

Report on Millstone Dressing Workshop, held on June 28, 2015 at the home and bakery of Mike Zakowski, Sonoma, California.

Roger Jansen, long time mill-wright, taught a group of thirteen very enthusiastic students first how to handle the stone dressing air hammers and tools, and then how to bevel the edge of a precut round of granite. Soon thereafter instruction was given to cut furrows. There was some discussion as to how many furrows should be cut, and the realization that this depended on the size of the stone and aesthetic preference, with four being a suggested minimum for the smallest stones. There does not seem to be an exact science developed for this except that the line of the main furrows should be tangential to the inner-circle, cut out for the entry of grain. The beveling is valuable to avoid the chipping that would occur when a furrow was taken to the edge of a sharply edged granite piece. Following the instruction there was practice time for everyone who wanted to develop their skills with the air hammer and tools.

Mike Zakowski brought forth whole wheat-whole rye bread from his wood fired oven during the morning and served it with jam. For lunch we relished salad with fresh pocket breads from whole Khorasan wheat, and pot-luck accompaniments such as hummus, and vegetable pizza based on a whole rye crust.

After lunch the lands of the stones were systematically roughed (dressed) with the air-hammer. This is a remarkably fast process compared with the ancient method of using a pick hammer, which can make a mark on the granite just one strike at a time. Later two 8 inch Meadows Mills were taken apart and their stones dressed. In order to make sure the dressing had been done evenly and that the stones in each mill were properly aligned and matching, the lands were painted with water-soluble non-toxic paint. The idea being that when the paired stones were run against each other in the mill, they would wear off the paint at the high spots. The recognizable high spots were then worn down by dressing with the air hammer and tool. The process of running the stones against each other, and further dressing the stones, was repeated until the wear pattern on the paint showed that the stones were evenly dressed.

While the paint dried initially, Doug Mosel gave us some insight into his experiences milling whole wheat flour from both an Osttiroler mill and a Jansen mill. The composite stones in the Osttiroler cannot be dressed and present a randomly rough and pitted surface, such that the granulation of the flour cannot be so fine as that obtained from a well dressed granite stone. The Jansen mill has granite stones that can be dressed in such a way that the dressed lands mill the endosperm of wheat to a very fine granulation. Doug also gave us an account of his experience when he accidentally milled some high moisture wheat; it essentially steamed in the mill and there was a risk of the flour caking in the mill and the stones becoming glazed by caked flour. Wheat grain ideally should be 10% moisture or less for stone milling. Such dry grain will store safely from molding and provide a whole wheat flour with the greatest stability of fresh flavor.

Finally the mills were reassembled and tested to see how beautifully fine the flour could be, coming from newly dressed stones. Such a revelation suggests the real reason that the hardest of stone materials are the best choice for millstones. The hardest stones need dressing less often.

Roger Jansen's Wheat Penny Society, founded.

First here's a quote from the prologue to Stephen Yafa's book, *Grain of Truth*, in which he explores the reasons for the current fashion of shunning wheat:

Every copper penny (from 1909...) through 1958 displayed a profile of Lincoln on its front and two wheat stalks on its reverse side. While both the president and the grain were instrumental in shaping the destiny of our country, those shafts alone symbolized prosperity, robust health, and thrift all at once – fundamental American goals and accepted virtues. It seemed only fitting that I keep a Lincoln penny in my pocket as I set out to explore wheat's economic and cultural heritage and its future prospects in turbulent times. These days a penny can't buy much, but this one inspired the kind of passionate curiosity that to me ranks as a currency beyond measure.

Similarly passionate thoughts must have inspired Roger Jansen. Before the workshop he hinted that he had a little ceremony to perform at the end of the day. We had no idea that Roger, ever an artist and philosopher, had collected Lincoln wheat pennies and mounted them in wooden teardrop pendants to be worn around our necks. He brought forth the box and presented each of us with a wheat penny pendant, and declared us the first members of the *Wheat Penny Society*. We were so surprised and gratified by his thoughtfulness that we could hardly express ourselves, but surely we have a symbol now for our appreciation of wheat: *The truth is that we need to have wheat for basic foods, presented in the 100% whole grain form and without added sugars or refined flours.*



E pluribus unum
We are all in this together

More unexpected extras from the day of the Millstone Workshop:

Looking back on the day I learned far more than was apparently presented, beginning in the early morning before the workshop.

On a Sunday morning the journey to Mike's place in Sonoma from the South San Francisco Bay was blissfully swift. That is, until we passed by the Sonoma NASCAR site, coincidentally on the day of a major event. As we inched our way through the mass of cars aiming for the gates I was compelled to realize the colossal size and popularity of NASCAR racing.

During the workshop our task was essentially to work on Meadows mills, designed with vertically hung stones, which would seem to contradict the classical vision of horizontally set stones. The story was told that during prohibition (1919 -1933) these Meadows mills were popular among the moonshiners for grinding corn and presumably barley to be fermented into liquor. As well, those moonshiners ran their cars on alcohol and could outrun the police when they were caught carrying illegal liquor. And wasn't that the origin of NASCAR racing? And did Rockefeller actually cause Prohibition so that cars would be run with the gasoline provided by his Standard Oil Company?

I came home determined to search for the base to these stories, and to expand my awareness. The Internet has been my instant resource, and I have a copy of *Meadows Mills: the first hundred years, 1902-2002*, by Marty McGee. (Meadows Mills, Inc. also produces hammer mills and steel burr mills, saw mills, grist mill accessories and more, including a new hand-turned 12 inch quern, ideal for teaching. www.meadowsmills.com)

The first Meadows vertically hung grist mill was invented in 1901 by William Callaway Meadows. The design was prized for its portability and efficiency, and must have been in use on many farms for the production of home made beer, and the distillation of fermented liquor to concentrated alcohol, otherwise known as whiskey. Meadows stone mill sales were not quite so brisk during prohibition. Nevertheless Meadows stone mills were important to the moonshiners who carried on with their fermentations and distillations during prohibition. The super fast cars necessary to outrun the police chasing the moonshiners were powered with distilled alcohol.

By now I appreciate that many of the original automobiles and farm vehicles were designed to run completely on alcohol, or could be switched from gasoline to ethanol use. Alcohol was a conveniently available fuel predating the easy availability of gasoline. Alcohol was a convenient fuel since cars could be driven from farm to farm, where supplies of fuel alcohol were for sale. Designing faster, alcohol powered engines for cars to outrun the police while carrying illegal liquor, led to racing fast cars and NASCAR was born.

Alcohol was such a popular clean burning fuel for cars that Rockefeller and those who had invested in gasoline prospecting feared the competition. Prior to Prohibition, there was a Temperance movement with just a few groups determined to prohibit liquor sales completely. However Rockefeller invested a huge sum of money to successfully promote the prohibition of liquor production and sales, with a view to putting a stop to the production of alcohol as fuel.

A further revelation from the day was that alcohol (ethanol) is a carbon neutral fuel. Carbohydrates, including starch in plants are produced by taking carbon dioxide from the air by photosynthesis. When the starch is fermented to

alcohol the carbon arrives in the alcohol, and when the alcohol is burned it produces carbon dioxide again. We surely cannot have food crops destined indiscriminately for alcohol fuel, but the potential to ferment waste carbohydrate materials to clean burning alcohol is well appreciated. Sugar cane growing in tropical regions offers one particularly interesting source of fermentable carbohydrate; we have no need for the vast amounts of refined sugar currently produced instead, from sugar cane. The caveat is to grow the crops for fuel using organic methods that will sustain the soil and keep air and water clean.

After all the revelations that whole wheat is the way to eat wheat, where are the investors who can rebuild our milling system with stone mills, to once again provide our basic wheat foods in the whole grain form? In so doing we would be moving into a future age of good health, essentially free from the scourges of obesity and diabetes. The heart of the mill will be of stone, but the encasements, mechanisms and controls can be entirely modernized to please all who revel in the excitement of novelty.

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