

BLOWHOLES OF THE WUPATKI AREA

Many blowholes within Wupatki National Monument have received attention and examination during the past twenty years. Blowholes are small openings in the rock layer which emit and take in large volumes of air at velocities up to 35 miles per hour. Once believed to indicate the presence of a large solutional cave system beneath them, the blowholes are actually small openings to buried earthcracks which appear to be tectonic in origin. Three blowholes have been enlarged to permit entry and have led immediately into earth cracks. At the Wupatki blowhole, it is possible to see down about 15 feet. However, exploration has been judged unsafe because it is simply too constricted.

Air is emitted and taken into blowholes cyclically depending on the difference in air pressure between the air inside the earth crack and the air outside. If the barometric pressure is less on the outside, the air will blow out with velocities which depend on the pressure gradient. One of the best times to experience this is when a low pressure system or storm front is moving through the area. If, however, the pressure is greater in the outside air, the blowhole will actually suck air in. One of the more active periods for this phenomena is at night.

The aerial extent of blowholes and their associated earthcracks is not known at this time. Researchers have conducted tracing tests in which a powdered substance was placed into a blowhole and was subsequently detected at another blowhole some 24 miles to the south. It is unlikely, however, that interconnections exist which are sufficiently large enough for humans to occupy them over a large area. There is also no existing evidence that the blowholes were ever used by the prehistoric inhabitants of the area as a means of cooling or for ceremonial purposes. The latter, though, is not entirely impossible.

Of the several blowholes which exist within the monument, the closest is located 100 feet east of the ballcourt at Wupatki Ruin behind the Visitor Center. Further information is available about this blowhole at the interpretive sign located there. See for yourself whether the air is blowing in or out and try to imagine what you would think of the blowhole if you were one of the Indians who lived in Wupatki Ruin some 800 years ago.

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