

Prehistoric Mammoth Ivory

By Rusty Edwards



The piece of mammoth tusk on the left is 13.5 inches around.

I recently acquired two pieces of mammoth tusk from Haley Wolters, a resident of southeast Texas. Many consider mammoth ivory to be the best alternative to elephant ivory, which has been banned since 1989. Today, craftsmen and artists around the world use mammoth ivory to make high-end gun grips, knife handles, jewelry, parts for musical instruments, scrimshaw artwork, artistic carvings, and other items. I anticipate the value of this rare and prized material will continue to grow in the future.

These sections of mammoth tusk were discovered by Ms. Wolter's husband's grandfather while he was working at a gravel pit near the Colorado River in Columbus, TX. It appears he may have broken them off while attempting to dislodge a larger section with a front-end loader.

Ms. Wolters took them to the Witte Museum in San Antonio, TX, to have them examined by the chief curator. Upon observing the "Schreger Line" pattern, he confirmed they were part of a fossilized mammoth tusk. He added that they likely belonged to one of the Columbian mammoths that inhabited the Colorado River valley in East Texas up to 50,000 years ago.

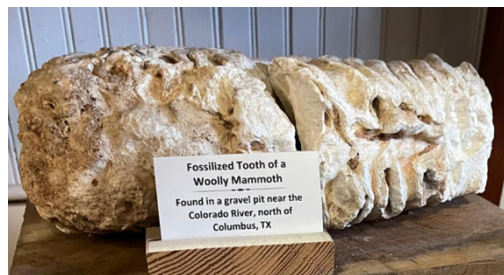


Schreger Lines

Schreger Lines form a distinct diamond-shaped pattern on elephant and mammoth ivory. By examining the lines where they intersect, one can determine if the piece is from an elephant or mammoth. Schreger lines in elephant ivory generally form an angle greater than 115 degrees, while the lines in mammoth ivory cross at less than 90 degrees.

Columbian mammoths were much larger and had far less hair than their relative, the Woolly mammoth. The average Columbian mammoth stood 13 feet at their shoulders, while most Woolly mammoths were about three foot shorter. Columbian mammoths also weighed about twice as much as Woolly mammoths.

Ms. Wolters' relative also found some mammoth bones and at least two mammoth molars at the same gravel pit. The Wolter family donated one of the molars to the Schulenburg Historical Museum in Schulenburg, TX. This artifact is currently on display at the museum. *(Note: The sign incorrectly indicates the molar came from a Woolly Mammoth.)*



Museum Display

In 1989, the U.S. banned the importation, sale, and possession of post-ban elephant ivory. Mammoth ivory was not banned because it comes from an extinct animal. Most mammoth ivory comes from Siberia. About 90 percent of their inventory is sold to China, where it's carved into jewelry, chop sticks, and traditional artistic pieces. Mammoth ivory currently sells for \$50 to \$300 a pound. At the lower end of this spectrum are smaller fragments that may be difficult to use because of their size and poor condition. The most expensive are larger pieces without significant cracks, splits, and/or decolorization.

At this point, you might be interested in learning how a raw piece of mammoth tusk can be processed to reveal its ivory content. Let me illustrate using another piece of mammoth tusk that I own. On the left is how it looked after being buried in the Alaskan tundra for thousands of years. It was dull and weathered, and riddled with numerous cracks, crevices, and blemishes. Frankly, it looked much more like a chunk of firewood than a valuable piece of ivory. The image on the right shows same piece looks after it was "stabilized" and polished.



Before & after stabilization & polishing.

During the stabilization process, the tusk was placed in a vacuum chamber with a liquid polymer resin. A powerful pump was used to draw air out of the piece, while creating a strong suction that drew the resin into every void, regardless of their size. After this, the ivory was placed in an oven where it was heated for several hours to set and harden the polymer. The final step was to polish the piece with a buffing wheel and polishing compound. This fairly simple process significantly enhanced the item's appearance, durability, and value.