

Broken Bones - Unbroken Spirit: ILLIMANI's Story

By Eric Hoffman



Illimani's face was also injured. We think, because of the dent in the top bar, that in his panic, he may have run into the green metal gate.

In 2011 I was hired to evaluate alpacas and llamas for a distress sell of about 1,000 camelids. While walking through the numerous herds, I also discovered an unlisted herd of seventeen guanacos. When I asked about the plans for the guanacos a member of the auction team hired to disperse the herds frowned, complaining that the guanacos couldn't be caught or handled. A chill ran down my back. I'd had a conversation with a meat procurer earlier in the day who was planning to take animals that weren't purchased. I wondered if the guanacos would experience his services. I asked auctioneers if I could have a little time to find homes for the guanacos. We agreed on a price of \$300 per animal. Happily, I found them all homes by phoning a few friends, and buying three myself.

The males had been separated from the female herd and were housed individually in smallish pens. These males were nervous animals, pacing and running up and down their fences demonstrating their territorial yearnings to both the female herd and the pens of nearby males. The close proximity of so many like-minded males provided a demonstration of sky-high testosterone levels and uncensored male camelid behavior: snorts and every conceivable threat display. I hoped I could find a male that was on the docile side who could co-exist with domestic male camelids back at our farm. At last I found a calm guanaco male running with a dozen male llamas. With enticement of a bowl of pellets he entered a catch pen.

I've been raising llamas and alpacas since 1976. In the spring of 2011, I brought three guanacos home. This is a story about one of them, our male guanaco, Illimani. Illimani means "beautiful mountain" in Aymara, one of the native languages of the Peruvian highlands. Illimani is the second tallest mountain in Bolivia, a 6,483-meter (21,122 ft.) goliath, covered in glaciers towering over the Bolivian capital of La Paz. In the mid 1990's I often marveled at this peak when screening alpacas near the airport in El Alto. During lunch breaks we'd watch the snow blowing skyward off its many glaciers. Bolivians working with us would tell about Eastern Airlines flight 980 that hit the mountain in 1982 and how no bodies were ever recovered because the terrain and altitude were so inhospitable. The mountain holds many mysteries.

He was nervous when I approached but manageable once haltered. This would be my male. His name would be Illimani.

Illimani joined our farm in California and quickly became a favorite. He loved to run and he didn't spend much time threatening others or pacing. His speed and agility was impressive. Friends would come by to watch him run. In a race with any of our llamas and alpacas he'd start forty yards behind them, pass them in a few giant strides get to our barn, and head back right through the herd he'd left behind. He'd sail over the ground like a greyhound and turn on a dime. When he'd go into pronking mode he was beautiful. His leaps appeared effortless, light as feather with enough vertical lift to qualify as "hang time." He also liked running up a steep hills and reversing himself and racing down at breakneck speed. He seemed to do it for pure joy.

Two years ago Illimani's exuberant mobility was halted in a horrible accident. Early on January 4th, a rainy, foggy day, there was a loud explosion near our pens. It woke neighbors. I was in a pen feeding alpacas and the noise was so loud it made my ears ring. I couldn't tell where the noise came from, but it was felt very close. In a few minutes I was on the phone to the police who promptly arrived with a swat team (today's America). They went into the park looking for the source of the noise. At first I helped them find their way, but I soon noticed they were armed and wearing flak jackets and I wasn't. I excused myself and went back to the farm and soon noticed Illimani was standing very still at the bottom of his favorite hill. He was unsteady. His front right leg dangled like

a pendulum. He had broken his leg a few inches under his elbow. The skid marks on a steep hill told the story. He'd come racing down and slid into the fence he'd stopped in front of for years. Illimani's reaction to the explosion had pushed him past the fine line he'd displayed so many times. Out of fear, he'd run blind.

Our veterinarian, Kristin Wallace arrived within the hour. The radiograph showed a nasty break with an extra complication of large triangular section of bone that had separated from the fracture. In a short time Dr. Wallace fashioned a cast that was well padded and designed to transfer his weight to a splint. His weight would transfer up the cast to his shoulder and came close to stabilizing his leg above the break. This was seen as a temporary measure. Dr. Wallace would cost out moving Illimani to a veterinary service that could plate his leg to bind the break.



Eric assists Dr. Wallace (center) as she works to stabilize both ends of the fracture in a specially designed cast with multiple splints and plenty of padding. Nicole Henry, a UCSC Pre-Vet student helps with restraint.

We wondered if Illimani would tear himself apart when he was allowed to walk again. After all, being a guanaco he is hard-wired to be leery of people and the unknown, prone to run from danger, and take risks. To our relief he treated his broken leg with respect. He held it out in front of him and never tested it on the ground during the first few days. When he'd kush he'd lean to his good side and roll to the ground, and when he rose he used his sound leg to lift himself to a standing position. Some kind of inner voice told him not to mess with his bad leg. He'd hobble around his pen slowly with his leg held off the ground. His appetite remained strong. We reconfigured his pen into a smaller space on level ground with no obstructions or slopes of any kind.



Illimani coming out of anesthesia wearing his first cast.

In a short time we realized cutting edge medical care was financially prohibitive

After looking at the radiographs, both a top equine surgery and UC Davis quoted us around \$10,000 - with no guarantees. We decided to fix it ourselves by fashioning a really sturdy cast with specially made aluminum splints to help stabilize the leg entirely at both ends of the break. Dr. Wallace agreed to give it a try but warned me the outcome could be disappointing.

For this article, I asked Dr. Wallace what she was thinking at the time. "Well, I remember a severe break with a free floating fragment. I didn't feel comfortable with it because the break was so close to the elbow that stabilizing it would be nearly impossible. I was skeptical."



A few days later Dr. Wallace created a second cast using specially cut aluminum rods and a length of plastic pipe to add greater stability to the leg.

Four days after the accident Illimani was anesthetized again. Radiographs were taken. The fragments and break looked worse. We went ahead with our plan. Dr. Wallace worked meticulously. She padded the leg with thick gauze and vet wrap and fixed aluminum splints into the cast. She spent a lot of time adjusting the fit because she was worried about chafing and rubbing that would cause sores that could become infected. An hour after she started Illimani was back on his feet. He moved away from us but did so gingerly. Dr. Wallace detected slight movement at the elbow and guessed this would greatly reduce the chances of the break healing. We paid attention to Illimani's diet. Healing can be enhanced by nutrition so we added supplements to the high protein forage we were feeding him, in the hope of enhancing healing and bone growth.



The cast with a two-splint system is complete.

A month passed and Dr. Wallace returned. She anesthetized Illimani and took radiographs. She recalls, "Overall, it didn't look good. The large fragment displacement looked worse. It had moved away from the impact area and there were no signs of healing." Clinically perhaps more worrisome was the fact that he was not bearing any weight on his leg; he was still carrying it out in front of him. Illimani had been a model patient but it appeared his luck had run out. We discussed amputating his leg. On another farm, Dr. Wallace had amputated an alpaca's front leg that had been mangled in an accident. The animal was mobile but spent a lot of time off her feet. This was a tough decision. We talked about euthanizing Illimani. He didn't seem to be in pain but the movement he thrived on seemed to be gone forever. Legs for him are what wings are to a falcon.

We live in a redwood belt that gets between 40 and 100 inches of rain annually. The day after we learned there had been no healing in that first month, the rains began with a vengeance. Illimani liked to sit on a covered earthen platform and watch the water rush down our valley as it passed right below him. He'd sit there for hours chewing cud. He'd taught himself how to get up and down without tweaking his fractured leg and extended it fully when he was kushed. Despite the rains he stayed dry. The rains turned out to be a blessing. We had decided to amputate, but the rains persisted and his covered night quarters seemed too limited a space to restrict him during his recovery. We waited for the rains to pass, so his recovery area could include fresh grass and different settings. Two months after we learned the fracture hadn't healed the rains finally stopped. Nearly four months had elapsed since his injury.

On March 25, 2015 Dr. Wallace returned with her surgery kit. We anesthetized Illimani. Navreen Riar, a pre-vet student from UC Santa Cruz and Stacey, Dr. Wallace's assistant, prepared for the surgery. I asked if we could take one more radiograph to make sure where things stood. "Of course," said Dr. Wallace. The radiograph showed a healed leg! Dr. Wallace palpated it and stressed it to see how solid it felt. "Amazing," she said. Thanks to the careful construction of the cast there were no troublesome sore areas. Illimani was given a transitional splint

that allowed his knee joint to regain movement while the leg got some support. For weeks his knee seemed unable to flex properly but eventually the joint loosened up.

A little less than two years after his accident Illimani started pronking again: huge leaps and gentle landings. He walks and runs with just a slight limp. When radiographed it looks ugly, but it has healed and is strong. Illimani still likes to explore his space and can sprint, but he's not the daredevil he once was. He has also become more trusting towards people.



After four months in a series of casts, Illimani's leg had only one small rub mark.



Initial break.



The splint/cast is visible and the bone ends and fragment aren't connected. Clearly the radiograph showed no healing. It was a very sad day; amputation seemed a probable outcome. Then it started to rain, - a lot. Over 100 inches, and everything went on hold.



The bone ends found one another and connected. On March 25 we had planned to amputate his leg but this image told us the bones had fused.

Dr. Wallace thinks there was some luck involved, but says, "The team effort made the difference. I did my part as best I could under the circumstances and your management mattered. It helps that camelids have a capacity to heal their broken bones better than most large animals. I've certainly had some nasty camelid fractures that healed remarkably well but Illimani is the most spectacular example. Unfortunately there are others without anything close to his success. There's a saying among veterinarians: If you put the cat and the two ends of the bone in the same room, it will heal. Camelids are sort of like a cat when it comes to recovering from bad breaks."

Illimani has been an inspiration to all of us.



Illimani today, two years after his accident. He is mobile and alert.

About the Author

*Eric Hoffman is the primary author of the second revised edition *The Complete Alpaca Book*, (Bonny Doon Press, 2006). He wrote the first scientifically based alpaca registry (known as ARI for many years, but most recently merged with AOA) in the world and is author of hundreds of articles on all four species of camelids. His articles have appeared in *International Wildlife*, *Animals*, *Pacific Discovery*, *California Living*, *Wildlife Conservation* and many other publications. His speaking engagements on camelids have taken him to many places including Australia, New Zealand, Sweden, Finland, Switzerland, Canada, Peru, Chile, Germany and England in recent times. Most recently he has been involved in cancer research project involving camelids at Kyoto University in Japan. Eric and co-authors Sherry Edensmith and Pat Long DVM published "The Alpaca Evaluation: A Guide for Owners and Breeders", a three DVD set and 120 page fully illustrated handbook.*

