



SAFETY NUGGETS

- Safety is a **PRIORITY** in the GPOC.
- As Spring turns to Summer—the snow melt from the Rocky Mountains causes runoff and increased river flows.
- Even with the best waders and gear—you are **NO MATCH** for the force of the river or stream.
- Use caution and sound judgement when panning, sluicing, dredging, or digging in or near the water.
- If you are on the Arkansas, also watch out for rafters!
- Remember—water can rise and fall, even in the same day. So be cautious, be alert, and stay alive!

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The Prospector's Quill

VOLUME XLII, ISSUE VI

JUNE 2016

My First Dredging Experience or Dredging 101

by
Andrew C. Hawkins

It was a cool and overcast Colorado spring morning when I met two fellow GPOC members at our Woody's 1 claim near Swissvale, CO. Calvin Johnson and Ron Johnson (a new GPOC member, no relation) met me on the claim. Woody's 1 & 2 are located on the Arkansas River, in the Arkansas Headwaters Recreation Area. The spring weather in Colorado has been a bit unpredictable this year with snow, rain, more snow, some thunder, and occasional sunshine. And this particular Saturday was no exception. It pretty much mirrored the weather of the spring, but compressed it into one neat 8-hour package!

We arrived at the claim at about the same time from separate origins, 10:30 am plus or minus. The first thing we did is park alongside Highway 50, get out of

our vehicles to greet each other, and go inspect our route to unload the Green Dragon – Calvin's 4" dredge. After some exploring and walking the riverside, we decided to stay on the HWY 50

side of the claim. Calvin had spotted a riffle on the HWY 50 side of the river when surveying our options earlier in the morning that looked like a natural
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Woody's One. Not the most picturesque morning for dredging – I've seen CO do better! Still picturesque though.

**Get GOLD ... at all hazards, get GOLD!"
NOT TRUE for GPOC members. Be SAFE!**

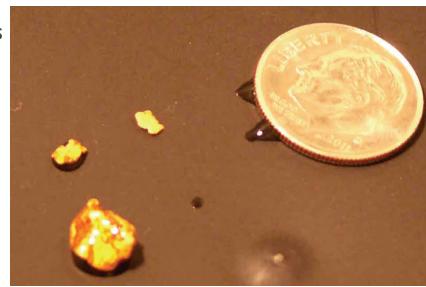
by Calvin Johnson

That was the edict given to departing New World explorers by King Ferdinand of Spain on July 25, 1511. All of us in GPOC want GOLD, but FIRST -- be SAFE!!!

GOLD season is upon us and whether you come to a club Gold panning demo event, go out to one of our claims or 'hit

the streams and hills' on your own, safety has to be your first concern! Especially with family members that are young! Several times I have been sunburned and dehydrated after a day at the panning troughs. It

is SOOO much fun to see the eyes of youngsters', parents' and grandparents' light up when they first find gold, copper or the gemstones in their pans that I often forget to take time to hydrate or take a break and reapply sunscreen for the
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Schedule of Events

***Official GPOC Events/Outings are preceded with "GPOC" ***

- } **2nd — GPOC** Board Meeting, Gold Hill Police Station, 955 Moreno Avenue, Colorado Springs, CO, **7 pm** (access from W. Moreno Ave.)
- } **5th — Denver Museum of Nature and Science (DMNS) FREE Day!** SCFD-sponsored. Minerals rock in the Coors Mineral Hall!
- } **8th — GPOC** Gen Membership meeting, Starting at **7 pm**, Elks Lodge, 3400 N. Nevada Ave, Colorado Springs, CO (Public Welcome).
- } **10th—GPOC** supports the NOMAD Race special event, Victor, CO.
- } **17-19th—GPOC** Gold Panning Championships, Breckenridge, CO.
- } **22nd—GPOC** Planning Committee Meeting. **7 pm** at Denny's on Academy Blvd. in CO Springs.
- } **28th—30th — GPOC Event** Old Colorado City Territory Days. Bancroft Park. 10am-7pm (Sat & Sun); 10am-6pm (Mon)

JUNE 2016

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2 GPOC Board Meeting	3	4
5 DMNS Free Day	6	7	8 GPOC Gen. Member Meeting	9	10 NOMAD Race— Victor	11
12	13	14	15	16	17 Gold—>	18 Pan- ning—>
19 Champi- onships	20 FIRST DAY OF SUMMER	21	22 GPOC Planning Comm. Mtg.	23	24	25
26	27	28	29	30		

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The Gold Prospectors of Colorado (GPOC) was founded around 1974 as a non-profit organization for recreational gold prospectors in the Colorado area.

Our membership at any given time has grown to over 600 members and continues to grow across the Front Range, the nation, and even the world!

My First Dredging Experience or Dredging 101, continued

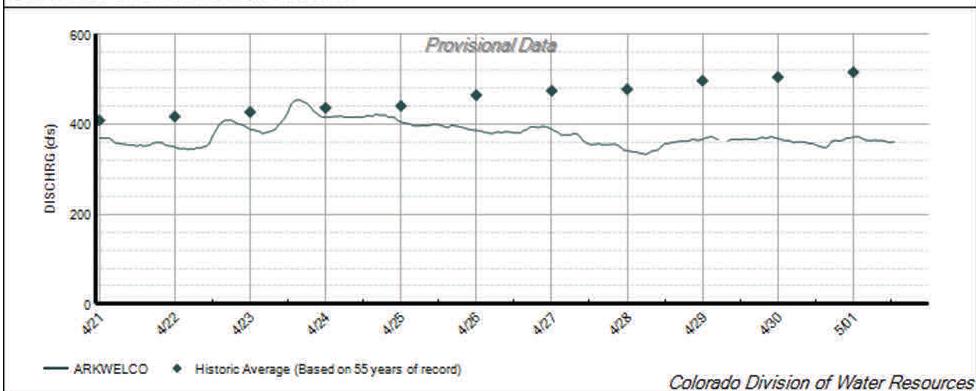
>>> Page 1

bedrock riffle, not one constructed by the BLM for rafter's enjoyment during the rafting season. That was our spot. In fact, it was just yards upstream of a spot chose for dredging by fellow GPOC members Brian

(P350, 4" intake-3" output) a 4' long Spartan (made under license from Karl Von Mueller) and a second homemade (4' long x 22" wide) sluice lined with a variety of Gold Hog matting.

idea! But this Spartan was commercially manufactured in 1954 by an Idaho company under license from its designer, Karl Von Mueller. The stenciled labels on the sluice were finally worn to the unreadable state in 2013! The original configuration has been lost to history, but Calvin has used it in a 4 inch and a 3 inch configuration since buying it in 1987 for use on some Idaho placer claims in the Owyhee District.

ARKANSAS RIVER NEAR WELLSVILLE (ARKWELCO)
Data Source: Co. Division of Water Resources



Arkansas River flow chart taken from the Colorado Division of Water Resources website, http://www.dwr.state.co.us/Surfacewater/data/detail_graph.aspx?ID=ARKWELCO&MTYPE=DISCHRG

This tool is both informative and necessary if you are heading out to prospect on one of the Woody's or Prospector GPOC claims on the Arkansas. It can help you plan your prospecting trip and let you know what parts of our claims are accessible.

Lee and Mike Beaty a few weeks earlier. The Arkansas was flowing at about 450 cubic feet per second that day, based on the Wellsville gauges not far upstream. The spring melt was not yet in full flow, and this made it easier for us to access the natural riffle in the river. Of course – we all went in the river (wet) a couple times and at least I filled my hip waders to the brim once with cool and refreshing river water. So don't be fooled! 450 cubic feet per second of water may be low on the annual average, but it can still carry you away downstream if you are not paying attention to your footing!

Both Andrew and Ron were new to dredging and had no idea what work it would take to tame the mighty Green Dragon! In fact, this was Ron's first time out on a GPOC claim. Talk about pushing a new member into the deep end! After some positioning and repositioning of the vehicles, we unloaded the dredge and began assembly on the banks of the mighty Arkansas. All in all, the Green Dragon, so named for its green pin striping and appetite for river gravels and sand, is about 10 feet long, fully assembled. It consists of three separate floating sections: a powerful Honda engine (GX240, 8 Hp) and Keene water pump

The Green Dragon started out as a Spartan Dredge. The Spartan sluice box probably was sold as an entire dredge. Most folks think that small suction dredges are a new

Once we had assembled the Green Dragon, we were off to float it upstream to our chosen dredging spot. With Calvin in the water to guide the beast, and Ron and I on the front and rear safety ropes (no one wanted to lose the Dragon or Calvin for that matter!), we maneuvered upstream about 200 yards to our parking spot. In went the intake hose for the Dragon, directly into a downstream hole that was two or so feet deep, perfect for the intake. The motor float (inner tube) somehow deflated on the trip upstream and upon inspection; a 1/4" hole was to blame. Not all of the river rocks are smooth and rounded I guess! The Green Dragon's engine was then parked and leveled on a series of river rocks near the bank while the sluices remained afloat downstream. After some positioning and repositioning, we finally had

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Photo of Green Dragon, assembled. The Green Dragon is a beast and so named for its green hoses, bright green pin striping (safety green, of course and applied to areas that might take a 'bite' out of your wetsuit or waders) and its "Dragon head" nozzle and handle with an appetite for anything within three feet. The Spartan was designed to capture extremely fine GOLD and the only modernizations Calvin has made is using nomad matting (miners moss) with "V" matting under that and with the edges sealed with Gorilla tape." Spartan sluices and dredges have a great history, worthy of a complete article.

My First Dredging Experience or Dredging 101, continued

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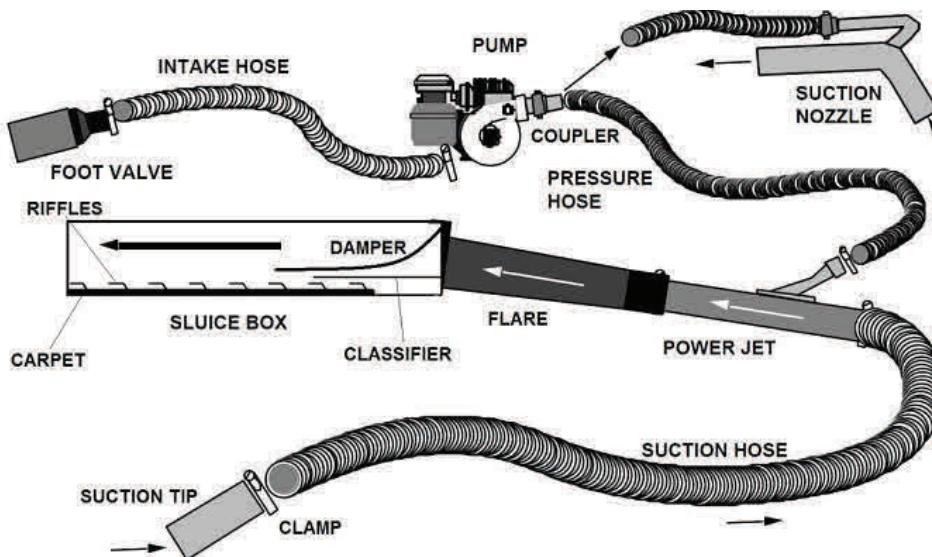
all the hoses attached and were ready to run. After some intensive pump priming, we got the pump running and began to dredge. Calvin and Ron were the first to man the nozzle, potato rake and pry bar

sands. At just above idle on the engine, it was drawing material from up to a 2' radius. Once barred and dredged loose, the 1"-12+" cobbles and rocks are raked out of the targeted area, aided by the current. The dredge works on the Venturi

and washing the sluices into a rectangular tub, we were ready to rebuild the system with a fresh set of mats and replace the riffles. By this time, it was early afternoon, with storm clouds from the West looming. With matting and riffles replaced, we began to restart the pump. Primed with water from a handy re-purposed red plastic Folgers can, we pulled the cord and fired up the engine. She was purring like a happy kitten – but not pushing water. As Calvin inspected the pump – he noticed water leaking from the shaft side – possibly a blown pump seal. Although he had a new one, it wasn't a job for a quick field fix at the side of the river. Our dredging was done for the day. And just in time – as the storm rolled in and dropped a mixture of rain, snow, graupel (a semi-solid, slushy hail I've only experienced in CO), and thunder. It was time to call it a day.

We started to disassemble the Dragon, piece by piece. Hoses off, sluices were detached from the motor and floated by guide downstream, bungees were unhooked, and one of the inner tubes from the sluices was repurposed to float the motor and pump downstream as well. With the dredge safely on the bank in our staging area, we returned to clean up the site, and our cons. Tools, pans, buckets, gloves, and waders were hauled back to the staging area. In the field, we classified the cons down through a #2 screen and into two fractions, one for Ron and one for me. Ron's share of the cons filled a Folgers plastic coffee tub – those things are so handy. I put mine in a green bucket (color coordination not planned) to haul home for further cleanup. I remarked as I lifted the heavy green bucket "This is more cons than I got all last season with my hand sluices!" It was true! I was excited. Ron was so excited and appreciative of the in-the-river training he received that he handed his container of

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Dredges operate (usually) on the Venturi Effect, where pumped water from the dredge pump elicits a vacuum at the dredge intake nozzle. Water and slurried material are delivered to the sluice boxes on the dredge. The Venturi effect is the reduction in fluid pressure that results when a fluid flows through a constricted section (or choke) of a pipe. The Venturi effect is named after Giovanni Battista Venturi (1746–1822), an Italian physicist. Diagram from: <http://www.detectorprospector.com/>

while Andrew tended the sluices monitoring water flow, sluice riffle action sending light material downstream and clearing rocks. Later the roles were exchanged so both Andrew and Ron had time and tutorials on bar, nozzle, rake and sluice dredge operations that included tips and techniques from Calvin's experience. This is definitely a two-person job.

The pry bar is used to probe for gaps between rocks and loosen the river gravels, cobbles and sand that have formed into a not yet lithified concretions with larger rocks and boulders on the river bed. The 4" nozzle of the Green Dragon is hungry for small rocks, river gravels, cobbles and

effect, using water from the motor and water pump to drive suction from the nozzle. The injected water, water from the nozzle, and material sucked from the river bed are all then moved into the floating sluices.

We ran the dredge for about an hour before doing a cleanup. Cleanup took about 20-30 mins, with step-by-step instruction from Calvin. The (first sluice) had 4 layers, including riffles, expanded metal riffles, miner's moss, and an underlay of rubber V matting. The second Gold Hog mat sluice had four feet of various types of design and lifted out easily after a good splashing and rinsing. After separating out all the mats

The Quill wants your feedback! Send us your story ideas, photos, artwork, summary of your prospecting trips, stories, and stuff you want to see published in the Quill. Got a great campsite that you want to share with your fellow GPOC prospectors? Know a nugget of Club history? Found your first nugget? Email us!

gpoquilleditor@gmail.com



My First Dredging Experience or Dredging 101, continued

>>> Page 4

cons back to Calvin. Ron said to Andrew "Did you see how happy he was when I gave him those cons!" I agreed, and remarked "He'll be so excited to clean those up at home to see how the spot he picked panned out!" We finished disassembling the dredge and loading all the parts back onto Calvin's trailer during some sideways rain and called it a full day. As we parted ways, each of us with a big grin and some aches and pains, we felt satisfaction and fulfillment for a day of great dredging, learning, and comradery.

GOLD CUBE CONS. After a week of work travel, I returned to my green bucket of cons (I thought fondly of it in my absence, excited to learn what it might contain). I took it to my basement setup – a wash tub – for classifying down to a #8 screen in preparation for running through my 4-stack Gold Cube. Screened bucked in hand, I set up the Cube and began recirculation. I had only about 1/3 of a bucket of cons to run, of which the Cube made quick work. I pulled out my catch basin and set it aside for a second run. I disassembled the Gold Cube and washed each tray vigorously with my spray nozzle on the wash tub. I couldn't see any gold in the Cube – but I could see lots of material in the catch pan upon cleanup. I re-

assembled the Cube and re-ran the dredging cons again, then cleaned up Cube a second time. True to its advertising, I had about three or four cups of what I call "Cube Cons" ready for further processing.

FINAL CLEANUP. I choose to dry my cons in an old 16" x 9" cake pan on my grill (note: don't do this inside in case there are fumes from mercury, arsenic, or other elements commonly found in gold-bearing rivers and streams). Twenty minutes later, my Cube Cons were dry as a bone. I poured the few pounds of material into my tabletop six-inch classifier set (#10, #20, #30, #40, #50, and #60) and carefully prepared each fraction. I also use a 100 mesh screen as a final stage and thus generate both 100+ and 100(-) fractions for a total of eight size fractions. I separate out magnetite, the strongly magnetic portion of the black sands, using a Big Orange Gold magnet. Magnetite is natural iron oxide (or rust) that once was a commercial source of iron in many US states. After 4-6 separations on each fraction (this reduces the chance of losing gold in the magnetite), I move on the weak magnetics. I use a 1" diameter rare earth neodymium magnet (a VERY strong magnet) to pull out the garnets and minerals with only a little iron, from each fraction. I call these hematite and weak magnetics. Hematite is also iron oxide, but usually has other impurities and



Woody's, classified. Final cleanup in my kitchen (yes, my wife loves -- I mean tolerates -- that) using my stack of six-inch classifying screens (plus one 1" 100 mesh screen, not shown). I do my final classification dry and separate out magnetite and stronger magnetics as well as hematite and weaker magnetics before a final finishing pan.



Left, 40+ Cube Cons with one fleck of 40+ gold from Woody's. Right, 50+ Cube Cons from Woody's with no apparent gold present. Not all fractions contained gold; 8+, 10+, 20+, 30+ and 50+ showed no color.

less iron, hence it is only weakly magnetic.

Magnetite and hematite sometimes contain trace amounts of other elements, namely platinum, and likely contain small amounts of gold that I could not separate. So I ALWAYS save my magnetite and hematite fractions! If



Top left, 60+ mesh gold showing about 9 flakes. Top right, 100+ mesh gold from Woody's showing 40+ flakes of color. Bottom left, 100(-) mesh gold from our dredging trip to Woody's. I lost count at 75 flakes here. Note the abundance of this fine, flour gold. And finally, bottom right, all of the Woody's gold combined into a stout glass vial. Dime shown in each photo for size reference. Hey—it may not look like much, but it's a reward to see it all in that vial!

nothing else, the containers make great doorstops. What I'm left with is blonde sands and any possible gold! In a final step, I pan each fraction. I'm told it is rare to find gold much larger than 50 mesh at Woody's. So the single flake of 40+ gold I found was a blessing! Below are the fruits of our labor. A reward to be treasured not only for its intrinsic value, but for the memories and friendship made while collecting it.



Be SAFE! *continued*

>>> Page 1

afternoon. I have also had several occasions to catch or at least steady a person that has been stooped over the panning troughs and straightens up too quickly. I have also observed folks during inside demos need help because of 'slick spots' caused by spills or just 'aggressive panning'. Many of the folks that are at the events we support with panning demos are visitors to Colorado and not accustomed to our high altitude, or like me, just forgot how long we've been stooped over the trough or equipment.



In the great Colorado outdoors, there are even more concerns. Going into any stream for the first time with a new pair of boots on can get

you very wet, possibly hurt or worse! The more water there is, the more you should be aware of safety! From a safety aspect, the only difference between a deep hole in a shallow stream and a high stream or river during run off is the dangerous current (often carrying submerged debris that can hurt you) and the low water temperature. Every year experienced fishermen (and ladies) are found dead in Colorado streams, so let's not

have this year include a drowned prospector. Also, keep in mind that when the storms hit last year the river got to over 5,000 cps! Be aware that the County road 45 low spots on the way to Prospector claims may also flood when the river is high. As for me, I don't mind fording Badger creek between Prospector 1 and 2 if it is low enough, but driving through what is now part of the Arkansas is not something I would recommend!

Much of Colorado is classified as "high desert" and besides the sun burning and dehydrating you, even our club claim that is at 10,000 feet in elevation has cactus! You probably won't die from cactus, but I

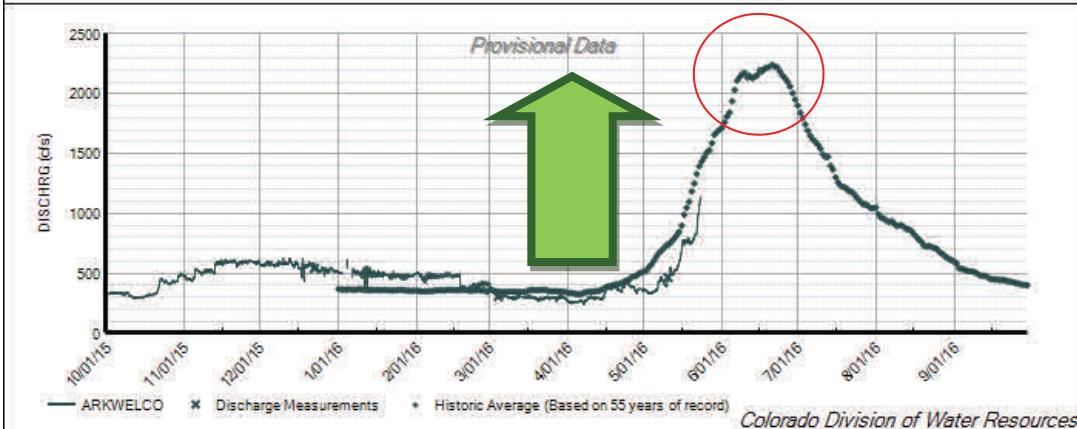
have seen people jump into the river startled by the "poke"! No parent wants to have to pull cactus needles out of a toddler's feet, hands, arms or legs. Most people don't walk on marbles to practice exploring the cobbles and gravels of current or former stream channels that you'll almost always encounter when prospecting. Please don't twist an ankle or worse because you wore tennis shoes or 'flip flops' to prospect.



Lots of crevices for gold and snakes to hide. Can you find the rattler in this photo?

ARKANSAS RIVER NEAR WELLSVILLE (ARKWELCO)
Data Source: Co. Division of Water Resources

Arkansas River heading higher to mid-June peak!



The mountains aren't the only places to watch for very rapid and possibly life threatening storms. Our Colorado hills and stream banks are not grassy back yards for pets either. Speaking of "non-human" animals, there are both good and bad ones that you might encounter, sometimes at too close a distance like in the photo.

GPOC is about having fun and sharing our prospecting experiences with other members and the public -- Let's do it safely!!!





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California Supreme Court Will Hear Dredging Case on June 1!

by

Dave McCraken
The New 49'ers

Good news: The California Supreme Court will hear oral arguments for the Rinehart case on the first of June. This is perhaps the most important litigation concerning mining and prospecting on the public lands in over a hundred years. As many of you know, the Third Appellate Court decided unanimously for gold prospectors several years ago, and all or most other mining-related litigation in California is now on hold, waiting for direction from the high court. Traditionally, once oral arguments are scheduled, it means the justices have studied the litigation and have probably already reached a tentative decision on how they will rule. It is likely they will issue a final ruling soon after oral arguments while the case remains fresh on their minds. This means we are very close to a major crossroads where unreasonable and prohibitory over-regulation by the State is going to be dramatically pushed back, or it isn't. Please keep your fingers crossed for our side, and stay tuned for more news.

Thank you very much to all of for your steadfast support. If it were not for you guys, we would never have made it this far!

A short update from our attorney can be found right here:

<http://www.goldgold.com/wp-content/uploads/2016/05/Rinehart-developments-5-20-16.pdf>

And here's the direct web site for the People v Reinhart case: <http://peoplevrinehart.org/>

The New 49'ers Legal Fund, The New 49er's, 27 Davis Road, Happy Camp, California 96039, USA



Brandon Rinehart with his son and father on one of their many outings.





The Prospector's Quill Spring Edition

VOLUME XLII, ISSUE VI

JUNE 2016

Get Yer Gear! Field Testing Prospecting Gear. The “Clog Buster”.

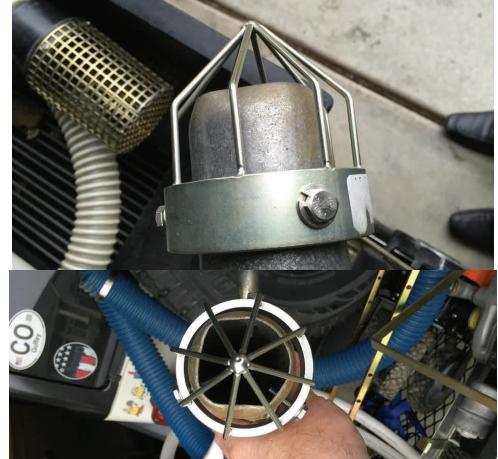
by
Andrew C. Hawkins

After my first dredge outing in April, I caught the “dredge bug”. So I trolled Craigslist and the classifieds until I found a unit for myself! It’s a Keene Combo with a 2.5” dredge nozzle. I took it out for the first time on Clear Creek near Golden, CO in mid-May and realized immediately how much hassle it is to get a clog in the nozzle. I was literally smacking the nozzle with a rubber mallet or poking it with a large pry bar every 3-5 mins! I thought there must be a better way.

There is: A Clog Buster! I visited a local prospecting shop called Gold-N-Detectors. They are located right on Washington Avenue in historic Downtown Golden. I presented my problem—I want more time

dredging and less time un-clogging. Louise and Bill had the solution—a locally-made nozzle guard they call the “Clog Buster”. Since my nozzle was a 2.5” diameter, I went with the 3 inch version for about \$32. It’s solidly made with clean welds and plated steel. I mounted it in a few minutes with three stainless steel lag bolts and lock washers. My Clog Buster came with three thumb screws, but they weren’t long enough for my smaller nozzle.

What a great investment! The next time I went out, I operated the machine for about an hour straight without a single clog! There is a small trade-off—larger cobbles are not sucked up anymore. But if you accept that, the Clog Buster does exactly what its name promises. Check out more at: <http://goldendetectors.com/>



The “Cog Buster” keeps those pesky small cobbles from blocking your nozzle. Available at Gold-N-Detectors. Check it out!



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