leaving the sensitive frog.

Testing the Strength of the Live Frog

A pressure squeeze test is one way to judge the health, resilience, elasticity, and support of the live frog beneath the digital cushion and above the frog padding. It will also reveal if there is damage to the live frog. The test, which can establish the resilience of the digital cushion and strength of the live frog, can be done by placing the fingers on the top of the digital cushion above the heel bulbs and behind the pastern while at the same time, placing the thumb under the frog at the heel and squeezing (Photo 5). The area between the thumb and fingers should feel firm, with some give to pressure. It should not feel mushy, like pushing into soft fat.

When a digital cushion squeeze test is performed on a crushed, low heeled hoof, the condition is often misdiagnosed as an atrophied, underdeveloped, and weak digital cushion caused by lack of proper stimulus. Many trimmers finding these results will avoid repositioning the heels to the natural baseline of the internal structures. Some will recommend shoeing and padding until strength returns. These are both erroneous, as they will not structurally improve quality of the digital cushion. The problem is with the live frog.

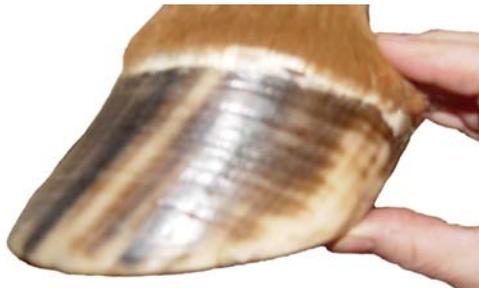


Photo 5: The digital cushion squeeze test.

A better approach is to understand that the loss of strength is not in the digital cushion, but in the unhealthy live frog. Commonly, a diseased frog doesn't readily reveal the extent of weakness beneath its visible outer padding. Occasionally, however, at the base of the collateral groove exit, diseased frog tubules will swell and turn gray, as rot and moisture weaken the once strongly growing tubules. Disease diminishes the live frog's strong, taut, sling-like support of the upper structures, which begin to sag between the lateral cartilages. Think of a new trampoline that gives little to the bounce, but catapults the bouncer high into the air. Then think of the over-used older trampoline which sags from the bouncer and provides little rebound off the mat. In essence, this is the same difference between what a healthy live frog provides in the back of the foot as opposed to a diseased live frog.

It is common for hoof care professionals and

All photos courtesy Cheryl Henderson



Photo 6 & 7: Sole views of hooves with a variety of disease.



veterinarians to turn a blind eye to disease within the capsule wall, sole, and frog (Photos 6 & 7), but observers may not understand what they are looking at, how damaging it is, or how to address it successfully. It is essential to change this paradigm, so practitioners begin to recognize that internal hoof structures need to be disease-free to provide the back half of the foot with shock absorption, protection to internal structures, balance, expansion, decontraction, and energy dissipation.

Findings from my own dissections of hundreds of hoof capsule shapes, ages, and pathologies over the past six years invalidate claims that poor conditioning from a lack of movement and contraction is the cause of weak digital cushions. In my study, weak heels were most likely to be accompanied by diseased frogs, creating pathology in the heel structures, including flat soles, underslung and crushed heels, and prolapsing of the frog, causing it to be unable to



Photo 8: A cadaver sagittal view, showing a diseased frog and live frog.

support the upper structures of the hoof.

The aftermath of a digital cushion unsupported by a healthy live frog, or of a digital cushion that has been crushed inward by a contracted capsule, is heel pain that manifests other problems to the hoof, leg, and body. But the condition appears to have been caused by disease in the frog, rather than by lack of movement—because the collateral groove and the central sulcus hold unhealthy mud and moisture, the frog tubules become weak and rotted, allowing disease to reach up into the sensitive frog to develop inflammation and infection. (Photo 8) Thrush with its black discoloration, sour smell and grease-like appearance, begins to devour the live frog's soft tissue, opening the foot to further infection. A pain response from pressure of the hoof pick in the collateral groove and the central sulcus is often a warning that this dangerous condition exists within the hoof.

Repairing a Diseased Frog

Fortunately, the process to repair and return strength to the superstructures of the live frog is quick and easy. Products made of chlorine dioxide provide antifungal, antiviral and antibacterial treatments that do not harm healthy, live tissue. Chlorine dioxides products, such as White Lightning, Oxine AH, and a treatment called Clean Trax, kill pathogens on contact. It may take from a few weeks to months to remove the disease and allow the new frog to grow in. The lateral cartilages and digital cushion begin to lift up, and the heels become more rounded at the back of the foot. The central sulcus now can develop the normal growth, leaving an open and wider cleft in the center back of the frog. The result is a healthier live frog supporting the digital cushion and structures in the limb above.

Beneficial evidence of treating the disease in the live frog was seen in every case in my further study of live horses with heel pain. Problems treating navicular syndrome that had been an issue for years, cleared up, and chronic toe walking ceased. Results of heel expansion, stronger heel bulbs, even weightbearing in the back of the foot, not to mention improved strides and body condition, were also observed.

Chlorine dioxide may prove not only to eliminate the problems from fungus or bacteria in the foot, but also to produce the unanticipated outcome of a horse that is finally able to move without pain previously diagnosed as "navicular syndrome." ●

About the author: Cheryl Henderson is the co-founder of the Oregon School of Natural Hoof Care. She has conducted field research for the last seven years, concentrating on the effects of fungus and bacteria on the internal structures of the hoof. Cheryl's website is www.ABChooftcare.com

Navicular Rehab Using Boots

by Steve Karshner

I was surprised to learn that some of the brightest stars in this industry don't use boots in their approach to Navicular rehab. I have to say that I, too, have rehabbed many Navicular cases without boots over the years, but it was a much longer and bumpier process than the method I use now.

Getting a Navicular horse to put his heels down first immediately after pulling shoes is virtually impossible without boots. Watching the animal in pain at the beginning of the process is hard on the owner, and is probably the main reason that a lot of these rehab attempts fail. These attempts end in a few days with the owner putting the shoes back on, because they can't stand to watch their animal suffer. How many times have you heard that story? For that reason alone, I would think that anyone that could use boots, would do so. There are going to be rehab attempts that fail, but let it not be because we thought so much of our personal skills or philosophy that we didn't use all the tools at our disposal to relieve the horses' pain. If the boot fits, wear it!

I am convinced that the significant reduction in the time it takes me to relieve a horse's heel pain is directly related to the improvements in our boot and pad products. There was a time when I thought six or eight months was a reasonable time frame to relieve Navicular pain. Then, I did it in six weeks using a Boa boot and frog pad set-up, with most of the pain subsiding in just three weeks, and an entire inch of heel decontraction in four weeks! Seeing those kind of results in a horse that was likely one of the most severe cases I'd ever seen was quite a wake-up call.

I've been using the Boa boots for years. They can be used for rehab, and are a very good boot (for the right foot), on the trail, after the rehab or transition is done. I am also using the Easyboot Rx now, and having great results with it. At present, I have three horses in rehab, and all the boots are holding up great. It's not recommended, but I have used the boots for light workouts in the round pen, and have allowed the horses pasture time in them, as well. To date, each and every one has held up nicely. One set of Rx's have been in constant use for over three months, with no problems. Just make sure the fit is good if you plan to let the animal move around a lot in them. Sometimes they will twist if too loose, and then the frog support can be compromised.

Some other reasons I'm getting quicker results is that, in certain conditions, using the boots allows me to be a little more aggressive. For instance, taking toe off of a foot with an underslung heel and a minus three degree palmar angle is often the only way to get the coffin bone close to ground level, and initiate the process of getting

the toe and the heel back under the leg, where it belongs. How many times have you heard your farrier say (or have you said), "I just can't grow any heel on this foot"? Whether you are dealing with a Navicular rehab or an asymmetry problem, giving the animal the comfort, support, and pain relief that a good boot and pad set-up provides is crucial to keeping the rehab progress moving forward AND keeping the owner happy and confident.

I think that most Hoof Care Practitioners and Bare Foot Farriers know that reversing a straight forward Navicular case is fairly easy to do with the right techniques. But what about the horse that has been given a severe Navicular diagnosis, but does not have any substantial heel pain at the test, and when blocked, does not come up sound? I would like to share a recent case with you that I think might shed some light on this problem.

A seventeen year old gelding Nick, under the care of a vet for the last five years, had been receiving regular chiropractic and acupuncture treatments, on and off Navicular shoeing, and for about three months was even under the care of one of our brightest equine practitioners—never getting any better. No one, vet or hoof care professional, could give this horse any real relief or definitive diagnosis.

At the walk and at the trot, this horse was head bobbing on the right side, and the front and hind quarters looked as if they were on two different horses. I knew the horse did not test hot in the heels, but he would land toe-first at the walk. Of course, he was also very short-strided up front, and would always turn his head away from the turn he was in while being worked in the round pen. At the beginning, he was so turned away, I



The asymmetry of Nick's knees.



Above: Nick's dramatic shoulder asymmetry reflected the asymmetry in his feet.



Nick in corrective shoeing, just prior to the start of his rehab. Note the clubby right fore and the underslung heel of the left fore. Note also that he is not standing square, but places his right (higher-heeled) foot forward, resting more of his weight on his left (lower-heeled) foot. This asymmetry translates directly to his knees and on up to his shoulders, and is a target for correction early on in his rehab. As you can see in the photo at top, Nick's left shoulder has a significant bulge of muscling below the withers, due to the fact that his left foot is carrying more load than his right.

thought he was going to hook his nose in the round pen railing.

When I started his rehab, I'll admit that I wasn't completely sure what his real problems were, but I was sure that it wasn't just one thing. On the first day, I pulled his shoes—he had been shod Navicular with wedges and pads, but even in shoes, I could see that he was severely asymmetric, and that his knees were out of balance by nearly an inch and a half. After the shoes were off, I could clearly see the asymmetry in his feet, and showed his owner the difference in his legs and the way he had been muscling more on his lower side at the wither. (Now remember, this horse has been under the care of a vet for the past five years, getting regular chiropractic and acupuncture treatments over the last eight months, and during this time no one had even suggested that the horse's knees were not in balance, and that it could directly affect the shoulder balance and other skeletal problems.) The owner had been told by the chiropractor, "this horse is out of balance everywhere," and her farrier said, "we

All photos courtesy Steve Karshner



Day 1: Nick's left fore before his first trim. The packing material (under the pads and shoes) was scraped away to reveal his sole. Excess hoof wall on the medial side of his heel was rasped off to begin the gradual process of moving his heels back. The same was then done to the other side. This photo shows that the landing surface of the trimmed side is already 1/8-1/4 inch further back than the untrimmed side, illustrating the adage "You've got to take heel to build heel."



Day 1: following the first trim.

can't do anything about the club foot, so we must leave it alone."

The final piece of the puzzle is that years before the new owner bought him, he had sustained a puncture injury at the shoulder on the "club side." No one thought it could be the reason for his lameness or head bobbing. In the end, the vet blamed the lameness on severe Navicular syndrome, and said there wasn't really anything more that they could do, aside from the normal Navicular shoeings and pads, and continued chiropractic and acupuncture.

Granted, much of the horse's history has been lost, but let me tell you what I think happened, and more importantly, what we are doing about it! I believe that this horse was asymmetric, either as a result of the injury to his right shoulder or possibly before the injury. Because he had a high

All photos courtesy Steve Karshner

heel on his right front foot, and as farriers, we are taught to leave a club foot alone, the CLUB FOOT was allowed to become more pronounced and increased the height of his right front heel to the point that it put his knees, and then, in turn, his shoulders, out of balance. After years in this condition, his body and muscles adapted to the imbalance by strengthening his left side (or his low side), causing him to have a consistently shorter stride on his right front, and the head bobbing became more noticeable.

The imbalance worsened over time until he was pronounced lame at the normal well checks, and was next to impossible to ride without jarring the fillings out of his owner's teeth. She could tell her horse was in pain, so as soon as he would start the head bobbing, she would stop the work-out, and this continued for years. I believe that, at first, the head bobbing was the result of the imbalance in the horse's feet—then knees, then shoulders, and then the whole body got into the act. At first, he wasn't lame because of pain, but became so as the result of all the years of imbalance. I believe his shoulders and, especially, his neck muscles became knotted and sore, and he may even have some nerve damage, as well, due to the years of skeletal imbalance.

My approach to rehabbing this horse was simple, and was the exact opposite of his previous course of treatment. Instead of blaming his head bobbing on Navicular pain or on an upper limb problem, I started at the ground, where I believe the problem started in the first place. I started with a dramatic trim on his feet, to start bringing balance to his knees and shoulders, and then added boots and pads to relieve any pain in his feet.

After two weeks of booting and light exercise, he began landing heel-first out of the boots and started to lower his head a little and focus in the round pen work. As he relaxed and lowered his head, and began taking more sound steps, the head bobbing would decrease. Over the next two months, his daily rehab routine included daily round pen work with neck massages in between side changes, and an emphasis on lateral flexing during the massages. These sessions would last about forty minutes and by the end of the session, he would be relaxed at the trot with his head down and the head bobbing ceased. This horse is now back at home, where the owner is continuing his daily exercise and massage treatments.

This was a problem with many facets, but the bottom line was simple. I refused to accept that his right foot was a true club foot, and began taking the heel, thus lowering his knee, bringing it closer into balance with his left front knee. On the left, which was a long toe underslung heel, I took toe dramatically to promote rebuilding of the heel on the low side. Within weeks, he was already building heel, thus aligning the lower side knee with the right side knee.

After two months, his knees are balanced, and



Day 61: Nick's feet have come a long way in two months, as can be seen in his left fore. His heels have widened markedly and moved at least 1/2 inch back toward a more natural, sound and functional position. His frog is fat and healthy, his sole has developed concavity, and there is a solid callous at the toe.



The asymmetry in his feet has nearly been eliminated, as can be seen by his square stance and level knees.

you can hardly tell any difference between his two front feet. I will also mention that this horse also had a very large bulge of muscle on his left wither which has begun to recede, all the while he is building more muscle on his right wither, bringing balance to his shoulders. His recovery is the result of first dealing with the asymmetry in his feet, which then balanced his knees, and eventual shoulder balance that this horse has not known for years. He now can muscle up evenly and because his body is now balanced, the pain in his neck and shoulders should go away completely with time and exercise.

About the author: Steve Karshner has his Natural Hoof Care Practice in Tehachapi, California, and specializes in the rehab of Navicular and Founder horses. You can learn more about him and Navicular Rehab at his web site: www.stevekarshnernaturalhoofcare.com or drop him an e-mail at: skarshner@aol.com

Barefoot at the Biltmore Challenge 2009

by Darolyn Butler

When we decided to make the 2,200 mile round trip haul to the Biltmore Challenge Endurance Ride in Asheville, North Carolina, this year, we didn't even begin to know what a challenge it would become.

The riders in this trip included: daughter, Cecilia Butler-Stasiuk; Enrique Searle Martinez (an Intl. rider from Chile); Deborah Sterling from Dallas, Texas; Carol Bracewell, newly moved to Florida; Elizabeth Martin from Houston; and me, Darolyn Butler.

The spring ride season had kept us really busy attending rides at least every two weeks, with as many as 18 horses at one competition. What initially made Biltmore tough was that we had the big Bluebonnet Challenge Ride the very weekend before we were to leave for Biltmore on Tuesday. So as soon as we came off that trip with 12 horses, we started stripping trailers and repacking daughter CeCi's trailer for the trip. We were taking 7 horses, (one to be delivered to a new buyer in N.C.), so my LQ trailer was out of the running, and although we could fit the 7 horses in my 4-Star, it didn't have the minimal living area that CeCi's & husband Jason's trailer did. So that meant the daunting job of sifting through my two personal trailers and the storage sheds for everything one needs for a week long trip on the road, as well as the accrements for 6 competing horses.

1st Challenge: The Flood

By Monday afternoon, saddles and tack had been pulled and lined up in the barn hall; a cafeteria table was laden with all the other goodies, lanterns, electrolytes, blankets, etc., to be loaded in an orderly fashion on Tuesday morning, followed by an early afternoon departure. Then mother nature struck. We had been having fairly continuous rains for two weeks, and the ground was seriously saturated already, when on Monday night, storm after storm here in the Gulf Coast put up to 10 inches of rain in the watershed area of Cypress Creek, which we live on.

I was awakened around 5:30 AM Tuesday morning from the yelling and knocking of one of my boarders, who had arrived to help us evacuate the horses. I quickly checked the flood stage on the computer, and was shocked to see the creek level was over 23 feet (normal is 3 feet), and I usually evacuate at 16-18 feet. I quickly put on my official flood tennis shoes (never get in flood water with boots on... rubber or leather) and dashed out to see the level on the road at the end of my driveway. It was already high. We quickly got the Envoy, the small truck and tractor out. I frantically called a neighbor, Richard; employee, Jessie; and a boarder, Donna Shifflette—all with goose hook-ups, as I had only one truck and four gooseneck trailers



The crest of the flood on Tuesday evening.

sitting on my place. I got the first rig out as quick as possible, and up to high ground, then back for a second one. CeCi and help loaded the ready saddles into her trailer, but we didn't have time to load horses, or any other equipment, feed or hay. Friends and volunteers were showing up to help with the imminent 68 horse evacuation, and calls were going out to those that I knew would help and had experience at this massive chore.

Richard hooked up to CeCi's rig, Donna arrived and hooked up to the LQ, and Jessie to the Keiffer. And then all 68 horses were marched through knee deep to chest deep flood water to the waiting trailers. The local Constables were called to help slow down traffic for us, as we had to make many u-turns in the middle of Cypresswood Drive's 4-lane highway. Of course, morning traffic was at its peak, although many people were being discouraged from driving, as the whole of Houston was under water in many places.

Our stallion was ridden over to Sovereign Farms (next door), along with 3 of the Biltmore bound horses. The other four ended up at the ten acre pasture over near Bush Airport, where we are able to place the horses for a few days. At that point, I wasn't even sure Biltmore was still possible... But as the last horses were successfully taken off the flooded farm, I reloaded the Biltmore horses from the "evac pasture" and took them back to Sovereign, where they had a regular box stall.

In the meantime, CeCi had organized a brilliant canoe brigade for bringing out at least a dozen sacks of feed, 12 bales of hay, and all of our other ride and camping equipment. The neighbors were kind enough to let us park the 4 rigs at their place, and we spent the rest of the day sorting through the trailers and repacking the Sundowner, which we would be traveling in. Bummer—late that afternoon, someone stole one of our canoes from the frontage road, so that made it a bit more difficult to get things out.

As the rain had stopped, I fully expected the Creek to go down, and perhaps we could start "un-evac-ing" the horses on Wednesday morning, still with time to leave for Biltmore by Wednesday afternoon. Not to be—the rains started again that night,

and the Creek went up 3-4 more feet to a final crest of 27-28 feet. Luckily CeCi's husband Jason arrived from their home in N. Texas that evening, and helped with the final pack out on Wednesday morning, and agreed to stay at the ranch and bring the horses back in later Wednesday or Thursday, when the water went down. So, with 3 final canoe trips bringing out our personal luggage, food and other supplies, CeCi, Enrique and I got on the road by mid-afternoon Wednesday. Jason would later fly into Biltmore with crew member Donna Shifflette.

2nd Challenge: The Trailer Break-Down

Only a bit drained, (no pun intended), we started East on I-10, hoping to make at least 500 miles (about 1/2 of the journey) that day. We arrived at an RV Park near Mobile, Alabama, and parked for the night. We had a successful early start on Thursday morning, expecting to arrive at Biltmore around 4:30-5:00 PM. That would have still given the horses a fairly good rest for the competition. However, the demons were rampant, and we had a double blow out on the right rear side of the trailer just across the Georgia state line. One wheel/tire had been totally sheared off, and the battered rim was all that was left on the other.

This event alone could make a small novel, but the short version is: US Rider sent us a local trailer to pick up the horses and place them safely on a small farm, but the mechanics they sent were not anywhere near capable of taking on this massive repair issue. Coincidentally, a mechanic had a flat just behind us, and it turned out his company was the best garage for miles around, A La Grange Automotive, in La Grange, Georgia. These guys were amazing. The blow-outs occurred at 1:30 PM, they started work around 2:30, they had to order/pick up parts, etc., and they did all the work on the side of the road, as there was really no way to get the trailer towed without using two tow trucks, they told me. They had me rolling by 5:30 PM. I went back south to get the horses, then north and stopped in La Grange for fuel and to have



Darolyn's daughter CeCi and Enrique Martinez pose on the street with one of the canoes. Floodwaters had gone down 4 feet by this point.

All photos courtesy Darolyn Butler

them install two new batteries, while we had a gourmet dinner at Waffle House, and on our way by 9 PM.

Final Challenge: Biltmore

We rolled into Biltmore around 4:30 AM... I did have to stop once and take an hour nap. Unloaded, built pens, and crashed for a few hours. I had kept our "on-the-road & in-the-air" riders and crews apprised of the issues and progress throughout the day, because at one time, I really thought there was no way to get that trailer fixed, and having desperately, but fruitlessly, searched for a 6 horse trailer to rent in the area, it looked like mission impossible. We even considered having Jason start driving with my 4-Star, but time certainly wasn't on our side there. So to have these guys fix the trailer and get us on the road was like a small miracle.

Checking the horses upon arising Friday morning, we discovered Macproof was a bit droopy. As he was CeCi's mount for the 100, we started scrambling on what to do. Should we drop him back to the 50, should we scratch him entirely? We had an extra horse with us, Tarzan, who was being delivered to his new owner (and part of our crew) Kate Burnett. We asked, and a very generous Kate agreed to let him go in the 50 under Elizabeth Martin/Houston. CeCi changed to DJB Juniper in the 75, Enrique took DJB Fantasia in the 50, and Carol Bracewell took DJB Boomer in the 50, leaving Deborah Sterling on DJB Cherrys Juliet, and me on Mercy, as the only ones on our original horses. Of course, this called for saddle readjustments and all sorts of stuff.

After confusing the heck out of ride management (Cheryl Newman, who was wonderful by the way), we got all of the entries done and started vet-checking the horses. The veterinarians expressed concern about the horses attempting it barefooted, but we assured them we did have boots, if needed.

Cheryl had sent out an e-mail warning us all about some new bluestone gravel that had recently been put on about a mile of road. I really wanted to drive up to that area and take a look at it and the edge of the road to see how it could be handled by our barefooted horses, but I just didn't have enough time. The ride meeting started at 5:30 and with weigh-ins and such, we just barely made it there. Since we were riding the longer distances, CeCi and I were a bit concerned about this gravel road, and CeCi momentarily considered putting on front shoes. However, good judgment prevailed, and we both fitted our Easyboots and Easyboot Gloves & placed them on the saddle, in case we needed them. All 6 horses started barefooted.

The hundreds went out first, of course, with a four-wheeler leading the way in the dark. I started back a ways and through the first loop made my way up to 12th or so. Mercy was handling the terrain beautifully. CeCi started 30 minutes later in the 75, and 30 minutes later Enrique, Carol, Deborah and Elizabeth in the 50. I think almost everyone in the

ride took a wrong trail here or there, and we were no exception. It's always so frustrating when every moment counts, and one has made a stupid error, or in some cases, there was just a missing marker. They are not allowed to use any ribbon at Biltmore and for the most part they are excellent marked trails, but just tricky at times.

CeCi hit the bluestone gravel first on her last loop of the 75, but I didn't get a report, as I had to leave on that same loop before she came in. Mercy was tiring a bit, and I was falling off my pace, but CeCi and Enrique were going strong. CeCi did not boot for the gravel, and came through fine. She ended up placing 2nd by about 5 minutes I think, and 1st FEI. Enrique was 4th in the AERC 50 & 1st FEI and BC in the FEI. Carol and Deborah finished middle of the pack and received their 1 Stars (the goal) and Elizabeth finished way back on Tarzan, who was not nearly as conditioned as the other horses, but he didn't do too bad for a stand-in. (I just received an e-mail from new owner Kate; she said the folks at his new stable near Raleigh were just in awe of his feet, and totally impressed with how they looked after 50 miles. They just couldn't believe it.)

I started the 5th loop (the one with the mile of bad gravel road) with the Easyboot Gloves on, so I wouldn't have to stop and put them on at the gravel, but I noticed Mercy didn't seem nearly as surefooted with them on, as it had rained and the trails were very slick in places. Shortly after the gravel, Nina Warren came by and we chatted about the slickness—geesh, I thought, and quickly got down and removed them. They are really quick and easy to take off. I had to do that loop one more time, and the next time, I just waited until I got to the gravel, put the boots on, and then removed them right after once again. So in total, I may have run about 8 miles of the 100 in the boots. My finish at 11:21 PM gave our little group of 6 Cypress Trails Horses a **100 per cent completion rate** in a race that went from 67% in the 50, to 62% in the 100. I think both riders and veterinarians were amazed. I'm always surprised, though, that more people don't ask to look at their feet after such a ride.

One fellow rider did ask me if I fed a special supplement to make their feet hard. "Nope," I said. "Oh, they are just Texas tough?" he replied. I laughed, "Are you kidding? I live in a swamp and sand. I have to go lookin' for broken asphalt to find anything abrasive to ride on. They are just healthy feet and have thick hoof walls and soles." It's really interesting: Mercy and June both have very flat feet. I used to stress about the lack of concavity, but now I think those thick soles just give them extra protection.

Valerie Kanavy rode a brilliant 100 Mile ride on her latest up and coming star, Spectacular Gold, followed closely by Farzad Faryadi on Bullwinkle.

75 Milers: A local rider, Bonnie Hannah won the AERC Division on Rezus Respite. **CeCi and**

All photos courtesy Darolyn Butler



DJB Boomer's hooves on the morning after his 50 mile ride.



DJB Juniper 1st FEI Division. B.C. went to Stagg Newman's horse Super ridden by Dom Freeman of Britain.

50 Miler: Bob Geilen won and BC'd in the AERC Division and **Enrique Searle Martinez and DJB Fantasia won the FEI & BC Division.**

Our group was on a total high. This is 18 year old Enrique's 5th ride since he's been in the U.S. and he impresses me at each one of them. Deborah and Elizabeth are very new riders and doing great. Carol is an old hand, but has had some injuries that have kept her sidelined. So good to have her up and riding. I know I can always count on the ladies to take care of my horses. And, of course, the indomitable CeCi, who did a fabulous job on one of my favorite mares, Juniper. Crew was audacious as CeCi's husband, Jason Stasiuk, Donna Shifflette, Kate Burnett, and Elizabeth's Aunt Diana proved to be right on top of everything! And, of course, there were those that jumped in with help at the line, like Jeremy Reynolds and loaners of hay and "strange grain"!! Thanks everyone!! 🍎

About the author: Darolyn Butler, 4 time Nat'l. Champion of AERC, says "I've ridden in the European Championship 2007, the World Championship in 2000, & won the World Nature Games Gold Medal in 1996. I am nearing the 30,000 mi. mark of races... I've finished over 120 one-hundred mile races, more than anyone in the world (right now). I've been competing barefooted for 10 years now, and very, very seldom ever shoe or boot. We work 55 barefooted trail horses here at the ranch, and those same horses go in parades, as well as endurance races barefooted!!"

Barefoot and 50 Miles of Sandy Trail



All photos courtesy Jackie Fenaroli

by Jackie Fenaroli

My horse and I have a job—product testing over long distances for Stonewall Saddle Company. My ride is a tough little mare, a naturally gaited Spanish Mustang, SMR Tia. She is 7 years old now and never been shod. Born and raised running free on the large Cayuse Ranch in Wyoming, she has “mustang” tough feet. The Spanish Mustang breed standard mandates keeping the horse in a naturally-groomed state, including the feet. Consequently, you’ll find a sound, sturdy population of horses.

Within the performance sport of endurance riding, the accepted rationale is that your horse must be shod, to protect the hooves from rocks and bruising over rough terrain, and to prevent excessive hoof wear over long distances. My own observations at endurance rides confirm that most riders subscribe to this wisdom. The majority of horses are competing shod, either all four hooves or just the fronts; a few horses were seen booted, and still less are completely barefoot. At our last ride, with upwards of 160 competitors, I remember seeing only one other completely barefoot horse, although I did not make a systematic inspection, and there could have been some others.

Why do I keep my horse barefoot when so many others, with more distance miles and horses with more impressive pedigrees, do not? Being an engineer, I probably understand better than most what an amazing shock absorber the natural hoof is, and I am loath to tamper with it without good cause. Horse shoes change the way the hoof structure functions, by raising the natural load-bearing surface—the sole and frog—off of the ground, and transferring the loads to the hoof capsule, which did not evolve to carry all the weight alone. If you haven’t already done so, take a look at <http://www.youtube.com/user/SwedishHoofSchool> on YouTube to see how the inside of the hoof works with and without shoes.

Another big reason I keep my horse barefoot is **safety**: safety for the horse and rider. Metal shoes are slippery, and that makes them scary. I’ve personally witnessed two falls when the horse’s shod hoof slipped out from underneath

him. Luckily in these cases, no one was seriously injured. My own horse is very careful about where she places her feet, and I give her the lead whenever we need to navigate tricky footing, and trust that she will bring us through it safely. Is this sure-footedness from being a trail-savvy mustang, or because she can feel with her bare feet? It is probably a little of both.

So what should we do, then, about the need for hoof protection and excessive wear? In most cases, nothing more than frequent trims. My horse has had a stone bruise on her sole, and occasional chips in the hoof wall. These are minor nuisance injuries that resolve themselves quickly and don’t warrant major intervention, such as shoes. The soles will and do build up a tough callous, and both my horse and I use caution when the ground looks particularly nasty, such as sharp gravel. In our case, wall chipping means the walls are too long and a redress of the mustang roll is in order.

I’m most skeptical about the claim that excessive wear necessitates the need for shoes. I hear many riders repeat this mantra, but I doubt they have seen an actual case. Nevertheless, if a case of excessive wear were to be documented there is a plausible chance that it would occur in a long distance, arduous sport such as endurance riding. Not only are the distances long, up to 100 miles in a day, there are also many miles of trail to condition the horse for the task at hand. Barefoot can be done anywhere if it can be done here.

I decided to record the before and after hoof condition over an endurance ride. What did I expect to happen? I expected the sole to become more concave and the outer shell where it’s proud of the sole to wear down, and increase the mustang roll radii.

Included are “before and after” hoof photos from the “Get R Done” 51 mile endurance ride at Inyokern, California, April 2009. In Tia’s right front hoof “before” shots, you can see the few spots where I’ve just trimmed a bit of this or that away. I keep a rasp and hoof knife in the bucket with my other daily grooming tools, and I usually find something to cut or rasp on Tia’s hooves during tack-up. Here, I’ve deliberately left a lip of hoof capsule just proud of the sole, to help with expected wear.

Note Tia’s right front hoof after the ride. The footing was shallow sand covering over graded dirt roads. I puzzled over these photos for a few days, trying to quantify differences



Tia's right front BEFORE a 51 mile endurance ride.



Tia's right front AFTER that same ride!



between the before and after photos. What I finally concluded, what is remarkable, is how little difference there is. The sole surface has been smoothed, erasing evidence of my nibbling. The sole did not become more concave as I had expected, nor did the hoof capsule lip get worn off. The depth of the groove around the frog was unchanged. By studying the location and depth of little folds and creases, you can see that very little of the surface was removed. The mustang roll has a flat edge worn on the bottom of it.

I gave these feet a good trim 2 weeks post-race. I am going to quantify the wear better over my next long distance rides by scribing lines on the outside of hoof and measuring to get wear per mile. I expect the number will vary somewhat from horse to horse and over different types of terrain. The method of scribing and measuring may take some fiddling before it is workable.

So now I know I can go 50 miles with plenty of horse and hoof left. Based upon these results, 100 miles seems very doable. How about 200, 300, or multi-days? That’s a job for another day.

About the author: Jackie Fenaroli lives with her husband, two children, two horses, and two cats in Southern California. You may reach her at stonewallsaddles@yahoo.com

Visit the Stonewall Saddle Company website at stonewallsaddles.com

Questioning Your Farrier

Questioning Your Farrier Is Always Justified: You Are Your Horse's Sole Supporter

by Eleanor Van Natta

It's a never ending process, this thing called wisdom. Even with a horse named Sage. It seems that she and I are a constant work in progress, but then, that is perhaps what it means to be human and maybe equine, too. If I could just get this hoof thing figured out, things would seem more stable.

Over last Fall and Winter, my horse's hooves had started looking pretty odd. I say "odd," because at the time I did not understand, and could not put my finger on, just what did not look right. I was having quite a time with self-doubt, too, so I



Eleanor and Sage.

kept my questions to myself. Besides, a holistic veterinarian who had seen my horse in early summer had commented on how good her feet looked.

My farrier had also trained with Pete Ramey, and he was now an expert, more than me with my scattered bits and pieces of knowledge about ulcers, boarding, and yes, just a little bit about hooves. Who was I to question a trained farrier who went to school for it, and then went along, side by side, learning with Pete Ramey? Besides, I liked him as a person, and knew he meant well.

I, and my horse, would learn the hard way that meaning well and doing well are two very, very different things.

The way Sage's feet looked kept gnawing at me. They looked too long, and her heels seemed too low. The thing that finally made me say something to my farrier was the strange looking build up of sole at the toe that I had never seen on her before. I went back to Pete Ramey's site and tried to find a picture in his articles—any picture—that looked like her hooves at all. I found nothing. So Pete certainly was not promoting hooves that looked like my horse's hooves. Then I looked on other natural trimming sites. No hoof look-alikes. Nothing. Nada. Zero.

So, I finally got up the courage to ask my farrier about it. He said that the toe callous would wear off. However, she seemed to have built it up over the summer—the time when she was actually being ridden fairly regularly.

I was confused and not too sure what to do about it. Besides, I did not want to switch farriers again. He was my sixth farrier, and I had dumped him once before—before he had

learned about and embraced natural hoof care.

I must be overreacting, I told myself. I am trying to know too much about all this stuff, and I am questioning everything. Besides, she is still standing and walking, I told myself, no obvious lameness. She has always been very sensitive when it comes to just about everything—horse changes, feed changes, trims, etc. You name it, and she is sensitive to it (which makes for a very good teacher, by the way). I wasn't following my own advice that I give on my website: to question the experts and trust your guts. I was deaf to the hoof-beats of my own drum.

Then the deafness turned to a roar.

In early February, Sage received a trim which made her so sore that she looked like she was walking on hot coals with every labored, painful step she took on the concrete. I was mortified for her pain, and I was terrified at first; was this a really bad colic, or tetanus, or what?! The barn owner and I deduced that since she had just been trimmed a day earlier, it was probably her feet, and she wasn't at death's door. Small consolation, but at least I could go home thinking that she would live, and she seemed more comfortable on the soft ground that was her pasture.

My farrier had no explanation, and he said he would come out and look at her, but I still do not know if he ever did. He gave me no feedback.

So I began my search for a natural trimmer and turned to *The Horse's Hoof*, scrolling through their Trimmer's List. There was somebody north of me, so I contacted her (Lori Holliday). We decided to let Sage settle and give her a chance to be less painful, prior to her next trim. It took her almost a full 6 weeks to be able to walk and stand on concrete.

I cannot begin to tell you how hard it was to trust someone new. True to Sage's nature, she was more willing than I. It still amazes me that she would let anyone near her feet again. The new trimmer, Lori, noticed immediately that yes, her toes were too long. Among other things, she also lowered Sage's inside heels in the back and told me about the ideas from *The Horse Mechanic* (www.thehorsemechanic.com/hoofcare.html)

Sage was able to walk away from the trim with a kind of surprised look on her face, instead of one of pain—a look I can only attribute to her testing out her new way of walking. Her hips swung more freely than I had ever seen them swing. Was she just parading her stuff in front of those geldings in their turnouts, or was something really different? I was cautiously optimistic at this point, but how would she feel and walk tomorrow?

I knew almost instantly upon seeing her the next day that she was fine; in fact, she was more than fine. She did not have that pained expression that she usually wore upon her lovely face, and she was into affectionately nib-

bling on my sleeves and jacket.

Then I walked her out onto the dreaded concrete. The same surprised expression came back onto her face, but no look of pain, no wrinkled eyes. Things were looking good. But did she feel good enough to run around?

I turned Sage into the arena, and presto, she turned into a different horse, full of vim and vigor and buck. Out on the grass she was the same, tail in the air, prancing around, energizing all the other horses in their turnouts with her jubilation. Someone said that they had never seen her act like that. Did I increase her grain? No, she doesn't get any grain, I explained. And then I almost cried.

It was tears of relief that I tried to hold back. Then I almost cried again later that day, when I gave Lori a progress report. A big weight had just been lifted off of my shoulders, but more importantly a lot of pain had been lifted off of my horse. I have no idea how many months this horse had been sore from the way her feet had been being trimmed. I do not think she has ever reacted to a trim like this, and the hip action is definitely something different.

I was still only cautiously optimistic for a few weeks about the results and the switch in my trimmers—maybe it was just a fluke boost of energy that day. I know that may sound silly, but I was pretty darned shell-shocked by the whole experience. I couldn't believe that I had put my trust in this farrier for the second time, had his work ok'd by a veterinarian, and still things went so terribly wrong.

I am happy to report, though, that Sage appears better than ever with each new day. She is less tight in areas that had been problematic, especially in areas like her hindquarters and neck. She also has a renewed exuberance and spring to her step. Furthermore, she is losing that build-up of sole on the toes; I assume that is a benefit of them being shorter.

While I am disappointed with myself that it took so long for me to figure this hoof thing out, and I only took action after Sage was in a lot of pain, at least I may have finally learned my lesson about trusting my guts. I have also socked away some more knowledge for the future from my research on toe length and heels.

The bottom line, the sole of the matter, is that you need to be ever vigilant about your horse's well-being. Questioning your farrier (or any other professional in contact with your horse) is always justified when your intent is the health and happiness of your horse. Those things are more important than some ruffled feathers, and who knows, you may be helping out some horses down the road by enlightening your farrier or other professional. 🐾

Visit Eleanor Van Natta's online blog at: www.sagebynature.com

Barefoot for Happy Horses...Update

Barefoot Stories, a book published in 2003 by The Horse's Hoof (limited copies still available), featured a chapter, "Barefoot for Happy Horses," about Dorothy Mark's horses: Solo, Echo & Nif. Dorothy continues her story about her barefoot herd—6 years later.

by Dorothy Marks

We have done quite a lot since I wrote that chapter in *Barefoot Stories*, and I have a new addition to the herd. Here is an update on Echo, Nif and Solo, and the new boy, Tango.



Echo, Nif and Solo, as seen in "Barefoot Stories."

Echo

Echo (above left) was my beautiful Andalusian X TB. I bred Echo, and kept him conventionally, shod and stabled, etc., until he was 5, when I first read Dr. Strasser's books. I decided then that I could not, in all conscience, shoe a horse again. I resolved to learn as much as I could, and make barefoot management work for what I wanted to do. I also decided that, if the horse could not cope with an activity without shoes, I would not do that activity until the feet were more functional, or at all.

So, Echo was my first barefoot horse, and we achieved far more than I would have thought, and had a huge amount of fun and excitement together. Echo also showed me the joy of riding bitless, and now I would not use a bit again. There are certain disciplines that you cannot do unless the horse is bitted, and I have made the choice not to do those. This is not a big deal for me, as I am not particularly competitive, and enjoy many ridden activities, so I can do those that are sufficiently enlightened!

The following photo shows us doing Dressage (yes, here I am using a bit)—we competed at Preliminary and Novice level. If I do Dressage now, I enter "HC" (hors concours, or "not judged"), and ride bitless. My local riding clubs and event centers know me, and are happy to accommodate my oddities! I still get the score sheet and judges comments, I just don't get the rosettes.

All photos courtesy Dorothy Marks



We also did regular showing, and Echo won a number of Riding Horse classes. Now I would not do showing classes, as the conventions demand bits.

Echo and I did Team Chasing, Endurance, and Trec (orienteeing and obstacles) shown below:



We also hunted, hacked, and did many riding club lessons and courses. He gave a lot of joy to my friend, Ali, who shared him, and my elderly mother, who also rode him. Throughout all these activities, he was always superbly sure-footed on all terrain, roads, tracks, mud, and looked after me in our jumping endeavors.

Sadly, age 10, Echo developed a Wobbler Syndrome, and lost all feeling and control of his hind quarters. He was put down before he became totally unable to get up by himself.

Nif

Nif is our 24 year old purebred Arab. He was shod until he was 17, and took to barefooting like a duck to water. He has not had a step of lameness with his feet, though he is now arthritic and stiff in his joints, and is living in honorable retirement. He did a number of short endurance rides in his later years without shoes, and has hacked all around our lanes and stony tracks until



Nif on one of his last Endurance rides, aged 20.

a year ago. Nif has been the most fantastic babysitter: he was "Big Brother" to Echo, "Uncle" to Solo, and is now "Grumpy Grampy" to my new baby, Tango. Nif has looked after (and disciplined) them all.

Solo

Solo, an Anglo-Arab, is now 9. He is the horse whose feet I have had the most difficulty with, and do use hoof boots on, if the weather and ground conditions are very wet. Ironically, he is the one who never wore shoes. However, his feet seem to be very soft and flat, regardless of how I trim them. The most help for this has been keeping his toes really short, a big mustang roll, and allowing his bars to grow rather more than I would like.

I think his soft feet are all a part of a general picture of weak connective tissue. He has lax ligaments—I have to be very careful with him, otherwise he gets a sore back, and fine, brittle hair. I cannot brush his mane and tail without the hairs breaking off in quantity. I wonder if a reader has any suggestions for improving the strength of these structures? I have tried a variety of nutritional supplements, with little difference. Homoeopathy has helped with him generally, but the most important thing has been careful, classical schooling, to help him use himself safely and correctly, and develop the right muscles.

This has not stopped us, though, from enjoying Endurance rides up to 40 km, Trec competitions, and unaffiliated dressage up to Elementary level, which we enter HC (non-competitively), as I ride him in a Dr. Cook style cross over bridle. I tend not to jump with him, as neither of us is very confident, and I do worry about his back.

Here we are doing endurance, check out that heel-first landing!



Solo is teaching me so much, and not only about feet. With him, I am really focusing on my Mary Wanless "Ride With Your Mind" riding technique, as he is naturally upside-down,

and would go hollow, with a stiff back. He finds it very difficult to flex his hind legs and engage his quarters. However, if he is allowed to move with his head up and back, he gets back pain, and is really upset and sore. Moving correctly, he has the most amazing cadence for a non-warmblood! He was ridden recently at a clinic by Heather Blitz (top US Grand Prix dressage rider) who loved him, and gave me the ultimate compliment by saying that he is really “accessible in his body,” with “nothing stuck.” She also forgot that she was riding him in a Dr. Cook style bridle, and did the most amazing work with him. Who says you need a bit to be “on the bit”!!

In April, we had a riding place on a Conference with Dr. Gerd Heuschmann, the German vet who wrote the book *Tug of War: Classical vs. “Modern” Dressage*. Dr. Heuschmann is part of a big movement in Europe to improve methods of schooling, and educate people on the damaging effects of some currently used techniques and gadgets.

Below is a photo of our Fancy Dress Dressage (we would have won our classes with scores of 73% in the prelim and 69% in the novice).



All photos courtesy Dorothy Marks

Tango

My new addition to the herd is Tango. He is a rising 2 year old National Show Horse (Arab x American Saddlebred), who I bought as a weanling. Apart from being the most irresistible foal, I wanted to buy a youngster that had never had bad living conditions, with feet that I could nurture. He was born into a herd of Daddy (ASB), Mummy (Arab), and 5 Aunties and brothers and sisters who all ran together. So he had the perfect herd life until weaning, when he joined my lot. He is an absolute joy, and loves all attention. He is learning about going out riding by ponying off Solo, who thinks he is a little squirt, and doesn't stand any nonsense! Below, Solo showing Tango the ropes, on a rare dry day last summer:



In spite of his as-good-as-possible start, he still has asymmetrical feet, with the off fore being rather more upright than the near fore. This is improving with trimming and exercise on the hard ground, but I do not think it was helped by him being born into one of the wettest summers we've had, and having a second very wet year last year. He really is suffering from lack of hard

ground. Still, he has great concavity and hard horn, completely different from Solo.

Tango, as a yearling, won a “Pure, Part-bred and Anglo-Arab” class of 1, 2 and 3 year olds. He beat the 2 and 3 yo's, with the judge commenting that he won because he covered the ground better than they did.

So, to conclude, I can honestly say that having my horses barefoot has hardly affected the riding that I have done, and as you can see, I have been out and about, doing lots! Occasionally, I have avoided particularly stony rides, and would use hoof boots now for these with Solo. I have just ordered a pair of Easyboot Gloves for him, which look phenomenal. If they really are as good as the reports say, no-one has an excuse to keep shoeing. I'm really excited about Tango, as he is robust in a way that Solo is not—we're going to have so much fun together. I think the biggest change over the years of having my horses barefoot is that now I hardly even think about where I am going and what I am doing, I just go, knowing the horse will be brilliant. 🍎

About the author: Dorothy Marks lives in Somerset, England, and is an Equine Chiropractor, Saddle Fitter and Ride With Your Mind Coach. She is passionate about making the lives of her horses as healthy and natural as possible, whilst still enjoying a wide variety of activities. Though many of her clients keep their horses conventionally, she tries to introduce the alternatives whenever possible, without alienating them, and has had a lot of success in improving conditions for many. Visit her website: www.thebacklady.co.uk

Liberated Horsemanship Goes International

Bruce Nock, Ph.D. founded **Liberated Horsemanship** in 2003, recruiting a growing group of selected experts dedicated to helping people and horses. These experts provide multi-disciplinary, science-based information about the care and use of horses through a variety of mechanisms and services. In early 2009, Liberated Horsemanship launched the **Barefoot Initiative** under the direction of Ann Corso. This program is one of three initiatives focusing on various aspects of horse care and use. As part of this initiative, Liberated Horsemanship now offers Natural Hoof Care Training for professionals and horse owners.

The initial step of the training is the six-day **Gateway Clinics**, which are also open to the public. Participants receive a well-rounded background in the theory of the natural trim and the factors that can affect its outcome, along with detailed practical instruction and supervised trimming experience.

In April, Ann Corso, Dr. Nock, along with John Graves and Richard Drewry, presented the 6-day Gateway Clinics in Warrenton, Missouri. The students were enthusiastic and eager to learn. Elizabeth McNeil of Charlton, MA, said, “In my 48 years, I have made several major career changes and participated in the necessary training for each. The Gateway Clinics training was by far the best training I have taken. It was very thorough. The instructors were quite knowledgeable and excellent at imparting the information. I highly recommend this training for anyone wishing to learn the correct way to care for and trim their barefoot horse!”

A week later, Liberated Horsemanship's Bruce Nock, Richard Drewry, Ann Corso, and Mike Smith traveled to Italy for two days of public presentations

All photos courtesy Bruce Nock



and the six-day Gateway Clinics (above left). The event was hosted by Barefoot Horse Italia, founded by **Dr. Luca Gandini** (above right). The events were held at Cascina Soleverde, in the beautiful Piedmont region.

Two more Gateway Clinics are scheduled during 2009. The first, July 31-August 5, will be held at Lone Pine Ranch in British Columbia, Canada. The second, October 16-21, will take place in Warrenton, Missouri.

During the October clinics Liberated Horsemanship will host special guest **Brian Hampson**, lead researcher and co-founder of the **Australian Brumby Research Unit**, University of Queensland, School of Veterinary Sciences. Brian will make a 4-hour public presentation about the important wild horse research taking place in Australia and New Zealand (Down Under, wild horses are called Brumbies).

Details about these events, the natural hoof care training and certification program, and other Liberated Horsemanship projects are available at www.LiberatedHorsemanship.com —Ann Corso

The Frog Pad

by Ove Lind

The dog does it, the camel does it, even the elephant does it, but very few horses do it. All animals are supposed to walk on their pads, but on the horse it is not even called a pad. In English, it's called "frog," in Swedish it's called "ray," and in Norwegian it is called "crow." All this tells me that there is a very largely-spread misunderstanding about this tissue. The pad is a pad, and it is supposed to carry the animal. Even on a horse! If we would start to call it "pad," even on the horse, maybe it would be more natural that it is supposed to carry a substantial part of the animal's weight, instead of being hidden away from active duty.

This article is written to share my experiences, not to put blame on someone or prove someone wrong. I know it is not what most people think, but I ask you to read it, and keep it in your mind. Maybe it might help you explain why that special horse does not perform the way you would like him to.

My ideas about the frog/pad:

1. It is made out of horn, which means that there are no nerves in it, so it cannot be sensitive in itself. The frog/pad is really just a protection for the sensitive inner parts. If your horse is sensitive on rocky ground, he is, most likely (like more than 90% of all other horses), suffering from an infected frog/pad that does not protect the inner parts as it is supposed to.
2. The frog/pad is supposed to be one solid pad. It is not supposed to be divided in two parts. Not even "just" in the back part. My experience

All photos courtesy Ove Lind



Very few people have seen a really healthy frog/pad, but very few people have seen a white tiger in real life, too, and still both exist, even though almost extinct.

says that tight "lips" are just as bad as more or less open ones.

3. If your horse moves easier and more freely with even a little higher heels sticking out from the hard sole, he is most likely suffering from an infected frog/pad. Infected frog/pads do not get any healthier by being elevated and pacified. The only thing that can heal the frog/pad, in the long run, is exercise. Different kinds of chemical or medical treatments do not make the frog/pad sound, they only make it possible to start exercising the frog/pad.

4. If there is not exactly the same height of hoof wall sticking out from the hard sole when it is time for trimming, the hoof is not in balance. If there is less hoof wall sticking out in the toe region, the heels are too high, and most likely that is caused by the fact that the horse makes

the sole in the back of the hoof thicker, to elevate the unprotected nerves above the frog/pad, when the frog/pad's protective capability is impaired by an infection.

5. The frog/pad is not a blood pump. On most horses, there is not any blood at all near the frog/pad. It is, however, an essential foundation for the pumping mechanism. As soon as the frog/pad is elevated the slightest, or even not fully loaded, it impairs the effectiveness of the pumping.



This picture is from the inside of a barefoot hoof with "just a little" thrush in the central sulcus. I have no pictures of the inside of a completely thrush free hoof, because he is still alive.



This picture shows the inside of the sole and frog/pad from a shod hoof with high heels.



Above: A barefoot hoof with the frog/pad almost touching the ground. Below: This is what the frog/pad looked like inside. Not much protective capabilities left.

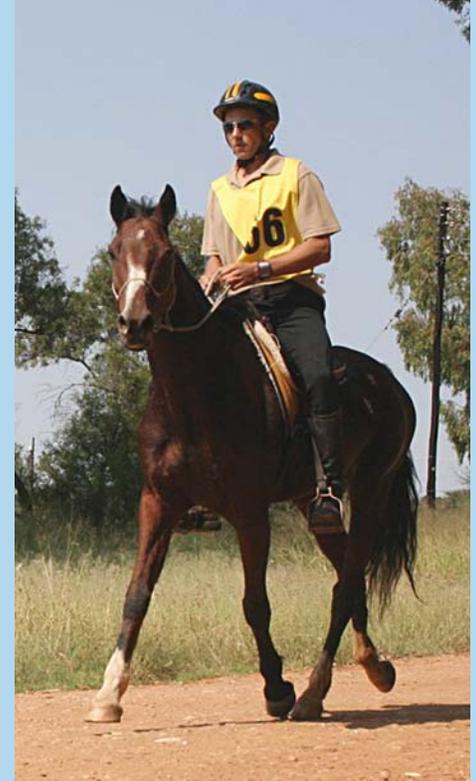


Of course, I know that you may have horses with what I say are not perfect frog/pads that act perfectly sound, but I also know that there are lots of horses with frog/pads looking exactly the same, who do not perform flawlessly on all footings. I would say that difference is not in the frog/pads, but in their heads. Some show pain, some don't. 🐾

About the author: Ove Lind is the founder of the Swedish Hoof School and travels all over the world giving hoof care seminars. Visit his website at: www.swedishhoofschool.com

American Saddler, Cosmic Xanthus, becomes a barefoot endurance horse in 18 months!

Theus Badenhorst of South Africa provided the following photos and story of Xanthus. The horse was acquired Nov 4, 2007, and had weak, overgrown hooves and seedy toe. Renegade Hoof boots were used during his transition to barefoot endurance riding. He now competes in 80 km endurance rides. Theus also hosts Horseback Safaris in South Africa! For more information, please visit: www.zandeotrails.co.za



All photos courtesy Theus Badenhorst

Xanthus' right hind before trim 04/11/2007.

Another shot of Xanthus' right hind 06/05/2009.

Xanthus competing in an endurance ride.



Xanthus' right hind 06/05/2009.

Compare to Mustang-Sierra Nevada Mountains.

A Few Nutrition Thoughts...

I have, in the past year or so, come to realize that heel pain is a dietary issue. We talk about laminitis, the inflammation of the laminae, as perhaps the only place in the hoof subject to it. The connection of the sole, the papillae, must be subject to inflammation also, just like the laminae. When I can convince my customers to get their horses with heel pain off of grains, voila—the improvement is significant within a few weeks. However, some customers have an affliction. One customer describes it as, "I feel the need to feed." When they go back to feeding grain, the pain returns.

I attended a nutrition clinic back in April 2009. There are a few things that seemed important for a horse owner to know. Horse owners need a **"BODY CONDITIONING SCORE CHART."** Any additional feeding beyond grass or hay should be done according to the body score and amount of exercise. Bear in mind that the TWO most demanding performances of a horse are endurance and eventing. These horses, according to this nutritionist (Dr. Pugh, Auburn Univ.), are the only ones that **MIGHT** need to be supplemented with grains. Horses who are not eventers or endurance horses are getting too much feed.

If lack of weight is a reason for grains, that grain may be the problem—grains can affect the horse's metabolism and prevent weight gain. Feeding should be done with eyes wide open, and not as a ritual that makes you feel good. Look at your horse on a daily basis, week by week, know what your horse is going to be doing in the near future, and feed accordingly.—Gates Billette, Natural Hoof Care Practitioner in Nocona, Texas

The Horse's Hoof Order Form

Please mail this order form with your check or money order (All payments in US Dollars). Make checks payable to The Horse's Hoof. Visit **The Horse's Hoof Store** online at www.TheHorsesHoof.com

The Horse's Hoof • P.O. Box 40
Litchfield Park, AZ 85340-0040

Toll-Free Phone: 1-877-594-3365
(leave message)

Book Shipping Charges

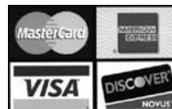
USA: \$7.00 for 1 or 2 books, + \$2.50 each add'l.
Canada: \$10.00 for 1 book or CD, call for price on more.
Foreign: \$15.00 for 1 book or CD, call for price on more.

Here are just a few items we sell:

Quantity	Each	Total
_____	THH 2008 Special CD, Issues 1-30	\$49.95 (free ship USA)
_____	THH Magazine Subscription 1yr Printed	\$25 US/Can; \$40 For
_____	<i>Making Natural Hoof Care Work for You</i> by Pete Ramey	\$26.95 + shipping
_____	<i>Paddock Paradise</i> by Jaime Jackson	\$26.95 + shipping
_____	<i>Horse Owner's Guide to Natural Hoof Care</i> by Jackson	\$29.95 + shipping
_____	<i>A Lifetime of Soundness</i> by Dr. Strasser	\$39.50 + shipping
_____	<i>Shoeing, A Necessary Evil?</i> by Dr. Strasser	\$39.50 + shipping
_____	<i>Who's Afraid of Founder?</i> by Dr. Strasser	\$39.50 + shipping
_____	<i>The Centaur Reborn</i> by Speckmaier/Kells	SALE! \$25.00 + shipping
	Subtotal \$	_____
	AZ State Residents 8.8% sales tax \$	_____
	Book Shipping Charge \$	_____
	TOTAL PAYMENT \$	_____

Payment enclosed:

- _____ check
_____ money order
_____ credit card:



- Visa Mastercard Discover AMEX

Account Number _____

Expiration Date _____

Signature _____

Order Online at: www.TheHorsesHoof.com

Name _____

Address _____

City _____ State _____

Zip _____ Country _____

Telephone _____

e-mail _____

The **Horse's Hoof Resources Pages** offer pertinent information, for both professionals and horse owners, about various groups, associations, publications, and products concerning barefoot horses and natural horse care.

Most items on these pages are press-release type information. These are NOT advertisements nor endorsements—they are submissions from any party that are accepted, as space allows, with preference given to the most relevant barefoot topics. Please email your submissions to: editor@thehorseshoof.com

EasyCare Wants to Hear about Your Hoof Care Event

EasyCare, Inc is designing and implementing a new **hoof care events page**. If you know of an event that would benefit those interested in keeping their horses barefoot, please email: marketing@easycareinc.com. EasyCare wants to know about hoof clinics, trade show events, nutrition and hoof care seminars (no matter how big or small), trimming clinics and veterinary talks. The event will be posted to our website and in our hoof news blog.

The additional event page adds to an already fairly comprehensive site on hoof care and booting. Consumers can find a retail dealer or hoof care practitioner, educate themselves about keeping horses barefoot, and find a riding or therapy boot that is right for them. Visit the EasyCare website at www.easycareinc.com

Natural Horse World Website

Natural Horse World, Helping people know the natural needs of horses. This fabulous website, owned by Cynthia Cooper (who has 15 barefoot horses!), is filled with helpful natural horse care and hoof care information. Don't miss signing up for their free monthly newsletter, and there is an archive of previous newsletters, with a barefoot section. Also, tons of hoof and health articles in their articles archives! www.naturalhorseworld.com

True Cowboy Magazine is a very special publication with a noble mission of saving the wild mustang from round ups, penning and slaughter with subscriptions, content and advertising support. Publisher Calamity Cate is also a barefoot advocate, "my 7 yr old TB mare, Raider, has been shoeless for well over a year and has never had healthier hooves." www.truecowboymagazine.com

The Canadian Barefoot Horse Association is a nation-wide non-profit natural horse and hoof care association with a full certification program in natural hoof care and lifestyle management of the horse. They have just launched, with a trail ride and fundraiser scheduled for July 18, 2009 in Lafontaine, Ontario. For more info, email: Carolyn@b2bhoofcare.com. Their upcoming website is under development, and will be located at www.cbha.ca

Liberated Horsemanship Hosts Brumby Research Event

Liberated Horsemanship will host **Brian Hampson**, post-graduate Ph.D. scholar, lead field researcher, and co-founder of the **Australian Brumby Research Unit (ABRU)**, University of Queensland, School of Veterinary Sciences. The ABRU is a team of scientists who are also experienced bushmen and horsemen. On Saturday, October 17, 2009, Brian will present findings about the ongoing wild horse research taking place in Australia and New Zealand. During this four-hour event, Brian will describe cutting edge information about hoof form, diet, movement, behavior, and more.

This exclusive U.S. engagement will be held at a venue in the St. Louis, Missouri area. Details about this and other Liberated Horsemanship events are available at www.LiberatedHorsemanship.com

Liberated Horsemanship Advanced Trimming Instruction

Steve Hebrock is making final arrangements for the "**Liberated Horsemanship Advanced Trimming Clinic**." Steve is a full-time instructor at the Ohio State Agricultural Technical Institute, where, in addition to teaching computer applications, he teaches equine hoof care.

Certain pathological conditions, such as severe laminitis, injury, and chronic imbalance, can make it very hard to identify landmarks normally used as guides for properly trimming and balancing a hoof in accordance with natural hoof care principles. This one-day clinic is designed to familiarize hoof care professionals with the underlying anatomy and bio-mechanical theory necessary to successfully trim such extreme cases.

Cadaver hooves are used to guide participants step-by-step through the processes of identifying, evaluating, and trimming abnormal hooves. Large-screen live video is utilized to provide an unobstructed view of all clinic materials. Each attendee receives a booklet containing assessment and approach information with high-quality color photographs and radiographs of the hooves. A basic understanding of the principles of the natural trim is recommended.

This clinic will be offered at three locations during 2009. First, on Sunday, July 19 in Wooster, Ohio; again on Sunday, July 26 in Tucson, Arizona; and finally on Tuesday, October 20 in Warrenton, Missouri. The October clinic will be held simultaneously with the Natural Hoof Care Gateway Clinics.

In conjunction with the events in Ohio and Arizona, Steve will present "An Introduction to the Principles of Natural Hoof Care for Horse Owners." Details about these and other Liberated Horsemanship events are available at www.LiberatedHorsemanship.com

News from the AANHCP

Much planning and organizing is now underway to launch a new **Natural Hoof Care Practitioner training program** this fall. This is an evolution of our current certification program (begun in 2002), and will add considerable new subject matter to the curriculum; moreover, everything will be taught in a much "tighter" training timeline. Classroom curricula and lab practicums have been formatted into an unprecedented, 124 hour "**boot camp**" venue, compressed into two weeks, followed by an expanded field mentorship program that will rigorously reinforce the student's theoretical training. Please go to the menu online at www.aanhcp.net, and check out specifics under "NHCP Training & Certification Program". If you, or a family member or friend, are considering a career in natural hoof care, this is it—the most comprehensive, in-depth training program of its kind in the world! —Jaime Jackson, www.aanhcp.net

A new barefoot hoofcare book will be published in July 2009: ***Feet First: Barefoot Performance and Hoof Rehabilitation***, by Nic Barker and Sarah Braithwaite—founders of the UKNHCP (UK Natural Hoofcare Practitioners), a training and research organization for farriers and trimmers working in the UK.

ESA Equine Sciences Degree Program

This summer, the ESA will launch its **Equine Sciences Degree program**. Whatever your area of interest in working in the equine industry, this program is designed to give you a thorough, fundamental understanding of all the key aspects of **horse husbandry** in today's world, and the tools to apply what you have learned to equine care and management.

This knowledge base is an indispensable foundation, as success in any given discipline requires a broad understanding of all the factors in the horse's life and their implications and effects. This can only be gained through study of the "Whole Horse."

The program will encompass three terms of six online courses each, and the Orientation week, but does not require Hoof Care Certification. The classes will provide a thorough understanding of hoof care, but students will not be required to go through practical hoof care training.

We believe that Equine Sciences, as a field of study, should be based on the horse's innate requirements for health, happiness and soundness, as opposed to many of the conventional practices now taught in most schools. We look forward to the time when this becomes the "typical equine sciences degree program."

More information will be posted on our website in the near future. Sign up for our mailing list for the most current information. www.equinesciencesacademy.com

EasyCare's New Hoof Boot Accessory

EasyCare has released a new boot accessory that puts more power (and fun) into the Easyboot Gloves and Glue-On boots. The new easy-to-install **Power Strap** comes in ten colors and is designed to give the boot more stability in extreme riding conditions. Horses whose feet don't fit perfectly into the Easyboot Gloves or Glue-Ons will also benefit.

Because the Power Strap comes in a variety of colors, horse owners can mark boots for individual horses, find the boots easier if a horse loses one, and match their tack.

The Power Strap is designed to add rigidity and tighten the boot at the top. They help boots on slightly irregular feet, or those that show slight gaps at the top (but the boots fit well otherwise) fit the hooves better. The power strap also helps keep debris out of the Easyboot Glove.

Power Straps are available through EasyCare. If you would like to find out if the Easyboot Glove or Glue-On is right for your horse, please visit the EasyCare website at www.easycareinc.com. Fit kits are also available that will help you determine the correct size Glove or Glue-On boot.

Energetics Brand Announces Release of SILVETRASOL

Revolutionary Hoof Care Product for Thrush, White Line Disease and MORE!

KC La Pierre, RJE, founder of the Institute of Applied Equine Podiatry and Energetics™ Brand products, is pleased to announce the release of a **revolutionary hoof antiseptic**: SILVETRASOL. This ALL NATURAL, ANTI-MICROBIAL, colorless, odorless topical spray has been tested worldwide and proven effective against bacteria, fungus, and viruses found on the equine hoof. And it's AFFORDABLE!

SILVETRASOL works ten times more quickly than most other hoof care products used to kill bacteria, including commonly used Lysol or Clorox. SILVETRASOL kills most harmful bacteria in less than 30 seconds, and the fungus often present in white line infections in less than 10 minutes. SILVETRASOL contains a high concentration of sub-nanometer sized (0.65nm) silver particles and silver ions (.00015%). The total silver content typically consists of 75% silver particles and 25% silver ions.

SILVETRASOL is only approved for topical use on hooves. Energetics™ Brand Products are developed based upon the theories and sciences of the Institute of Applied Equine Podiatry, which is dedicated to Whole Horse Hoof Care.

To order SILVETRASOL or other Energetics™ Brand Products, including Perfect Hoof Wear (the non-cast alternative to replace horseshoes and boots), visit www.perfecthoofwear.com

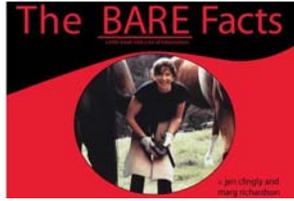
"The Bare Facts" Free Booklet

Horse owners and trainers around the world are discovering there is a sound option to ride without metal shoes and still have their horses perform in any discipline with success and soundness.

Interest in natural hoof care simply stems from wanting what is best for horses, but in this effort, many have been on a downward spiral of constant lameness or chronic hoof problems. Hooves adapt to their living environment, but when we put our weight and saddles on their backs, and then want to ride them on terrain other than which they are accustomed, their hooves need help.

Cavallo's FREE full-color booklet, "**The Bare Facts: A Little Book with a Lot of Information**," is chock-full of information in layman's terms, directing the horseowner to the main issues of keeping horses barefoot.

Download your FREE copy of "The Bare Facts" today at www.cavallo-inc.com/hoofcare/education.html



New Cavallo Sport Hoof Boot: Built-in Breakover with a Designer's Touch

Innovation, Form and Function unite in the **new Cavallo SPORT Boot**, designed to enhance hoof function, with a built-in breakover and innovative heel (skid) brake, just like the natural hoof. The built-up inner rim provides support for the outer hoof wall and relieves pressure on the sole area.

Slightly narrower than the Cavallo SIMPLE Boot, the SPORT Boot provides a snug fit in all equine sports, fits hind hooves, and provides total comfort. Reflective piping boosts safety for night riding. And like the SIMPLE Boot, the high quality SPORT Boot is quick and simple to put on and take off.

And they look great too! The Cavallo SPORT Boot is chic and sleek, styled in collaboration with Sylvana Rivadeneira, the head of the design team at John Fluevog Shoes. Fluevog's funky cool footwear has been spotted on the likes of director Robert Altman and pop star Madonna.

Comfort, night riding safety and fashion all in one sleek package: the Cavallo SPORT Hoof Boot, \$129.95 per pair. Cavallo Horse & Rider Inc., toll-free at 1-877-818-0037 or online at www.cavallo-inc.com



The Edge has finally arrived! EasyCare Inc. Announces their Latest Riding Boot

The long awaited Easyboot Edge hoof boot is now available. This boot is great for the weekend warrior, as well as the long distance rider who wants protection over their horse's bare feet.

Trail riders will appreciate the **worm clamp fastening system** which makes this boot easy to apply, and an aggressive tread that grips slick terrain. The gaiter is designed for a seamless fit, while the smooth interior hugs the hoof. The tread will last 500-750 miles on average, and they'll outlast shoes 3 to 1!

The Easyboot Edge opens wide enough for the foot to easily slip in, and adjustments can be made using the new "Easy Key" that comes with the boot. A screwdriver or penny can also be used. The padded tongue ensures the boots are not over tightened, and all hard portions of the boot are below the hairline.

The Easyboot Edge is sold in pairs. EasyCare has also released three other boots this year—the Easyboot Glove, the Easyboot Glue-On and the Easyboot Rx therapy boot. Available from The Horse's Hoof Store, or www.easycareinc.com



Hoof Help Online™

Hoof Help Online Launching

If you are reading a printed copy of this magazine, our current plans are that we have already launched Hoof Help Online by now! We are shooting for the end of June—or asap!

Hoof Help Online is a barefoot trimming educational program, hoof care assistance, and a supportive community all in one, which will be located at www.HoofHelpOnline.com

On this membership website, James & Yvonne Welz will share their unique system for the first time, in full detail, through video, photos, articles, presentations, and a members-only forum. Our keys to obtaining a truly high performance barefoot hoof that looks astonishingly close to wild mustang hooves will finally be unveiled—and demonstrated. The most controversial topics of "how and why" different parts of the hoof are trimmed will be covered in detail. Learn why we believe that the trim itself really is the most important part of barefoot success.

For the latest status of Hoof Help Online, visit: thehorsehoof.com/HHO.html

Healthy Hoof X-Rays

There is perhaps nothing more rare than x-rays of **healthy** hooves, showing healthy coffin bones! Most x-rays are taken for diagnostic purposes on lame horses with pathological hooves. Catherine Chandler shares photos and x-rays of Indra's healthy hooves—read their whole story on page 2!

Indra's Left Front



Indra's Right Front

