

Wetumpka Crater Images



One interesting sidelight of Alabama's Cretaceous formations is the Wetumpka Crater, or Astrobleme. Located northeast of Montgomery, this crater-shaped feature contains Coastal Plain layers that are bent up at very high angles; this is the only place in Alabama's Coastal Plain where the strata are so highly deformed.

It is the result of a meteorite impact that occurred at some time after deposition of the Mooreville Formation, as those layers are part of the structure.

Wetumpka, Alabama, sits right on the bull's eye of the greatest natural disaster in Alabama's history. The hills just east of downtown are the eroded remains of a five mile wide meteor crater that was blasted into the bedrock of Elmore County. The mighty blast occurred near the end of the Age of the Dinosaurs, about 85 million years ago. All around the circular pattern of hills that make up the remaining rim of the crater, the hard rocks of the Piedmont are bent sharply up and pointing toward the center of the impact. The normally horizontal layers of more recent surface rocks are mixed in and around the crater suggesting an incredible explosion that would have destroyed all life for a radius of about forty miles.



Geologically speaking, something is wrong with the vaguely circular patch of hills located immediately south and east of Wetumpka. Normally in this area, the layers of soft sedimentary rocks of the Coastal Plain smoothly overlap the harder and older metamorphic rocks of the Piedmont, but at Wetumpka, this is not the case. In the crater area, rocks of more than 225 million years difference in age are intermixed. At Bald Knob, where communication towers overlook Wetumpka, a curved ridge of very old metamorphic rock protrudes seven hundred feet above its normal level through jumbled layers of much younger rocks. Below the surface, the area is characterized by rock fractures and zones of shattered rock. Nowhere else along the 2,250 mile border of the Piedmont does anything similar exist.

As a rule of thumb, a hypervelocity projectile causes a crater of about twenty times it's diameter. Given the diameter of the Wetumpka crater and using this formula, the meteorite is estimated to have had a diameter of about 1000 feet. Because no fragments of the meteorite have been recovered (most of it probably vaporized upon impact), the composition of the object is not known exactly. However, because stony meteorites are far more common than iron meteorites, the former would seem to be the best guess. To give one some idea of how large this object was, the Wetumpka meteorite is said to have been large enough to fill the entire bowl of Jordan-Hare Stadium at Auburn University.

The enormity of the Wetumpka explosion is hard to comprehend. The impact of a large object traveling at 40,000 miles per hour would cause an explosion that would dwarf even the largest thermonuclear weapons.

