high in the thin cold air



can't recall what year this was, as I am writing on the spur of the moment, but it was around 2000. Jeb Blakely and I had gotten something going in the Peruvian Andes a few years before, and that was producing some nice stuff. The latest article in the *NSS News* (October 2011, Vol. 69, No. 10) by Mike "Gringo" Green, is an update on that area.

But being adventurous me, you could say I wasn't satisfied. There were some intriguing situations in the Andes and my work up to that point indicated that the other foreign caving expeditions had chosen places with known caves of relatively easy access. After having been there, I can say that *none* of the Andes is of easy access. Peru is the land of 12-hour bus rides (and that is if all goes well), and has huge wilderness areas.

The Cordillera Raura came to my attention while going through the files of the South American Explorers Club in Lima, files which have now been discarded. It is a lesser known mountain range to the southeast of the Cordillera Huayhaush, which is just south of the well-known Cordillera Blanca.

Of interest to me was the geological map of northern Peru, which showed a huge limestone band occupying this range. Wow, some really high limestone – the peak called Santa Rosa is the tallest there at 5706 m, or 18,720 feet. Damn, that's high!

It is not easy to interest folks in just scouting, but I got old-time Marbles caver Mark Harder up for it. A road runs up to the Minas Raura, ending at a rich mine, the only reason for its existence. We caught a bus from Lima and 12 hours later, about midnight, we get off and it's COLD. Gee, I am breathing hard, but the Minas are at 15,000 feet.

We found a room in the bachelor miners' barracks, and the next morning took a look. What a sight!...you are

The Cordillera Raura

by Steve Knutson



in the bottom of a glacial valley, at 15,000 feet elevation, and all around you are 17-to-18,000-foot peaks literally looming over the mine complex. Glaciers attached to the sides looked ready to detach and come crashing down to wipe us all out. At a glance you can see that those peaks are all limestone, and with massive bedded structure. Very nice.

Santa Rosa is right there, and the top of the peak was free of snow and the same gray rock. Yikes, limestone at 18,700 feet! This must be the highest limestone in this part of the world ...though maybe higher in the Caucasus, the Himalayas, or New Guinea. Wow.

The plan was to spend a few days checking around road's end, to acclimatize some (mountaineers say it takes about a day for every thousand feet), and then backpack north, downstream from near the headwaters of one of the main branches of the Amazon River, the Rio Maranyon. Losing some elevation, and then

over a pass to the east, we would head around the northern end of the Siete Caballeros, a high, jagged ridge going north from Santa Rosa, and into a parallel valley. The goal was to check out a sizable lake that had no topographic map outlet, under the northeast face of Santa Rosa.

This would be a day's hike to the valley, and we would camp wherever we found water. Mark wasn't acclimatizing well, so we postponed a day and I went alone around the little side valleys to the Minas, and saw a few holes into which glacial lakes were draining, but they all pinched out quickly. I could see that to get high onto the Santa Rosa, or up onto the Siete Caballeros (where miners said there were pits) would require crossing a glacier. I actually took a look at that, but it was a *real* glacier and I knew enough to know you don't do those alone. In the side of it I found a glacier cave, at about 15,500 feet, a big walk-in passage that had formed, I guess, because the glacier went over a



step. Not too far inside you could hear churning water, which I took to be the melt stream under the glacier, and assumed I would find a passage containing just that. Inside, though, was an ice climb-down, and an equal climb-up just beyond, and not being sure I could do it, I backed off. Imagine the glacier stream being the resurgence of a limestone cave – glacier cave leads to a solution cave...

I also noticed the huge mineral band that ran thru the ridge that they were mining, and below every little lake was a different bold color...green, blue, red, yellow...I guess from heavy metal minerals.

It came time for the backpacking trip and off we went. We had I think five or six days to get it done to board the daily bus to Lima to catch our flight home. The hike north went well, but it socked in as we headed up and over the 15,000-foot pass. A llama train went by at one point as I waited for Mark to catch up. Some of those llamas, which you occasionally saw high up on mountainsides, were almost as big as a horse. I remember coming upon one in the mists, suddenly looming up. It was so big I made a detour around it, which it seemed to expect.

When it was clear, we could occasionally see solution passages upon the faces of the cliffs with some finely sculpted hour-glass shaped openings, but no easy way to get to them. As we came over the pass it was getting late in the day and we soon found a trickle of water enough for a camp and called it home.



[Above] Llama train [Below] Mark and a karst landscape. Steve Knutson [both]





The next day would be a day trip down to the enclosed lake. Mark still wasn't feeling well so I figured he would eventually turn back to camp. The route was very clear since we were heading up a glacial-cut valley, with its smooth U-shaped cross section, floored with nothing but alpine bunch grass. There was a faint trail to follow as it climbed ever higher.

I finally got to the lake and found a way down to the edge. On the far side, hundreds of meters across, the Santa Rosa side was revealed to be a massive 1,500-foot cliff face. Glacial melt cascaded down, and in a couple places it hit ledges and then no visible water for a ways, then cascades again. Karstified? I thought to myself. At lake level there looked to be an opening

on the far side but not totally black like it really went. I tried to get around to it but got cliffed out.

I started back and checked a couple holes on the valley side but they didn't go. I got back to camp and went to Mark's tent and shook it to rouse him and tell him what I had seen. Nada! I unzipped it but no Mark! What the hell! In the valley on the way back I could see the whole thing, and he wasn't there... was he down the valley?

I needed something to eat, so I quickly fired up a stove, cooked and ate. It was getting dark and still no Mark. Should I wander around in the dark back up the valley? And then a storm suddenly arrived. I got my light and went out to a point that overlooked the valley, and

[Left] Peak above the mine. [Right] A lead left behind. Steve Knutson [Both]



showed my light. It was now blowing hard and sleeting with lightning going off overhead. I could see up and down the valley for miles yet no lights appeared. I went back to camp as it was still storming, I was tired and what good would it do to wander around in the dark? So I went to bed. You can imagine my mood.

In the morning as soon as it was light I was up and fed and off south to see if I could find him. What the hell was I going to do if I didn't? I was having a hard time imagining him surviving the night, especially if he had gotten hurt. As I walked along in the mist, I suddenly saw a figure ahead of me, but that's not Mark, as this guy is wearing a poncho. I walked up to him and said I was looking for my companion. He replied, "Yeah, he is at my place."

Off we went to this fellow's homestead at 14,300 feet. I had seen this earlier but didn't know what to make

of it. There are rebel groups in some outback parts of Peru, like the Sendero Luminoso (Shining Path) - real Maoist types who don't like anyone, so I had deliberately avoided it. There were some ore cars at the mine, built like Abrams tanks, that had been blown all to hell by the Path guys.

The homestead was a bunch of sod buildings, cut from the old playa lakebeds right there, and the owner must have been growing potatoes and was clearly raising some animals. I asked what he did when it snowed "Oh, it only gets so deep", as he indicated his waist height. He asked me if we were from the low lands, apparently because we were so dumb in the mountains. Mark had been housed in one of the sod outbuildings, which he shared with a herd of the little guinea pigs that Peruvians like to eat. The Peruvians advice? "Go Home!" After we paid the guy for keeping Mark alive, he said "Hey, come back anytime."

[Above] Laguna Manacancota. Steve Knutson