

What, The Sluice????

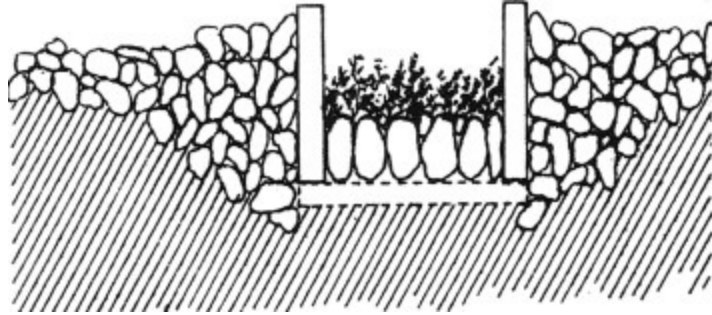
Written By Rob Boyko

The title is an open ended question. The sluice itself has been around for thousands of years. The Babylonians had them, the Samaritans had them, the Romans used them, the Aztecs engaged them, so did the Mayans, the 49ers employ them, the Klondikers used them, and we still are using them today.

The ancients, through observation and experimentation learned that metals were heavier than each other and that the precious metals weighed more than some of the nonprecious types. Gold for example, its weight is about 10 times the weight of water. They also learned that certain metals could be washed out of the dirt and made to settle or in other words drop out of suspension by slowing down the wash water at different locations along its path. Archeologists have discovered some ancient sluices and they definitely do not look like boxes. Actually they were dug into the stream beds as the one shown here.



Others were placed in the stream banks as shown in the sketch below. In this picture they use natural plant and rocks as the riffles to collect the concentrates and possibly nuggets.



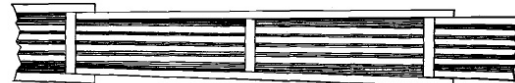
Even today in my explorations I still use some of those old techniques. When the streams are running high in the spring, a lot of the material is washed down into the streams and carried along until it slows at a gravel bar or some other natural trap. This is when digging into the gravel banks, creating sluice traps made of natural material works well. When the creeks are running high, these traps will fill with that fluvial material just waiting to be sampled when the level drops after the winter thaw. I usually place these in the fall and return in July to sample and reclaim or leave for the following year.



As time went on the Ancient got a little more clever, possibly for religious reasons, they actually carved some sluice systems into the rocks within a creek like these found in India.



Sluices were then redesigned to the box type. Most were long and thus called Long Toms. These were simply constructed from wood. They were generally used in larger operations. Other types were modified so that one person could operate them with ease. These were the Rocker Boxes. Most were used by the 49ers and those prospectors of the Klondike years and others.

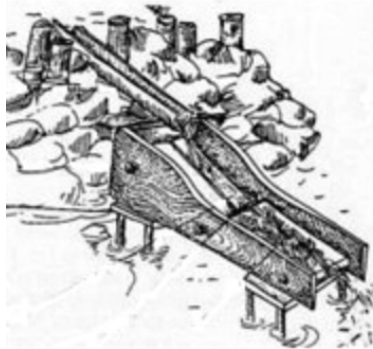


Long Tom



Rocker Boxes

In order to wash more material the Highbankers were conceived. Using this type of assembly and a continuous water supply, a miner could wash a lot more material in a shorter period of time.



The one shown on the right is one of my own experimental units. This one worked very well when it came to washing out clay material. Some of the material was cemented together in a loose conglomerate that needed some breaking up during the washing process before sending it into the sluice box.

It is no wonder that the sluice is one of the most important tools for any miner, large or small scale operation. However the shovel and pan is still number one. There are times when you may need to set up a sluicing system. If you are in an area that does not have a viable water source or you may want to process your sample material at home or back at camp.





As you can see in the last three photos, I had to set up this system in behind my truck. There was no viable water source, so the water was trucked in by a forestry water tanker. The last two photos was my setup at home prior to processing my sample material in my back yard. The bucket was for capturing the fine concentrate that was washed out of the sluice. Setting up using this method can also be an environmental option as it is more environmentally friendlier with a lesser impact on dusting a creek with sediment washed dirt.

Keep in mind the angle to which you would set your sluice to. I have found that an angle of 1 inch for each foot was more productive regardless of the sluice I was using at the time. Always test before actual processing your material. Use just plain sands and gravel to adjust your water flow. Too much flow and you will lose your fine material, too little and you will not get a proper wash. You do not want to lose your fine gold, but then again you do not want to spend the extra effort in panning your final concentrates after clean up. Check out the video of my newest sluice assembly. It is set up in my backyard for testing its operation and I also have some sample material that I need to run through. This for me is an opportune time as I need to get ready to get back in the field and continue to prospect my Moncton Creek project. My water supply will have to be trucked in and therefore the fifty gallon bins and swimming pool. Can you guess what the five gallon bucket is for?

This video can be viewed at: <https://youtu.be/kYG1duXVYRw>

I hope that you found this article interesting and would like to know if you enjoyed the video. If you did just click "like" to let me know. Again, if you find anything in error please contact me through the contact page and start a conversation. I too am still learning.

Reference material complements of Google Images and my own file photo's.