Mesquite Grinding Resource Sheet

Manos and metates were used to grind maize, beans, cotton seeds, and other wild grains and seeds. The actual grinding process may have taken on the characteristics of a production line. In the case of corn, kernels were removed from the ears and deposited on the metates. In some cases, the metate would be surrounded by flat stone slabs positioned in an upright fashion to serve as a makeshift pan to prevent the ground corn from being scattered. It is possible that two or three people participated in the grinding process using separate metates. The first might bruise and rough-grind the corn; the second would grind it into a finer texture; the third would grind it down to the texture of flour. Inevitably, stone particles from the grinding process would end up in the flour and be consumed. These stone particles contributed to excessive wear and decay on the teeth of those that consumed them.

Mesquite Tree and Beans Facts:

- Most common shrub/small tree of the Desert Southwest.
- The wood was and still is used for fuel and is quite fragrant.
- The bean pods have long been used by humans, wildlife and livestock as a food source.
- It is estimated that over 75% of a coyote’s diet in late summer is mesquite beans.
- Native Americans relied on the mesquite pod as a dietary staple from which they made tea, syrup and a ground meal called pinole.
- They also used the bark for basketry, fabrics and medicine.
- A favorite of bees and other insects, mesquite flowers produce a fragrant honey.
- The taproots, which can be larger than the trunk, are often dug up for firewood. Next to ironwood, mesquite is the best firewood of the desert, because it burns slowly and is smokeless. The wood is also used for fenceposts, tool handles and to create aromatic charcoal for barbecuing.
- Cattlemen regard mesquite as range weeds and eradicate them, but much of the invasion of mesquite into former grasslands, where it did not grow a century ago, is due to overgrazing.
- Native Americans ground the seedpods into flour that they later baked into cakes and tortillas. The flour has a sweet flavor and is still used today (mixed with wheat flour).
- The roots were stone hammered to separate them into fibers that they could later weave.
- They boiled the sticky, black resin to make a dark-brown dye.
- When the leaves are boiled and then placed over the eye, they purportedly can cure some eye problems.
- The seeds, when boiled, distill a frothy sweetness that would have been excellent in cooking.
Mesquite Grinding Worksheet

The Hedgpeth Hills were a valuable source of volcanic rock for making manos and metates, the hand-held grinding tools used to crush grains and seeds and the flat, oval-shaped stones used as a grinding surface. Using rocks from your backyard, you'll now get to try this technology to get an idea of what this daily activity would have been like.

Directions:

• Watch the Arizona State University Open Door video to learn about how metates and manos are used in the food processing process.
• Now that you’ve seen how the grinding is done, find mesquite beans or a substitute (i.e. coffee beans) to grind.
• Find 2 stones – 1 round and large enough to hold in your hand and another stone a little larger and flatter to grind on. If you can’t find a flat stone, a hard rock-surface outside (backyard walkway or driveway) will work.
• As demonstrated, take the beans and lay them on the flat surface, then use the round stone in our hand and start to pound and grind the beans against the hard surface. The more you grind the softer the beans will become and eventually turn into a powder.