

ARCHAEOLOGY

(/)

A publication of the Archaeological Institute of America



SUBSCRIBE NOW! [\(/subscribe/\)](#)
Special Introductory Offer!

RENEW (<https://ssl.palmcoastd.com/26901/apps/-165606?iCp=7CE73C023C2F14FB2FC4FE3478FFC3197023DFD7B40FC2E9A33E862E4691E786>) GIVE A GIFT
(https://ssl.palmcoastd.com/26901/apps/-166935?iKey=F**GFT&) BACK ISSUES (<http://archive.archaeology.org/>)
E-UPDATE ([/subscribe/eupdate.html](#)) CUSTOMER SERVICE (<https://ssl.palmcoastd.com/26901/apps/-165606?iCp=7CE73C023C2F14FB2FC4FE3478FFC3197023DFD7B40FC2E9A33E862E4691E786>)

HOME (/) [NEWS \(/NEWS\)](#) [MAGAZINE \(/ISSUES\)](#)
[ONLINE EXCLUSIVES \(/EXCLUSIVES\)](#)
[MARKETPLACE \(HTTP://WWW.ARCHAEOLOGY.ORG/MARKETPLACE\)](http://www.archaeology.org/marketplace)
[TRAVEL \(HTTP://WWW.ARCHAEOLOGY.ORG/TRAVEL\)](http://www.archaeology.org/travel)
[SUBSCRIBE \(HTTP://WWW.ARCHAEOLOGY.ORG/SUBSCRIBE\)](http://www.archaeology.org/subscribe)

Scientists Examine Possible Link Between Art and Echoes

[Share \(http://www.addthis.com/bookmark.php\)](http://www.addthis.com/bookmark.php)

Monday, June 26, 2017



(Margarita Díaz-Andreu)

BARCELONA,
SPAIN—
[Science News](#)

<https://www.sciencenews.org/article/sound-reflecting-shelters-inspired-ancient-rock-artists>) reports that hunter-gatherers and early farmers living in the central Mediterranean may have been drawn to rock shelters with special acoustic properties. Margarita Díaz-Andreu and Tommaso Mattioli of the University of Barcelona and their team investigated echoes produced by caves in the Baume Brune cliff face in southeastern France, and in the Valle d'Ivodoro on Italy's eastern coast. Each location consists of multiple rock shelters, but only some of them were decorated with paintings between 6,500 and 5,000 years ago. The researchers connected a special microphone to a digital recorder to measure the direction, intensity, and timing of sound waves generated by popped balloons at different distances outside each of the decorated and undecorated caves. In France, those distances ranged from 70 to 120 feet from the entrance to

the caves, and in Italy, where the terrain was rougher, from 250 to 1,000 feet. The acoustic data was then used to create 3-D, slow-motion depictions of the echoes as moving circles originating from the place where the sound was reflected. Díaz-Andreu and her colleagues suggest that the sites decorated with rock art produced audible echoes, and the sites with the most paintings reflected the best echoes. For more, go to "[The First Artists \(/issues/201-features/top10/3952-indonesia-early-cave-art\)](#)."



<http://www.archaeology.org>

IN THE CURRENT ISSUE

Features

[Egypt's Final Redoubt in Canaan \(/issues/262-1707/features/5627-jaffa-egypt-canaan-colony\)](#)

[Set in Stone \(/issues/262-1707/features/5626-native-american-bannerstones\)](#)

[Letter From Peru \(/issues/266-1707/letter-from/5653-letter-from-peru-spiral-temples\)](#)

From the Trenches

[Ka-Ching! \(/issues/263-1707/from-the-trenches/5641-trenches-jersey-celtic-coin-hoard-disassembly\)](#)

[Off the Grid \(/issues/263-1707/from-the-trenches/5640-trenches-sweden-gamla-uppsala\)](#)

[While You Are Waiting \(/issues/263-1707/from-the-trenches/5639-trenches-rome-metro-garrison\)](#)

[A Dangerous Island \(/issues/263-1707/from-the-trenches/5637-trenches-scotland-eigg-massacre\)](#)

[House Rules \(/issues/263-1707/from-the-trenches/5636-trenches-mexico-oaxaca-el-palenque-palace\)](#)

[Renaissance Melody \(/issues/263-1707/from-the-trenches/5638-trenches-france-medieval-music-plaque\)](#)

[Take Me Out to the Ball Game \(/issues/263-1707/from-the-trenches/5635-trenches-austria-carnuntum-roman-entertainment\)](#)

[Tomb Couture \(/issues/263-1707/from-the-trenches/5634-trenches-china-datong-tomb-murals\)](#)

[Not So Pearly Whites \(/issues/263-1707/from-the-trenches/5633-trenches-italy-pleistocene-dental-cavities\)](#)

[Late Paleolithic Masterpieces \(/issues/263-1707/from-the-trenches/5632-trenches-france-paleolithic-engraved-tablets\)](#)

[Afterlife on the Nile \(/issues/263-1707/from-the-trenches/5631-trenches-egypt-shemai-tomb\)](#)

[Knight Watch \(/issues/263-1707/from-the-trenches/5630-trenches-virginia-jamestown-tombstone\)](#)

[The Grand Army Diet \(/issues/263-1707/from-the-trenches/5629-trenches-lithuania-grand-army-isotopes\)](#)

[Angry Birds \(/issues/263-1707/from-the-trenches/5628-trenches-new-mexico-ancestral-pueblo-macaws\)](#)

World Roundup

[First World War booze, Russian bear grease, Mediterranean mystery religion,](#)

Artifact

[A venerable bead](#)

[and exploring under Algiers](#)

[\(/issues/264-1707/artifact/5652-artifact\)](#)

[\(/issues/265-1707/world\)](#)

Recent Issues



[July/August 2017](#)

[\(/issues/261-1707\)](#)



[May/June 2017](#)

[\(/issues/254-1705\)](#)



[March/April 2017](#)

[\(/issues/248-1703\)](#)

[About Us \(/about-us\)](#) [Writers' Guidelines \(/writer-s-guidelines\)](#)

[Privacy Policy \(/privacy-policy\)](#) [Contact Us \(/contact-us\)](#)

[Advertise \(http://www.archaeology.org/advertising\)](http://www.archaeology.org/advertising)

(c) 2017 Archaeology Magazine, a Publication of the Archaeological Institute of America