

US drone to map ancient Peru ruins

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Tourists watch llamas at the ruins of Machu Picchu in Cuzco in 2005. Archeologists in Peru plan to use a US-made drone to survey ancient Andean ruins, in the latest civilian application of the unmanned aerial vehicles used to hunt militants in the world's war zones.

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The device, which can fit in a backpack, is due to be tested later this month at the ruins of the 16th-century Spanish colonial town Mawchu Llacta, some 13,450 feet (4,100 meters) above sea level.

The Skate Small Unmanned Aerial System will take only about 10 minutes to map the massive site the size of 25 football fields, saving the researchers months of time-consuming cataloging, they said.

"Mawchu Llacta, with its exceptionally well-preserved layout and architecture, provides an ideal case study," anthropologist Steven Wernke and engineering professor Julie Adams of Vanderbilt University told AFP in an email.

"But the scale and complexity of it necessitated a novel approach to mapping. A UAV-based solution seemed the most fitting, since it would enable fast and detailed documentation of standing architecture and walls."

The researchers, who want to test Skate in different environments, developed software to collect and process data rapidly, with the aim of providing a low-cost solution to [archeologists](#) that is easy to use.

Drones have mostly been used for military operations but could also have other uses, such as tracking the advance of global warming and helping first responders provide relief at a disaster site.

If it works, the system would provide the tools to build three-dimensional maps of world ruins, building a major digital archive for researchers.

"As UAVs become more inexpensive and ubiquitous, they will become less and less the exclusive domain of state power," Wernke and Adams said.

"This project is part of that process, as it will develop free, [open source code](#) for flight and imagery capture."

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