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**New Crater Found Down Under**By [Stewart Taggart](#)posted: 10:33 am ET  
21 April 2000

SYDNEY, Australia A new crater, the worlds fourth-largest at 75 miles (120 kilometers) across, has been found in western Australia. Scientists believe the impact crater was caused by a 3-mile (5-kilometer) wide asteroid slamming into the area, causing a wave of extinction 200 million to 360 million years ago. Upon impact, massive earthquakes pulsed out hundreds of miles (kilometers) from the site. Local animal life was vaporized by intense heat or pulverized by massive sonic waves. The crash also fostered regional volcanic activity and almost certainly sparked tsunamis, or tidal waves, in the nearby ocean. Worst of all, the violent crash must have shot huge amounts of dust into the sky that blocked out the sun for months, killing plant and animal life dependent upon stable atmospheric conditions.

"Lack of sunlight, temporary changes in climate and associated acidification of rain would have resulted in an environment similar to a prolonged nuclear or volcanic winter," said Western Australia government geoscientist Robert lasky. He and a colleague confirmed the craters existence last year while researching the isolated regions mineral exploration potential. The new crater has been named Woodleigh in honor of the sheep station north of Perth, where it was found.

The crater now enters the record books as smaller in size only to Vredefort crater in South Africa (at 1,865 miles, or 300 kilometers across), the Sudbury crater in Canada (at 155 miles, or 250 kilometers) and the Chicxulub crater in the Gulf of Mexico (at 110 miles, or 180 kilometers). It displaces the Manicougan crater in Quebec and Popigai crater in Russia (both roughly 60 miles, or 100 kilometers across), which now become Earths fifth-largest known craters.

**Once in a lifetime find**

lasky, who works for the Geological Survey of Western Australia, became interested in the craters potential existence after looking through drilling reports of a company prospecting for coal in the region in 1981. The report noted unusual deformations of quartz, but the company shrugged off the data.

Intrigued, lasky and geoscientist Arthur Mory looked further, taking their own drilling samples in April 1999 and concluding the deformations were from a massive impact. Their peer-reviewed findings are soon to be published in the scientific journal *Earth and Planetary Science Letters*.

"This is the kind of find that comes once in a lifetime," lasky said.

The huge crater lies mostly on private land, and is virtually imperceptible to the untrained eye amid the regions rolling hills and barren rock land. Geologic evidence of the crater can only be gained by analyzing rock samples lying 195 to 650 feet (60 to 200 meters) below ground for signs of metamorphism. Whats more, theres no direct evidence of the asteroid, which itself was pulverized as the crashes first victim.

**"This is the kind of find that comes once in a lifetime."**

The find poses new avenues for future research. The most immediate is to pin down more precisely when the impact occurred since it would significantly add to our knowledge of prehistoric evolution. Three extinction waves occurred during the likely date range.

**New avenues for research**

An extinction episode took place in the late Devonian Period (roughly 364 million years ago), a time when reptiles were migrating from the oceans to the continents. Another extinction wave occurred at the end of the Permian Period (247 million years ago) and a third at the end of the Triassic Period (214 million years ago).

Perhaps the best known wave of extinction occurred 65 million years ago, when the impact that created the Chicxulub crater likely caused the extinction of the dinosaurs. The Woodleigh crater was created by an impact likely very close in its force to the Chicxulub, lasky said.

Follow-up research at the Woodleigh crater could include searching for fossilized bacteria in and around the structure as a means of gauging how long it took before Earthly life began regenerating. Its also possible the asteroid itself carried hardy organisms that survived the crash and took root on Earth. Pursuing these avenues of research are highly relevant to exploring crater-scarred Mars since they could help scientists devise more sophisticated tests for future missions there.

The center of the Woodleigh crater is located roughly 100 miles (160 kilometers) southeast of the Western Australian pastoral town of Carnarvon, roughly halfway between Carnarvon and Geraldton in the Shark Bay region north of Perth.

Australia has long presented a rich field for researchers due to the continents geologic stability. Because the country hasnt known many episodes of volcanic activity and metamorphic change, it offers an incredibly well preserved window into Earths deep geologic past.

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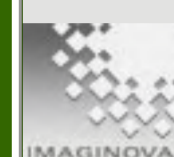
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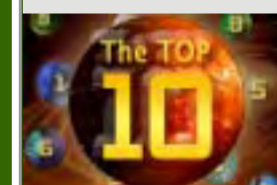


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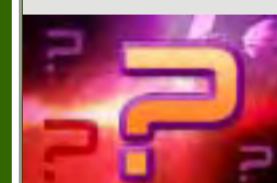
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