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CHAPARRAL WISDOM

Richard W. Halsey

His paws were twice the size one would expect from such a delicate, little body. Holding one of them in my hand, I gently pushed inward with my thumb. Although not unexpected, it was still surprising to see small, sharp claws reveal themselves through soft tufts of fur.

He was a wild animal, but it was difficult not to think of him as a friendly housecat, purring loudly on his favorite, overstuffed chair. I picked him up as carefully as I could and set him under a large manzanita next to the road. He was heavier than I expected, a mass of muscle and instinct, all stopped cold by some early morning driver who was no doubt sipping his coffee, blindly racing

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Mopping up

A Muse by Jim Hart

Sometimes it takes a kid to put things into perspective. I was reminded of this on the last day of my USFS red card refresher course about a month ago. A red card is a license to do fire with the feds.

I carpoled with a 20-year-old young man who has been dreaming about firefighting ever since he was a toddler playing with toy fire trucks. We had just spent our final session together scraping dirt and breathing in smoke while mopping up the last remnants of a prescribed burn; nothing too exciting. Although we did experience flame lengths in excess of four inches, our portable fire shelters were not deployed (a running joke all day). Just a bunch of folks out in the forest doing

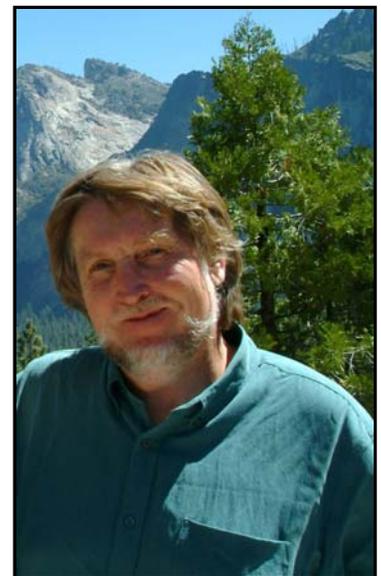
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Jon E. Keeley: A True Chaparralian

"Phenomenally eccentric in his research interests, that's the way I'd describe Jon Keeley," Bruce Mahall said of his long time friend and colleague.

No wonder. Jon's enthusiasm for solving interesting questions about the natural world has led him to investigate such diverse subjects as the physiology of vernal pool plants, seed germination, the taxonomy of the classic chaparral species, *Arctostaphylos* (manzanita), fire ecology, land management, invasive species, and conservation biology. "He even did this fascinating study of *Sylites*, a tiny, rare plant that only grows in the high Andes. He discovered it doesn't have stomata, so it has to absorb CO₂ through its roots! How does he

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what they love. Although Joe and I are thirty years (plus) apart and couldn't have been coming from more different places, we hit it off pretty well. I guess that kind of thing happens when you toss people together who are asked to do push ups every morning, memorize 10's and 18's, and learn a new life. But this was wildland firefighting in the USFS and it ain't like anything else (10's are the ten basic firefighter safety orders, and 18's are the eighteen watchout conditions on the fireline that spell trouble).



Joe

Joe and I talked about a lot of things while we trained together, especially in the car up and back down the mountain during our last day together:

- What being a wildland firefighter really meant to us (helping people and protecting the land).
- How important it was for our crew to work as a team.
- How proud we felt to be able to wear USFS gear (even though the packs were brand new).
- How lucky we were to be trained by a remarkable captain whose main concern was to create a professional crew that he can bring back home ALIVE, every time.
- Why the community bond within the fire family is so strong.
- And yeah, how cool we felt when we filled up the gas tank with our Nomex still on (Nomex is the fire resistant clothing wildland firefighters

wear). People noticed and knew we were USFS firefighters. One girl smiled and waved at us.

Although he's eager to work with the Crew 5, Joe can't wait to get assigned to an engine. He was a 17-year-old volunteer when the Cedar fire started in San Diego County and was on one of the first engines that responded that night. Since he was so young and a volunteer, all he could do was watch. But man, what a story to watch. He's worked with the CDF, a municipal fire department, the USFS, and has even flown a bunch of missions on air tankers. Fire is in this kid's blood. When I listened to him, all I could think about was how lucky I was to have the chance to be able to hear his enthusiasm, his dreams, and the love he has for the fire service.

Money? Who cares, just as long as you can drive around in a fire truck, put out fires, and save lives.

Imagine, going to work everyday with a firefighter uniform on, being ready to save some one's life or home on a moment's notice. That's what he was really saying.

During one of our intensely deep, philosophical discussions (the car radio was off), we figured there are two kinds of people in the world, those who go out and try and make lots of money, and those who go out to make a difference in the world. Money? Who cares, just as long as you can drive around in a fire truck, put out fires, and save lives.

There's a real sense of family in all this. I don't know whether it's the risks we take together, the common mission, or the camaraderie we share. Not to say there isn't a healthy amount of inter-agency rivalry, because there is. Each one thinks they're the best, USFS, CDF, city, etc. Being a

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come up with these things? The man has remarkable insights.”

My first interaction with Jon in 1999 exemplifies another one of his talents, being brutally honest. I had sent him an email with some questions about fire in chaparral ecosystems and he quickly wrote back the next day indicating in no uncertain terms that my note was “very troublesome” because I appeared to have “some significant misconceptions about fire” (and did I!). He continued writing, “My answering a few questions below will not solve that problem. If you are writing a natural history of chaparral you will need to do much more research on the subject to do it justice. I will send you some articles that may help get you started.”

Within a few days a huge envelope stuffed with scientific papers dealing with chaparral and fire appeared in my mailbox (actually it was sitting on top as it wouldn't fit inside). It didn't take long for me to realize I had encountered not only a dedicated scientist, but someone who has a passion for helping to educate others. He doesn't waste time with formalities; he is only interested in facilitating scientific truth. If the data doesn't stack up, he will be sure to let you know, and quickly. Pity the poor fool who unquestionably spouts conventional wisdom and unfounded assumptions. The envelopes have kept coming ever since.

If the data doesn't stack up, he will be sure to let you know, and quickly.

Jon has always enjoyed the natural world, playing within the chaparral covered canyons of San Diego County while growing up and learning about ecology along the way. After high school, the next logical step for him was to obtain Bachelor's and Master's degrees in biology at San Diego State University. Then it was off to the University of Georgia to obtain a Ph.D. in botany in 1977. He's been on a roll ever since, being a professor of Biology at Occidental College in Los

Angeles until 1998, a Program Director at the National Science Foundation, then as a Research Scientist with the U.S. Geological Survey in Sequoia-Kings Canyon, his current position.

Having authored more than 200 papers thus far, Jon continues to expand his knowledge and experience by asking the right questions, especially questions no one else is asking. For example, it was once generally accepted that chaparral shrubs chemically inhibited seed germination under their canopies, a process referred to as allelopathy. “I'd discuss the concept with my students,” Jon explained, “and they kept asking questions I couldn't answer so I decided to conduct germination experiments of my own.” He found that the seeds of most chaparral species are innately dormant before they hit the ground. Allelopathic chemicals had nothing to do with it. He continued to expand this line of research and was able to identify, for the first time, the specific cues (heat, charred wood, and smoke) that were responsible for stimulating germination in dozens of chaparral plant species.

Students and colleagues have often played an important role in inspiring Jon's research because of the way he teaches and communicates, focusing on methods instead of conclusions and encouraging independent thought and collaboration. And if there is ever an opportunity to give credit to those he has worked with, he goes out of his way to do so.

A remarkable scientist, teacher, and conservationist, Jon endeavors to show all of us the value of sharing knowledge with others and the importance of letting data determine the answers, not the other way around. Dr. Jon E. Keeley...a true Chaparralian.

A full set of Jon's papers can be found here: <http://www.werc.usgs.gov/seki/jkproducts.asp>

-RWH

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along the black ribbon of death. He must have felt it. He obviously didn't stop. Perhaps all he offered was a callous glance into the rearview mirror.

The end must have occurred within an hour of our discovery. The little body was so very soft, pliable. I ran my hand across his thick coat and scratched the back of his tufted ears. "I'm so sorry my little friend. I'm so sorry." No animal ever had fur so rich and silky. My boy Jake touched the front paw with a single finger and held it there only for a moment. This was not the way he wanted to experience nature, laid out on the asphalt like a discarded rag. Just before we arrived home several hours later, my son said, "I'm sad about the little bobcat."

Despite the sorrow that visited us that afternoon, the bobcat became an important, final messenger during our excursion into the Anza-Borrego desert that weekend. Four whispered voices from nature, each with its own language, had provided signposts that helped me find my way back outside, away from the self-centered noise within my own head. They reminded me of the sweetness found in the present moment.

During the morning of our departure the day before, our desert trip had become a reluctant one. Anticipation of fun in the truck with Jake and his neighborhood friend Ryan, driving through the desert, stopping to collect insects or rocks whenever we pleased, had been replaced by anxiousness. The morning hike I had been asked to lead was cancelled due to weather. My son's friend was expressing ambivalence about going with us. I sensed that attendance to the evening talk I was giving would be sparse. Perhaps I should leave the boys home, forgo the overnight stay, and do it alone. At the final moment, Jake's friend decided to go and we packed up the car after some lunch and headed up the mountain with windows open, music playing, and a burden of past and future worries clouding my brain.

Although its importance was not clear at the time, the first messenger arrived while taking a short cut to avoid driving through Ramona, a rural town with signals and 35 mph speed zones. It offered a chance to pass up slow moving drivers. The importance of such action seemed self-evident at the time, but not for the reason I had thought.

With a chance turn of the head, I caught a flash of bright yellow and red, moving through the roadside trees. "Hey, look, look! Did you see that?" I shouted at the boys. They both responded with quick bursts of excitement as they sorted through their stuff in the back seat to find their cameras.

"Dad! Don't stop in the middle of the road!" I realized the error of my ways and pulled the truck over, jumped out, and stared at the rainbows flitting about the foliage in the trees across the street; two Western Tanagers, and perhaps a third, dancing before us. Photographic efforts failed, but the experience continued nonetheless.

"I've only seen two of those in my life," I told the kids. I remembered each time as well I remembered other time-stopping moments, like where I was when I learned Walt Disney had died. But there's something different about memories of Western Tanager sightings. They're on a totally different level from experiences that deal with human-centered events. They help turn one's mind outward, to see existence as much more than just the assorted mental constructs we have created within. Nature lives in the raw, exists in the present moment, and invites us to do the same.

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After leaving the tanagers, we continued our travels, up and over the mountain, down through consecutive bands of different plant communities, each drier than the last: conifers, oaks, chaparral, inland sage scrub, sagebrush flats, juniper woodland, creosote shrublands, and then cholla-laced alluvial fans. We spent some time hunting butterflies along San Felipe Wash, but not much luck, possibly too early. The caterpillars were still dinning, getting ready for the big change.



While waiting on the roadside for the young entomologists, another messenger came my way, jumping from branch to branch within the boughs of an old sagebrush. Somehow the plant had survived the recent road improvement project. The messenger was so close I could have touched him; another bird, this time with a black mask surrounded by bright, yellow stripes. He would have stayed to chat, but a driver of a passing vehicle decided to modify our exchange by laying on his horn.

The bird flew away, I shuttered, and the driver laughed as he disappeared around the next bend. But the brief visit by the little warbler, the closeness, the calm manner in which he responded to my presence, allowed me to leave my inner world again. Sighting one of the region's most beautiful birds can do that.

Back in the truck, we drove out of the narrow canyon. The desert opened up and flooded my mind with space. Concerns regarding our final destination disappeared. Suddenly I was motivated to turn off the road to show Jake and Ryan a few earthquake faults I remembered from a previous trip; earth in the raw. Kids do that too. Live in the raw, the now, unless adults interfere. The geology mattered, but it wasn't long before old yucca stalks turned into spears and were thrown my way. Primal yells bounced off the rock walls, and deadly serious warnings of "Mammoths coming!" were shared between the cavemen. It took a sharp yucca splinter in my right hand to suddenly move the time machine fast forward. Otherwise, we could have stayed there for years.

Within the hour we arrived where we would be staying for the evening; a rather posh place with a kitchenette and squishy pillows. Showered, dressed and off to dinner we went, with all the assorted gear necessary for my presentation. One wouldn't expect to find anyone within the confines of a country club setting who had hiked the Pacific Crest Trail. But there they were, across the table from us, explaining what it was like to hike the spine of California in order to celebrate their retirement when most people their age and disposition would have been much happier on an ocean cruise. The surprising conversation, the unexpected story, the presumptions I had carried to the table, all reminded me of the two birds I'd seen earlier in the day. Not the birds themselves, but the message they had delivered. If one can leave preconceptions behind and allow the present moment to live, the richness of life can be fully felt.

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No doubt a fine glass of Cabernet helped, but the dinner experience became all absorbing. That was until time reminded me of its passing. My talk was in fifteen minutes. As I turned to get up, the third messenger made its appearance. Alternatively soaring and diving over a small pond outside the restaurant window, a single nighthawk searched for insects. With distinctive white wing bars and a head that seems to be completely absorbed by a short, stubby body, nighthawks are birds of twilight, most often seen at dusk. "I love the way they fly," I commented to Karyn, the naturalist who had invited me there. "I've only seen a few. They've always been so mysterious to me."

She smiled and pointed to the lake at the center of the golf course. Dozens of nighthawks crowded the airspace above the blue oasis, maybe 200 of them. Jake and Ryan immediately asked to go and experience the air show for themselves, dashing out the door before a word was spoken. I paused myself and debated on whether or not to delay my talk, maybe even drag the audience with me. Whatever I was going to say, the nighthawks would certainly have been able to say it better. Sitting there quietly, on a grassy slope, watching life unfold in its purist form would have shown what words never could. But I deferred to the mood of the audience and shared my thoughts about the nighthawks from within.



We left the desert the next morning a different way than we had come, up a steep grade into a vast area of desert chaparral that I had never really considered before. Always on the lookout for new forms, this type of chaparral was dominated by huge specimens of sugar bush, scattered chamise, scrub oak, a few silk tassel bushes, and some remarkable manzanita. We pulled into a turnout and embarked on a short

expedition to discover what other mysteries the elfin forest would reveal.

A fire had started nearby, most likely caused by some careless tourist or a car fire at the turnout. It looked like a small one, about ten acres. Based on the re-growth, it appeared to have happened about two years before. I didn't notice any seedlings so the entire shrub population was regenerating from basal burl re-sprouting. We located the handline firefighters had cut just below a small ridge and followed it along the burn's perimeter. The kids asked if they could go clamber about on some boulders and I agreed, giving them the usual warning to be careful. They went a short distance before turning around to explore in a direction completely opposite to the one they had asked me about.

I went my own way and found the signs of a small spot fire that had been extinguished by some focused

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and delicate work with a chainsaw. What was being protected, other than preventing the fire from escaping again? Before me was a ten-foot tall, multi-trunked manzanita, gracefully arching its smooth, red limbs into the sky, variegated with alternate ribbons of dead, gray wood. Several larger branches growing in the direction of the fire had been cut and piled nearby. Having not been there, I can only speculate about what went on, but it was clear from the piled branches, cuts, and handlines, that the fire crew had gone to great lengths to save this old beauty. A fire suppressed; an ancient art form saved from the flames.



What struck me about the chaparral stand in this place was the thickness of the all the shrubs' trunks and the age they suggested. They looked to be at least a century old or maybe more. I didn't think such a healthy, old-growth stand could exist in such a dry, desert environment, but here it was. The sandy soil and aridity of the site made this chaparral type less dense than old stands at higher elevations, but they also allowed access.

After losing, then finding my two junior explorers, we jumped back in the truck and headed over to Julian for several tall stacks of pancakes, eggs, and sausage. It was in route, just before making the final ascent at Banner Ranch that we stopped and found the dead bobcat. Somehow we had already passed by without noticing him when a hillside scene caught my eye and demanded a photograph. We stopped, turned around, and backtracked several hundred feet. That's when the kids saw him, laying there, perpendicular to the yellow line.

After we had carefully laid the our deceased friend under the protecting branches of the roadside manzanita, a bicycler named John stopped on his journey up the hill and noticed what we were doing. "That's horrible," he said. "It's so sad." We talked for a while until John realized he had taken a wrong turn, placing him over 35 miles away from where he wanted to be. "Could you guys possibly haul me and my bike up to Julian?" We did.

As we drove, I asked John the usual questions one would expect to ask during a meeting of this sort; where had he gone, what had he seen, what were is favorite rides? He pointed out a deep scar running from his lower right thigh, across his knee and down to his ankle. It was a lasting memory of his own experience with an automobile. Unlike the bobcat, the driver had stopped and called for help. "It can be a pretty dangerous sport," John said.

When hearing he had been riding for just a few years, I asked him why he had started. "My dad died," he said without hesitation. "Overweight. I weighed 250 pounds and so did my brother. He still does. I

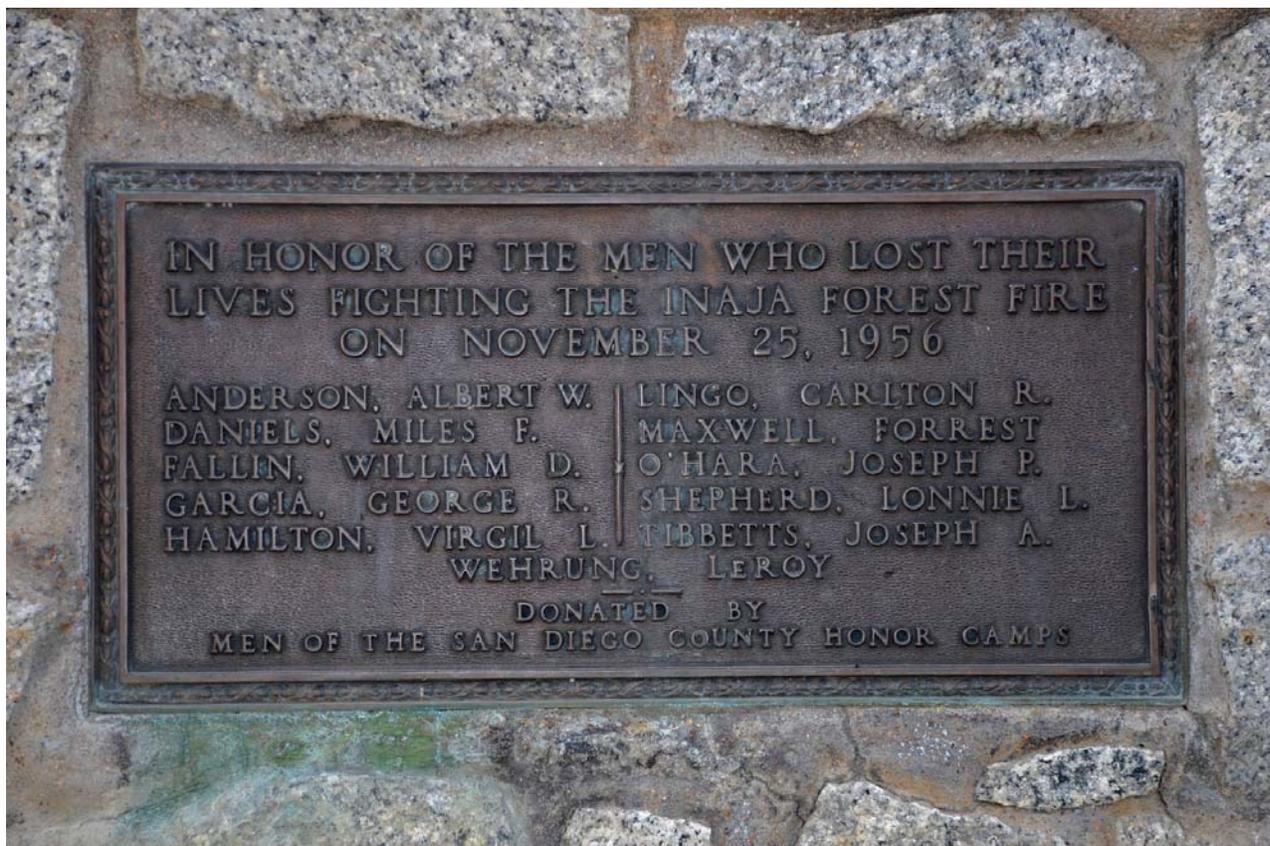
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didn't want to end up like either one of them so I took to riding." His thin frame showed his determination to change. "Life is too short. No reason to make it any shorter."

We dropped John off in town, stopped for breakfast, then continued down the coastal side of the mountain toward home. Our final stop was the Inaja Firefighter Memorial, located on a ridge above the steep confines of the San Diego River Canyon. The place marked where 11 firefighters were killed battling a blaze in 1956. It was after this incident that the Standard Ten

Firefighting Orders were established, rules to help protect future firefighter lives.

Sometimes it takes loss to be able to see what is really important, to shake complacency over the preciousness of life, to remember that it can all be taken at a moment's notice despite our plans to the contrary. But sometimes, if we're lucky, a few messengers come our way to gently remind us that the present moment is all we've got.



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gypsy myself, I've wandered from agency to agency and have heard all the jokes. I've been the butt end of snickers myself. I made the mistake of wearing my USFS shirt when giving a talk about natural resources to a large room filled with navy-blue-uniformed CDF crews. I'll never do that again. You could have heard a pin drop, even when I was using some of my best lines.

But you know, whenever I'm in a new town I usually end up finding my way to a local fire station, grabbing a bottle of water and talking with the on-duty crew. No matter if the trucks are green (USFS), red (CDF and city), or yellow (BLM). It just happens. Some of the best meals and conversations I've had this past year have been in San Diego city fire stations. The fire family is just like that.

I guess what I'm getting at here is that no matter how one group may set itself up as better than another or how that voice in your head tries to make you think you're separate from all the rest, the fact of the matter is we're all in this together.

There is a commonality that can bring people together if it's given a chance. The isolation and intolerance that is being peddled by an assortment of AM radio hosts, short-sighted corporations, and political demagogues may be effective in herding the sheep, but not people who care about others, the world, and the future.

Yeah, sometimes the B.S. gets to me. It did a recently; people tryin' to hijack both my flag and my Bible for their own selfish interests. What did I do to shake it? I grabbed an expensive cigar I'd been saving, a bottle of Guinness, a photo of the USFS fire crew I'd trained with, and headed outside to do some thinking on a granite outcrop. In the photo, Joe is leaning against a tree, skinny, with a yellow Nomex shirt hanging off his young frame, smilin', and full of life. He reminded me of the optimism only kids can deliver. "I can't wait to get assigned to an engine, Jim."

The cigar and beer were good, but being inspired by a young firefighter's hopes and dreams made them even better. They helped me remember that I'm not traveling alone.

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