

The Midas Touch: A Return to Gold Basin

by Geoffrey Notkin

The slopes are like gigantic eels half buried in the sand. Intervening gullies are choked with sand and pebbles from centuries of flash floods. The sky is crystal blue, over rolling sun-blasted hills dotted with twisted joshua trees. The high washes – which run parallel to each other for miles and miles – are covered with a hard, dense desert pavement which is, unfortunately for us, almost exactly the same color as the Gold Basin meteorites which lie within it.

In February 1998 I interviewed Jim Krieger, discoverer of the Gold Basin strewnfield, and his hunting partner Twink Monrad (see “The Great Gold Basin Rush,” *Meteorite!*, May 1998). While prospecting for gold in north western Arizona Jim began finding unusual “hot rocks,” which give strong readings in metal detectors. The University of Arizona identified these stones as L4 chondrites that had baked in the Arizona desert for perhaps 20,000 years.

Following our interview, my hunting partner, Steve Arnold, and I visited Mohave County to search for ourselves. Two days’ work produced a fine assortment of bullets, barbed wire and ordinary hot rocks, but nothing extraterrestrial. I kept in touch with Jim and Twink throughout the year. We became friends and correspondents, and exactly a year later accepted an invitation to join the Gold Basin hunters at their campsite to see how it’s really done.

Day 1, Thursday

We have spent a few days at the Tucson Gem and Mineral Show in the company of Jim and Twink, and have made plans to rendezvous at Gold Ba-

sin. Steve and I retrace our route from the previous year, overnighing in Kingman where we stock up on supplies.

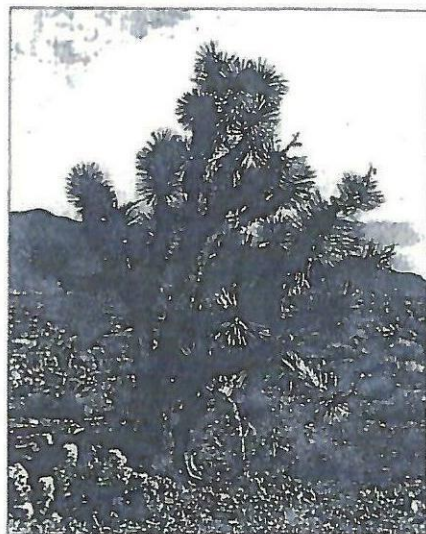
Day 2, Friday

The morning arrives bitterly cold and we buy heavy sweaters before leaving town. Little has changed in the intervening year.

Eventually we leave the paved roads beyond Dolan Springs and head cautiously onto rough trails suitable only for mules and the hardest of 4WD vehicles. As we lurch over shoebox-sized rocks and angular dry stream beds – all of them hungry for our muffler and exhaust pipe – we marvel at Jim’s driving skill, for each season he maneuvers an RV along these broken trackways. Jim has drawn us a map, and furnished us with excellent directions, but there are few landmarks. We watch intently for the “old placer mine,” and the “sign that’s fallen under a bush.” A few times, Steve stops and I get out, pacing a particularly rough stretch to make sure the old truck can handle it. We take 45 minutes to traverse a puny three miles, never certain that we’re going in the right direction. One nearly-invisible turnoff looks much like another, and what I imagine to be placer diggings might just as easily be animal burrows. We are about to turn around when I see a flash of white from the top of a steep hill: a splendid RV glittering in the sun.

We come to a stop in a cloud of dust, to be greeted instantly by John and Suzanne – meteorite hunters from Flagstaff whom we met earlier in Tucson.

“Jim and Twink went in to town to fix a flat,” John tells us. “Get your gear together and we’ll take you hunt-



The joshua trees dotting the landscape were spectacular, but the spines are extremely sharp and plenty of them are at eye level. I wore sunglasses at all times!

ing with us.” I grab my canteen and tools, and we are off bumping along rickety roads to a flat plateau, covered with brush, and criss-crossed by gullies with almost vertical sides.

Correctly calibrating the metal detectors is difficult and takes much practice and patience. The audio signature of the Gold Basin chondrites is so very similar to the sound made by ordinary hot rocks that even my musician-trained ears quickly become exasperated. I complain about this to John as we search. He laughs and says, “You just have to dig up a whole lot of hot rocks first.”

After a few hours Jim’s truck appears over a ridge. We are delighted to see him and Twink, but the February daylight is fading, and conversation is postponed in favor of hunting. As the Sun begins to set – turning the sage and joshua trees orange – Steve finds his first piece: a 60 g fragment, only fifty yards from the road. We have had six detectors working. John has found a small piece, and Twink has found three. I am impressed by the results, but Jim is disappointed.

“I can’t believe we didn’t find more,” he says. “With all those detectors out there.”

I crawl out of my tent at 6:45 a.m. to watch the sunrise. There is no natural wood here, but dead cactus limbs burn well enough to brew some tea. Jim has warned me about rattlesnakes, so I wear gloves and poke everything with a stick before picking it up.

This is the beginning of Jim and Twink's third year hunting at Gold Basin. "It's getting harder and harder to find anything," Jim tells me later, as we careen along dimly-lit trails, my head banging against the roof of his truck. "But we're definitely going to find some."

In the early-morning desolation, that last thing I expect to see is another meteorite hunter. But here's a 4WD parked by the side of the road. Setting up their detectors, are Jack Schrader and his father Chuck. They greet us with big smiles, and discuss the previous day's hunt.

Once we reach the site, I am struck by the speed with which everyone covers ground. Within minutes, I have the desert to myself. My companions have disappeared over hilltops or into ravines.

The washes are capped with desert pavement, with a bronze patina that could have been airbrushed on. Below, the ground is softer, and it's easy to dig through. I have a powerful magnet attached to my digging tool, but the only thing it sticks to is a buckle on my jacket. The number of useless stones I dug up! "The next one, maybe the next one," I keep telling myself.

By late morning, the heat has started to build, and we return to camp. Everyone has found at least one meteorite except for Suzanne and me. I'm a little cranky, but my sunshower has been warming up all morning, suspended from a Joshua tree. I feel relaxed and cool after basking in two luxurious gallons of warm water. I am about to settle down for some lunch and a rest when Jim reappears.

"Ready to move out?" he beams.



My first Gold Basin meteorite. The author with a 48.6 g stone. Photo by Jim Kriegh.

So, I stuff crackers and a bottle of ice tea into my backpack and in moments, the campsite is deserted.

Jim and John have patiently demonstrated how to calibrate my Goldmaster detector. I borrow a chondrite and, wearing headphones, repeatedly pass the detector over it, trying to paste that infinitesimally different aural signature into my memory. I'm damned if I can tell the difference. I determine to dig up every hot rock until I find something. Hours pass and I do dig up a bucketload.

I get into a routine where I lay the detector on my left forearm and scrape through the dirt with a hand fork. I dig down five or six inches to find more hot rocks. One of them miraculously jumps onto my magnet. I



At last! A 67.3 g stone with crust, just as I found it in the desert pavement.

keep telling myself it's just a lump of iron or some other as-yet-unknown hot rock which is magnetic, but still not a meteorite. I unhook my canteen and wash off some of the white caliche. Sparkling in the Sun are tiny metal flakes.

I walk over to Jim, still expecting the worst. He looks at the stone for a moment and says, "Yes, that's a meteorite. No question about it. It even has some crust on it."

That night, Chuck and Jack join us in the comfort of Jim's RV, all eight of us enjoying Twink's excellent Mexican cooking. There is a great feeling of camaraderie. After dinner, we partially cover a table with our combined finds. They look very impressive, but Jim brings us back to Earth by musing that, "All of these would have been a good find for one person in the early days."

Day 4, Sunday

John and Suzanne depart the next morning, and Jim takes us back to an area where good finds have been made in the past.

The land here is different: the wash backs are narrow and lie close together, like parallel fingers on a long hand, covered with cactus and brush that cast long morning shadows. After half an hour my detector briefly emits



The man with the Midas touch: Jim Krieger pulls another 100+ g Gold Basin meteorite out of the desert.

a slightly different sound; my ears are getting attuned. Fitted perfectly into the jigsaw puzzle of natural pavement is an exquisite 67 g golden meteorite. This one is not caked with caliche, and it clearly shows patches of black fusion crust. Jim has told me that whenever I find one, I should carefully search the immediate area, as they seem to have fallen in clusters. I carefully grid the surrounding quarter acre, and find another fragment sitting beside an old miners' burrow.

When Jim returns to the truck at

lunchtime, he finds Steve and me resting under its minimal shade. Jim produces a superb 209 gram broken individual – shaped like a small Idaho potato with the end snapped off – which he found buried five inches into a hillside. Twink shows off five new pieces, one of which is a lovely angular 130 g fragment which was “just sitting on the top, under a Joshua tree.”

In the evening, Jack Schrader joins Steve and me by our roaring campfire of dry cactus parts. An occasional meteor streaks across the clear sky, reminding us why we are out here.

Day 5, Monday

It is 7:40 a.m. As always, Jim is awake before us. We can barely keep up with him.

Today we venture high up into the eastern edge of Gold Basin, hoping to extend the known perimeter of the strewnfield. The ground is particularly harsh, with

deep ravines pock-marked by painfully sharp barrel cactus. We four hunt for several hours, finding nothing, suggesting that we have gone too far and moved outside the strewnfield.

Later, we return to more familiar regions, and I follow Jim over the slopes, taking pictures of him at work. I watch him discover an excellent 132 g chondrite, again on the surface, and almost invisible against the stones that surround it. Twink joins us and they find several more close by, clearly illustrating the tight pattern in which these fragments fell.

“This is how we work, Geoff,” Jim tells me. “As a team. We stay close together and if one of us finds one, we call the other over and search the area together instead of trying to clean it all out on our own. That way we usually end up with about the same at the end of the day.”

And they're part of a larger team too – continuing to meticulously record the weight and location of every find, and passing that information on to the University of Arizona. It is probably the most thorough body of information ever compiled on a large strewnfield. The resulting data may tell meteoriticists more about how and when large meteoroids break up in the atmosphere.

Yes, the stones are getting harder to find. Between us, Steve and I spent over fifty man-hours on the slopes and came home with six pieces. But they are our pieces, and isn't it just part of human nature that if they were easy to find, we wouldn't even want them?

Author's Note

The Gold Basin strewnfield lies on both private and Federal land. Meteorites found on U.S. Federal land belong to the Smithsonian Institution. Meteorite hunters should contact the proper authorities for permission to hunt at Gold Basin, as Jim Krieger has done, and forward any information regarding finds to Dr. Kring at the Lunar and Planetary Laboratory in Tucson, Arizona.

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