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DIGITAL REVIEW

Lidar and Lost Cities: Examining the Public Presentation of Recent Lidar Findings through News Media

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Overview
This review considers how scientific archaeological publications, especially those relying on new digital technologies, can become sensationalized for the public in popular media. I present three separate examples of lidar-based mappings of ancient landscapes in the Amazon and Central Asia, each initially published by archaeological teams in the journals *Nature* or *Science* since 2022. These academic publications were followed by many news articles in the popular press. A common trope of these popular presentations includes the concept of "lost cities" being finally "found" by the lidar surveys. This oversimplification usually ignores existing knowledge, especially that of Indigenous local communities and archaeologists. We archaeologists should, therefore, become more aware of the potential consequences of our scholarly communications. We should consider the public's experience with parsing scientific advances and what ways we can try to influence the public discourse.

Lidar for Site Prospection

In this review, I explore instances of archaeological discoveries made through lidar prospection that were sensationalized in the press. Over the last two decades, lidar (light detection and ranging) technology has dramatically changed the investigation of past cultural landscapes. Reconnaissance and mapping of ancient spaces, which used to take years, if not decades, to complete, are now prospected in a matter of hours with greater accuracy (Reese-Taylor et al. 2016). As well, the ability to gather spatial data over large regions has increased the scale at which archaeologists are able to engage with ancient landscapes (Figure 1). Lidar surveys have revealed great expanses of land containing multiple settlements with monumental architecture, infrastructure, and landscape modifications, some of which were previously unknown to a great swath of the populace. As a result, archaeologists now work at much larger scales, fundamentally changing how we conceive of ancient societies in ways that are still unfolding (Bickler 2021; Canuto et al. 2018; Chase et al. 2012, 2016; Evans et al. 2013; Fisher et al. 2017; Inomata et al. 2021).

An interesting phenomenon that has developed out of these scientific lidar site mappings is the concept that such prospections often lead to the discovery of formally unknown "lost cities," a concept fueled by news articles aimed at popular audiences. To examine this press sensationalization, I have selected for analysis three examples of academic articles from among countless publications that highlight lidar findings.[1] Each article considered here has recently been published in a major journal and was subsequently the subject of media hype in numerous news outlets. These examples are representative of the types of change in tone, emphasis, and words that skew archaeological findings to the point that they are difficult to distinguish from the pseudoscientific posts that heavily populate our social media.

Example 1: Low-Density Urbanism in the Amazon

On May 25, 2022, Heiko Prümers and colleagues published the results of a lidar reconnaissance in the Bolivian Amazon in the prestigious journal *Nature* (Prümers et al. 2022). The title of the article, "Lidar

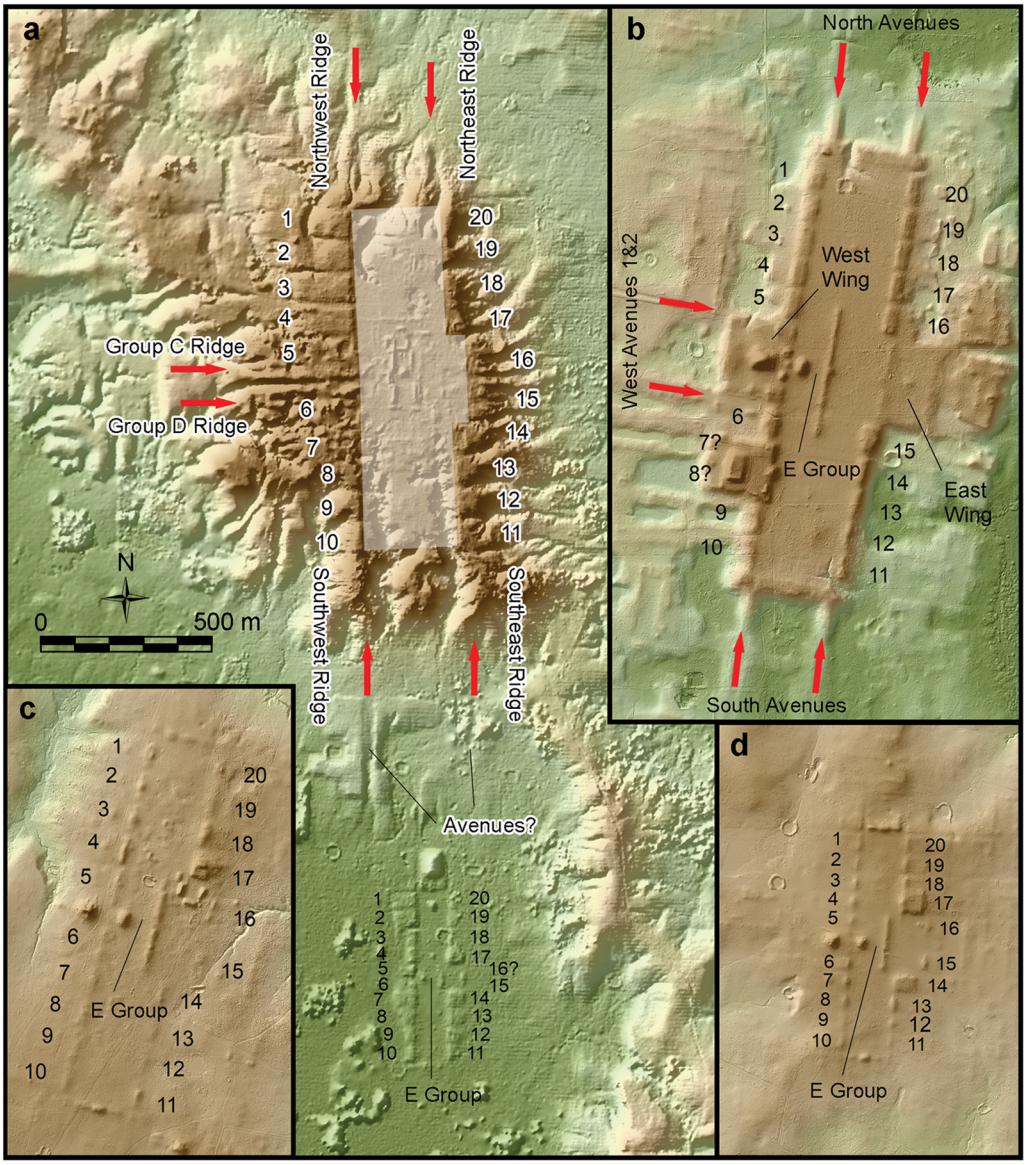

Figure 1. Comparable platform complexes from Veracruz and Tabasco, Mexico, exemplifying a regional landscape analysis aided by lidar (from Inomata et al. 2021:Figure 4).

Reveals Pre-Hispanic Low-Density Urbanism in the Bolivian Amazon," was understated, perhaps by design. In my experience, archaeologists generally seek to avoid dramatic wording in their academic papers. The authors clearly note that this work builds on earlier investigations in the region using remote-sensing and field reconnaissance that identified "189 large monumental sites (locally known as 'lomas'), 273 smaller sites and 957 km of canals and causeways" (Prümers et al. 2022:325; see Lombardo and Prümers 2010; Prümers and Betancourt 2014). The findings reported in 2022 highlight the extent of and investment in architecture of two previously known settlements in the region, as well as a "highly integrated, continuous, and dense settlement system" (Prumers et al. 2022:327).

This article was then featured in an online news update by *Nature* at the time of its publication. The news item, entitled "'Mind Blowing' Ancient Settlements Uncovered in the Amazon," mistakenly emphasizes, in the subtitle, that the urban centers were "the first to be discovered in the region," which clearly

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conflicts with what the authors carefully outlined in their own article (Kreier 2022:16). In fact, the use of the term "mind blowing" in the title muddies the lead author's use of the term in a statement concerning the overall complexity revealed by the lidar survey (Kreier 2022:16).

On May 26, 2022, *Nature* followed up its original news release with a video entitled "Lasers Reveal Ancient Pyramids and Canals Hidden in the Amazon: Hundreds of New Archaeological Sites Have Been Discovered beneath the Trees" (Bundell 2022). This almost six-minute video is a skillfully edited documentary that features the lead archaeologist, Heiko Prümers, who discloses that the mounds in the area were previously known by people living nearby. This is revealing, as it is the first recognition of local knowledge in the region.

The *Smithsonian Magazine* picked up the story on May 25, 2022, as well. Their eye-catching title, "Lost Cities of the Amazon Discovered from the Air," conveys a complete lack of regard for the original academic article authors' care in contextualizing their discovery (Handwerk 2022). This news item erroneously states that "scientists have discovered that ancient cities really did exist in the Amazon," as if the presence of these and other settlements were only exposed by the lidar survey, when in fact Prümers and others—including Michael Heckenberger, who is quoted in the article—have been identifying large settlements in the Amazon rainforest for over two decades (de Souza et al. 2018; Heckenberger et al. 2008; Iriarte et al. 2020; Lombardo and Prümers 2010; Prümers and Betancourt 2014).

Shortly after these initial news articles were released, secondary internet sources recapitulated content without reading the original article and therefore often echoed the distortions found in the news items (Archaeology Newsroom 2022; Henricks 2022; Snyder 2022). In fact, an *Axios* article (Synder 2022) erroneously states (in a bold heading) that Prümers and colleagues' (2022) publication documents the first time lidar technology was used in the Amazon region, disregarding an earlier study by Iriarte and colleagues (2020) that used lidar to reveal details of circular mound villages and interconnecting roads in southwest Amazonia.

Example 2: Garden Urbanism in the Tropical Rainforest

A more recent article in *Science*, titled "Two Thousand Years of Garden Urbanism in the Upper Amazon," was also the focus of a media blitz (Rostain et al. 2024). In this study, Rostain and colleagues analyzed lidar commissioned by the Ecuadorian National Institute for Cultural Heritage (INPC) in 2015. The results of their analyses demonstrated a densely populated region, with communities and agricultural fields interconnected by an extensive road system. Within the article, the authors are careful to acknowledge previous studies in the area identifying and exploring large settlements formed by groups of earthen platforms (Rostain et al. 2024:183). In addition, the authors note the modern towns in the region, including Macas, the capital of the Morona Santiago province (Rostain et al. 2024:184).

The innocuously titled article caused a news frenzy, with an extraordinary number of news outlets promoting the research. Over 19 news outlets, including CNN, BBC, NBC, AP, Newsweek, the *Guardian*, and the *Daily Mail*, all ran stories regarding the discovery in the aftermath of the publication (Agence France-Presse [AFP] 2024; Anderson 2024a; CBS News 2024; Dyer 2024; Gao 2024; Georgiou 2024a; Guardian 2024; Guesgen 2024; Khalil 2024; Larson 2024; Mishra and Kumar 2024; New York Post 2024; Orie 2024; Rannard 2024; Rommen 2024; Silverstein 2024; Stein 2024; Voice of America 2024; Weissman 2024; Yuhas and Jiménez 2024). A word cloud of article titles from 13 major outlets represents the relative occurrence of words. A total of 52 unique words were included, the four most frequent being "city/cities" ($N = 12$), "lost" ($N = 11$), "Amazon" ($N = 11$), and "ancient" ($N = 7$) (Figure 2).

This word cloud also reflects the tone of the news articles, emphasizing the discovery of a lost city or cities. The BBC article entitled "The Discovery of the Americas' Long-Lost 'Rome'" is perhaps the most sensationalized of the lot (Stein 2024). While Rostain and colleagues are measured in their article, the BBC publication imparts comparisons that could be considered overstatements, albeit to make a point. While the impressive evidence of 6,000 structures within 300 km^2, a well-engineered network of road systems, and an enormous investment in landesque capital in the Amazon dated to AD 300–500 indicates a large population with incredible ingenuity, it hardly compares with Rome, which had a population of roughly one million people at AD 300.

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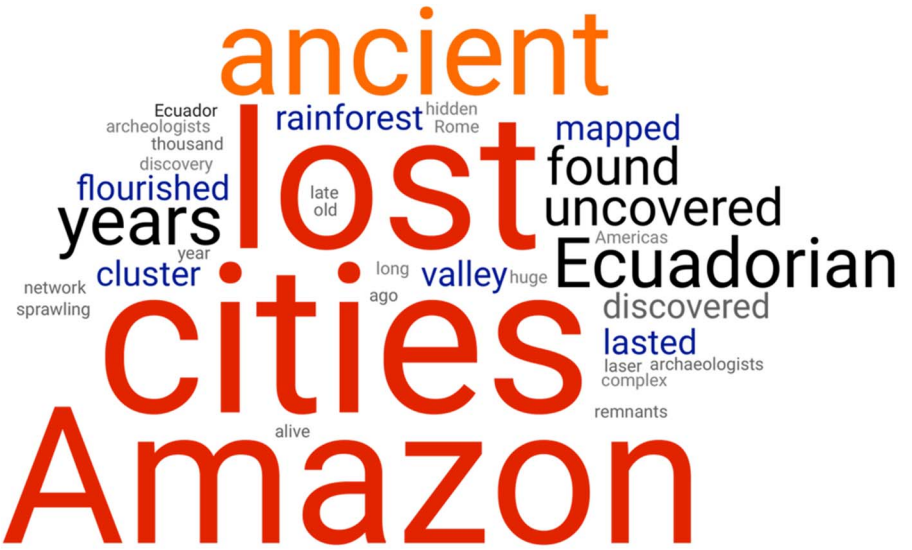

Figure 2. Word cloud generated from media article titles.

What is striking in the news coverage, however, is the failure to acknowledge previous studies in the area, often by local scholars, that also contributed to current understandings of Amazonian settlements in the study area. The lack of recognition, unconscious or not, downplays the role of local Indigenous knowledge in protecting cultural patrimony. This is in stark contrast to an article published by the *Tico Times*, a Costa Rican newspaper, which does a credible job of correcting these omissions. In that news report, entitled "Ecuador's 2,500 Year Old 'Lost City' Uncovered—But Is It Too Late?," AFP journalists point out that one of the largest settlements in the study area covered in the article by Rostain and colleagues (2024) was originally discovered in 1978 (AFP 2024). The AFP news article also notes previous work by Alejandra Sánchez, an archaeologist from the University of Valladolid, who found that the cultural heritage was critically endangered because of erosion, deforestation, and agriculture, which ultimately led to the original lidar scan of the area by the INPC in Ecuador. Sánchez and Argentinian Rita Álvarez presented an analysis of the lidar in 2023, which was referenced by Rostain and colleagues (2024:183, 189). The AFP news article also highlights the work of an Ecuadorian archaeologist, Alden Yépez, who is investigating the interconnected drainage systems in the region. Finally, the news article includes comments by Catalina Tello, director of the INPC, who commits to including the Shuar and Achuar Indigenous people in studies of the area because these people "have safeguarded and cared for all these vestiges" (AFP 2024).

Example 3: Urbanism at High Altitudes

Moving to another area of the world, Michael D. Frachetti and colleagues' recent publication "Large-Scale Medieval Urbanism Traced by UAV–Lidar in Highland Central Asia," in the journal *Nature* on October 23, 2024, provides a perspective from a high-altitude region in Uzbekistan (Franchetti et al. 2024). In this highly technical study, the authors outline the use of UAV (uncrewed aerial vehicles)–lidar to create very high resolution surface reconstructions. While the majority of the article details the use of lidar and semiautomated feature detection for the mapping and classification of architecture and infrastructure, including important fortifications, the authors also conclude that the highland cities on the medieval Silk Road were larger than initially thought and instrumental in providing security and connectivity along this critical East–West trade route (Franchetti et al. 2024:1123).

Importantly, on the second page of the article, Franchetti and coauthors (2024:1119) clearly state that the sites scanned, Tashbulak and Tugunbulak, were first discovered in 2011 and 2015, respectively. While *Nature News* (Silvia 2024) reported a very accurate synopsis of the original article, a *Nature* podcast

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strayed from the original intent of the article (Howe and Bates 2024). Entitled "Massive Lost Mountain Cities Revealed by Lasers" and published on October 23, 2024, the podcast was somewhat contradictory, leading to a mixed message. The title clearly emphasizes the "lost" nature of the cities, yet in an interview for the podcast, Franchetti and Farhod Maksudov from the Uzbekistan Academy of Sciences, authors of the lidar study, stress that historical records recounted huge cities in the region.

Not surprisingly, major news outlets picked up on the "lost cities" theme. CNN reported "Lost Silk Road Cities Mapped Using Remote Sensing" (Hunt 2024); *Scientific America* announced "Lost Silk Road Cities Discovered High in the Mountains of Central Asia" (Parshall 2024); NBC titled its news release "Lost for Centuries, Silk Road Cities Are Revealed by Drone Technology" (Peart 2024); and Reuters reported "Scientists Document Lost Mountain Cities on Silk Road in Uzbekistan" (Dunham 2024). Out of 22 media reports on the findings, 15 included the word "lost" in the title, one included "forgotten," and two included either "buried" or "unearthed" (Anderson 2024b; Bower 2024; Corbley 2024; Dunham 2024; Elymc 2024; Georgiou 2024b; Hunt 2024; Kesteloo 2024; McPhee 2024; Natale 2024; Nazaryan 2024; Ng 2024; Parshall 2024; Peart 2024; Radley 2024; Schwaller 2024; Sinha 2024; Zahid 2024).

This begs the question, what does it mean to be "lost"? In this specific case, the word "lost" appears to be tied to a lack of scientific documentation. Despite well-known historical documents describing cities in the region and pedestrian surveys recording their presence in 2011 and 2015, the news media's overt message is that the cities remained unknown until a lidar survey revealed them.

Conclusions

The media coverage of scientific findings is, at times, hyperbolic. Media teams often assume that the public will only be interested if the discovery is overdramatized, essentially reducing the story to clickbait. Further, when reporting on lidar findings, the media seems to be enamored with the lost-cities narrative, which is simultaneously mysterious and romantic. However, in most instances, what "lost" seems to mean is a lack of scientific reporting and, in the case of the Silk Road cities, a lack of documentation by lidar specifically. Such a nuanced definition of "lost" may be misleading to the public, who may associate the word with more common definitions such as "no longer known" or "ruined or destroyed physically or morally" (Webster's Dictionary).

Such confusion may actually be by design. Without guidance, readers might draw parallels between lost Amazonian or Silk Road cities and the lost continent of Atlantis or other "lost worlds," which remain very compelling, if the popularity of *Ancient Apocalypse* on Netflix is any indicator. Since media outlets strive for the public's attention, using slightly misleading and exaggerated wording can be justified. Not only does spicing up the sometimes dry information help news outlets' bottom line, it also draws attention to archaeological findings and the importance of the past. And we all want the public to understand and value the past, right? Yet it is a slippery slope. Overly dramatized reporting erodes the public's ability to distinguish good science from bad science and results in legitimizing pseudoscience and diminishing scientific discoveries (Emmitt 2022).

Omissions with damaging consequences are also perpetuated in lost-cities narratives. These reinforce a colonial perspective, discounting research by scholars from the Global South or non-Western countries, and ignoring the contributions of local communities, many Indigenous, to the interpretations and preservation of global heritage (Petrosyan et al. 2021).

To preserve scientific integrity, build trust with the public regarding scientific discoveries, and decolonize our discipline, we have a responsibility to craft and control the narrative of our findings. It will not be easy, as we are not taught to communicate with a nonacademic audience, but there are countless resources available, some new, such as virtual reality, as well as others that are well established, such as writing articles in popular magazines (Cobb and Nieminen 2023; Thompson and Cobb 2023). Decide what works best for you and make it a priority. It is essential that it is we who become the storytellers (Landa and Thompson 2023).

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Note

1. I have purposely not included lidar studies from the Maya lowlands in this discussion. I work in this region and have collaborated in the field, in conference sessions, workshops, and research groups, and on publications with most of the scholars who work with lidar. Therefore, I do not feel as though I could provide an unbiased review.

References Cited

Agence France-Presse (AFP). 2024. Ecuador's 2,500 Year Old "Lost City" Uncovered—But Is It Too Late? *Tico Times*, February 13. https://ticotimes.net/2024/02/13/ecuadors-2500-year-old-lost-city-uncovered-but-is-it-too-late, accessed October 15, 2024.

Anderson, Sonja. 2024a. Archaeologists Discover Ancient Cities Hidden in the Ecuadorean Amazon. *Smithsonian Magazine*, January 12. https://www.smithsonianmag.com/smart-news/this-ancient-city-has-been-hidden-in-the-amazon-for-2500-years-180983587/, accessed October 15, 2024.

Anderson, Sonja. 2024b. Archaeologists Map Two Forgotten Medieval Cities That Flourished along the Silk Road in the Mountains of Central Asia. *Smithsonian Magazine*, October 25. https://www.smithsonianmag.com/smart-news/archaeologists-map-two-forgotten-medieval-cities-that-flourished-along-the-silk-road-in-the-mountains-of-central-asia-180985328/, accessed November 6, 2024.

Archaeology Newsroom. 2022. Early Urbanism Found in the Amazon: Archaeologists Reveal Pre-Hispanic Cities in Bolivia with Laser Technology LIDAR. *Archaeology WIKI*, May 26. https://www.archaeology.wiki/blog/2022/05/26/early-urbanism-found-in-the-amazon/, accessed October 9, 2024.

Bickler, Simon H. 2021. Machine Learning Arrives in Archaeology. *Advances in Archaeological Practice* 9(2):186–191. https://doi.org/10.1017/aap.2021.6.

Bower, Bruce. 2024. Silk Road Cities Reached Surprising Heights in Central Asia's Mountains. *Science News*, October 23. https://www.sciencenews.org/article/silk-road-cities-central-asia-mountains, accessed November 6, 2024.

Bundell, Shamini. 2022. Lasers Reveal Ancient Pyramids and Canals Hidden in the Amazon: Hundreds of New Archaeological Sites Have Been Discovered beneath the Trees. *Nature* (video), May 26. https://doi.org/10.1038/d41586-022-01490-9, accessed October 9, 2024.

Canuto, Marcello A., Francisco Estrada-Belli, Thomas G. Garrison, Stephen D. Houston, Mary Jane Acuña, Milan Kováč, Damien Marken, et al. 2018. Ancient Lowland Maya Complexity as Revealed by Airborne Laser Scanning of Northern Guatemala. *Science* 361(6409):aau0137. https://doi.org/10.1126/science.aau0137.

CBS News. 2024. Archeologists Uncover "Lost Valley" of Ancient Cities in the Amazon Rainforest. *CBS News*, January 12. https://www.cbsnews.com/news/lost-cities-uncovered-ecuador-amazon-rainforest/, accessed October 15, 2024.

Chase, Arlen F., Diane Z. Chase, Christopher T. Fisher, Stephen J. Leisz, and John F. Weishampel. 2012. Geospatial Revolution and Remote Sensing LiDAR in Mesoamerican Archaeology. *PNAS* 109(32):12916–12921. https://doi.org/10.1073/pnas.1205198109.

Chase, Arlen F., Kathryn Reese-Taylor, Juan C. Fernandez-Diaz, and Diane Z. Chase. 2016. Progression and Issues in the Mesoamerican Geospatial Revolution: An Introduction. *Advances in Archaeological Practice* 4(3):219–231. https://doi.org/10.7183/2326-3768.4.3.219

Cobb, Peter J., and Juuso H. Nieminen. 2023. Immersing in Mesopotamia: Virtual Reality Site Tours in the Remote Classroom. *Near Eastern Archaeology* 86(3):240–249. https://doi.org/10.1086/725775.

Corbley, Andy. 2024. Trade on the Medieval Silk Road Was So Rich, It Sustained High Mountain Cities, New Discovery Finds. *World at Large*, October 25. https://www.worldatlarge.news/2024/10/25/trade-on-the-medieval-silk-road-trade-was-so-rich-it-sustained-mountain-cities-new-discovery-finds/, accessed November 6, 2024.

de Souza, Jonas Gregorio, Denise Pahl Schaan, Mark Robinson, Antonia Damasceno Barbosa, Luiz E. O. C. Aragão, Ben Hur Marimon Jr., Beatriz Schwantes Marimon, et al. 2018. Pre-Columbian Earth-Builders Settled along the Entire Southern Rim of the Amazon. *Nature Communications* 9(1):1125. https://doi.org/10.1038/s41467-018-03510-7.

Dunham, Will. 2024. Scientists Document Lost Mountain Cities on Silk Road in Uzbekistan. *Reuters*, October 23. https://www.reuters.com/world/asia-pacific/scientists-document-lost-mountain-cities-silk-road-uzbekistan-2024-10-23/, accessed November 6, 2024.

Dyer, Rebecca. 2024. Cluster of Ancient Lost Cities in the Amazon Is the Largest Ever Found. *Science Alert*, January 19. https://www.sciencealert.com/cluster-of-ancient-lost-cities-in-the-amazon-is-the-largest-ever-found, accessed October 15, 2024.

Elymc. 2024. Lidar Finds Lost Silk Road Cities. *Perplexity*, October 25. https://www.perplexity.ai/page/lidar-finds-lost-silk-road-cit-HFXtcZq2RwWWhAf2TUvcXQ, accessed February 4, 2025.

Emmitt, Joshua. 2022. YouTube as Historical Process: The Transfiguration of the Cerro Gordo Mines through Ghost Town Living. *Advances in Archaeological Practice* 10(2):237–243. https://doi.org/10.1017/aap.2022.7.

Evans, Damian H., Roland J. Fletcher, Christophe Pottier, Jean-Baptiste Chevance, Dominique Soutif, Boun Suy Tan, Sokrithy Im, et al. 2013. Uncovering Archaeological Landscapes at Angkor Using Lidar. *PNAS* 110(31):12595–12600. https://doi.org/10.1073/pnas.1306539110.

Fisher, Christopher T., Anna S. Cohen, Juan Carlos Fernández-Diaz, and Stephen J. Leisz. 2017. The Application of Airborne Mapping LiDAR for the Documentation of Ancient Cities and Regions in Tropical Regions. *Quaternary International* 448:129–138. https://doi.org/10.1016/j.quaint.2016.08.050.

https://doi.org/10.1017/aap.2025.2 Published online by Cambridge University Press

Frachetti, Michael D., Jack Berner, Xiaoyi Liu, Edward R. Henry, Farhod Maksudov, and Tao Ju. 2024. Large-Scale Medieval Urbanism Traced by UAV–Lidar in Highland Central Asia. *Nature* 634:1118–1124. https://doi.org/10.1038/s41586-024-08086-5.

Gao, Larissa. 2024. The Amazon's Ancient Complex of "Lost Cities" Flourished for a Thousand Years. *NBC News*, January 12. https://www.nbcnews.com/science/science-news/lost-cities-oldest-ancient-complex-found-amazon-1000-years-rcna133608, accessed October 15, 2024.

Georgiou, Aristos. 2024a. Lost City Discovered in Amazon Rainforest. *Newsweek*, October 23. https://www.newsweek.com/lost-city-discovered-amazon-rainforest-1972270, accessed October 15, 2024.

Georgiou, Aristos. 2024b. New Silk Road Survey Reveals Hundreds of Medieval Structures. *Newsweek*, October 24. https://www.newsweek.com/archaeologists-reveal-hundreds-medieval-structures-famous-silk-road-1973783, accessed November 6, 2024.

Guardian. 2024. Valley of Lost Cities That Flourished 2,000 Years Ago Found in Amazon. *Guardian*, January 11. https://www.theguardian.com/science/2024/jan/11/amazon-archaeology-lost-cities-ecuador, accessed October 15, 2024.

Guesgen, Mirjam. 2024. Archaeologists Have Discovered Massive Lost Cities in the Amazon Jungle. *VICE*, January 12. https://www.vice.com/en/article/archaeologists-discover-ancient-lost-city-amazon-rainforest/, accessed October 15, 2024.

Handwerk, Brian. 2022. Lost Cities of the Amazon Discovered from the Air. *Smithsonian Magazine*, May 25. https://www.smithsonianmag.com/science-nature/lost-cities-of-the-amazon-discovered-from-the-air-180980142/, accessed October 9, 2024.

Heckenberger, Michael J., J. Christian Russell, Carlos Fausto, Joshua R. Toney, Morgan J. Schmidt, Edithe Pereira, Bruna Franchetto, and Afukaka Kuikuro. 2008. Pre-Columbian Urbanism, Anthropogenic Landscapes, and the Future of the Amazon. *Science* 321(5893):1214–1217. https://doi.org/10.1126/science.1159769.

Henricks, Heather. 2022. What Lies Beneath: Amazon Mounds Key to Ancient Civilization. *ExplorersWeb*, May 29. https://explorersweb.com/what-lies-beneath-amazon-mounds-key-to-ancient-civilization/, accessed October 9, 2024.

Howe, Nick Petrić, and Emily Bates. 2024. Massive Lost Mountain Cities Revealed by Lasers. *Nature* (podcast), October 23. https://doi.org/10.1038/d41586-024-03463-6, accessed November 6, 2024.

Hunt, Katie. 2024. Lost Silk Road Cities Mapped Using Remote Sensing. *CNN*, October 23. https://edition.cnn.com/2024/10/23/science/lost-silk-road-cities-laser-mapping/index.html, accessed November 6, 2024.

Inomata, Takeshi, Juan Carlos Fernandez-Diaz, Daniela Triadan, Miguel García Mollinedo, Flory Pinzón, Melina García Hernández, Atasta Flores, et al. 2021. Origins and Spread of Formal Ceremonial Complexes in the Olmec and Maya Regions Revealed by Airborne Lidar. *Nature Human Behaviour* 5(11):1487–1501. https://doi.org/10.1038/s41562-021-01218-1.

Iriarte, Jose, Sarah Elliott, S. Yoshi Maezumi, Daiana Alves, Regina Gonda, Mark, Robinson, Jonas Gregorio de Souza, Jennifer Watling, and Josephine Handley. 2020. The Origins of Amazonian Landscapes: Plant Cultivation, Domestication and the Spread of Food Production in Tropical South America. *Quaternary Science Reviews* 248:106582. https://doi.org/10.1016/j.quascirev.2020.106582.

Kesteloo, Haye. 2024. Drone Lidar Reveals Lost Medieval Cities along Silk Road, Revolutionizing Archaeological Research. *Drone XL*, October 29. https://dronexl.co/2024/10/29/drone-lidar-medieval-cities-along-silk-road/, accessed November 6, 2024.

Khalil, Jesse. 2024. Lidar Reveals Lost Cities in the Amazon. *GPS World*, January 22. https://www.gpsworld.com/lidar-reveals-lost-cities-in-the-amazon/, accessed October 15, 2024.

Kreier, Freda. 2022. "Mind Blowing" Ancient Settlements Uncovered in the Amazon: The Urban Centres Are the First to Be Discovered in the Region, Challenging Archaeological Dogma. *Nature News* 606(7912):16–17. https://doi.org/10.1038/d41586-022-01458-9.

Landa, Yesenia Rubi, and Amy E. Thompson. 2023. Field Notes and Fictional Realms: How Archaeology Is Portrayed in the League of Legends Lore. *Advances in Archaeological Practice* 11(2):258–263. https://doi.org/10.1017/aap.2023.7.

Larson, Christina. 2024. A Cluster of Lost Cities in Ecuadorian Amazon That Lasted 1,000 Years Has Been Mapped. *AP*, January 12. https://apnews.com/article/amazon-lost-cities-ecuador-archaeology-8e48942ff8fd1c52611158696b74e214, accessed October 15, 2024.

Lombardo, Umberto, and Heiko Prümers. 2010. Pre-Columbian Human Occupation Patterns in the Eastern Plains of the Llanos de Moxos, Bolivian Amazonia. *Journal of Archaeological Science* 37(8):1875–1885. https://doi.org/10.1016/j.jas.2010.02.011.

McPhee, Rebecca. 2024. Two Lost Cities of the Silk Road Lay Buried for Centuries. *Explorersweb*, October 24. https://explorersweb.com/two-lost-cities-of-the-silk-road-lay-buried-for-centuries/, accessed November 6, 2024.

Mishra, Tarun, and Manoj Kumar. 2024. 2000-year-old Lost Cities Found in the Middle of Inhabitable Amazon Forest. *Business Today*, January 23. https://www.businesstoday.in/visualstories/news/2000-year-old-lost-cities-found-in-the-middle-of-inhabitable-amazon-forest-93083-23-01-2024, accessed October 9, 2024.

Natale, Michael. 2024. A Mountaintop Discovery Is Changing Everything We Knew about the Silk Road. *Popular Mechanics*, October 29. https://www.popularmechanics.com/science/archaeology/a62721019/silk-road-mountain-cities/, accessed November 6, 2024.

Nazaryan, Alexander. 2024. Ancient Cities Unearthed in Mountains of Central Asia. *New York Times*, October 23. https://www.nytimes.com/2024/10/23/science/silk-road-mountain-cities.html, accessed November 6, 2024.

New York Post. 2024. Cluster of Lost Cities in Ecuadorian Amazon That Lasted 1,000 Years Uncovered. *New York Post*, January 12. https://nypost.com/2024/01/12/news/ecuadorian-amazon-lost-cities-that-lasted-1000-years-uncovered/, accessed October 15, 2024.

https://doi.org/10.1017/aap.2025.2 Published online by Cambridge University Press

Ng, Kelly. 2024. Lost Silk Road Cities Discovered in Uzbek Mountains. BBC News Online, October 24. https://www.bbc.com/news/articles/c238kv8ddeyo, accessed November 6, 2024.

Orie, Amarachi. 2024. Huge Network of Ancient Cities Uncovered in the Amazon Rainforest. *CNN*, January 14. https://edition.cnn.com/2024/01/12/americas/ancient-city-uncovered-amazon-upano-intl-scli-scn/index.html, accessed February 4, 2025.

Parshall, Allison. 2024. Lost Silk Road Cities Discovered High in the Mountains of Central Asia. *Scientific American*, October 23. https://www.scientificamerican.com/article/lost-silk-road-cities-discovered-high-in-the-mountains-of-central-asia/, accessed November 6, 2024.

Peart, Hannah. 2024. Lost for Centuries, Silk Road Cities Are Revealed by Drone Technology. *NBC News*, October 24. https://www.nbcnews.com/news/world/lost-centuries-silk-road-cities-are-revealed-drone-technology-rcna176990, accessed November 6, 2024.

Petrosyan, Artur, Hayk Azizbekyan, Boris Gasparyan, Roberto Dan, Arsen Bobokhyan, and Mariam Amiryan. 2021. Foregrounding Daily Data Collection on Archaeological Fieldwork. *Advances in Archaeological Practice* 9(4):402–414. https://doi.org/10.1017/aap.2021.30.

Prümers, Heiko, and Carla Jaimes Betancourt. 2014. 100 años de investigación arqueológica en los Llanos de Mojos. *Arqueoantropológicas* 4(4):11–53.

Prümers, Heiko, Carla Jaimes Betancourt, José Iriarte, Mark Robinson, and Martin Schaich. 2022. Lidar Reveals Pre-Hispanic Low-Density Urbanism in the Bolivian Amazon. *Nature* 606(7913):325–328. https://doi.org/10.1038/s41586-022-04780-4.

Radley, Dario. 2024. Lidar Technology Reveals Long-Lost Silk Road Cities in Uzbekistan's Mountains. *Archaeology News*, October 24. https://archaeologymag.com/2024/10/lidar-reveals-silk-road-cities-in-uzbekistan/, accessed November 6, 2024.

Rannard, Georgina. 2024. Huge Ancient Lost City Found in the Amazon. *BBC News Online*, January 11. https://www.bbc.com/news/science-environment-67940671, accessed October 15, 2024.

Reese-Taylor, Kathryn, Armando Anaya Hernández, F. C. Atasta Flores Esquivel, Kelly Monteleone, Alejandro Uriarte, Christopher Carr, Helga Geovannini Acuña, Meaghen Peuramaki-Brown, and Nicholas Dunning. 2016. Boots on the Ground at Yaxnohcah: Ground-Truthing LiDAR in a Complex Tropical Landscape. *Advances in Archaeological Practice* 4(3):314–338. https://doi.org/10.7183/2326-3768.4.3.314.

Rommen, Rebecca. 2024. A "Lost Valley of Cities" Built Thousands of Years Ago Has Been Found in the Amazon. *Business Insider*, January 13. https://www.businessinsider.com/amazon-lost-cities-discovered-hidden-by-jungle-for-thousands-years-2024-1, accessed October 15, 2024.

Rostain, Stéphen, Antoine Dorison, Geoffroy de Saulieu, Heiko Prümers, Jean-Luc Le Pennec, Fernando Mejía Mejía, Ana Maritza Freire, Jaime R. Pagán-Jiménez, and Philippe Descola. 2024. Two Thousand Years of Garden Urbanism in the Upper Amazon. *Science* 383(6679):183–189. https://doi.org/10.1126/science.adi6317.

Schwaller, Fred. 2024. Two Lost Medieval Silk Road Cities Mapped in Central Asia. *DW Akademie*, October 24. https://www.dw.com/en/two-lost-medieval-silk-road-cities-mapped-in-central-asia/a-70589851, accessed November 6, 2024.

Silverstein, Jay. 2024. Valley of Lost Cities Found in the Amazon: Technological Advances in Archaeology Are Just the Beginning. *PHYS.ORG*, January 17. https://phys.org/news/2024-01-valley-lost-cities-amazon-technological.html#google_vignette, accessed October 15, 2024.

Silvia, Zachary W. 2024. Surprisingly High-Altitude Silk Road City Mapped from the Sky. *Nature News* 634:1056–1058. https://doi.org/10.1038/d41586-024-03315-3, accessed November 6, 2024.

Sinha, Sujita. 2024. 2 Cities Buried for Centuries beneath Silk Road Grasslands Uncovered by Drone Lidar. *Interesting Engineering*, October 24. https://interestingengineering.com/culture/1st-lidar-scan-reveals-hidden-silk-road-cities, accessed November 6, 2024.

Snyder, Allison. 2022. Ancient Cities' Pyramids and Causeways Discovered Deep in the Amazon. *Axios*, May 28. https://www.axios.com/2022/05/28/ancient-cities-discovered-amazon, accessed October 9, 20224.

Stein, Eliot. 2024. The Discovery of the Americas' Long-Lost "Rome." *BBC Travel*, January 23. https://www.bbc.com/travel/article/20240122-the-discovery-of-the-americas-long-lost-rome, accessed October 15, 2024.

Thompson, Amy E., and Peter J. Cobb. 2023. Incorporating Publication into Graduate Seminars: A Case Study with Digital Reviews in Archaeology. *Advances in Archaeological Practice* 11(4):442–451. https://doi.org/10.1017/aap.2023.18.

Voice of America. 2024. Researchers Discover Lost Cities in the Amazon. *Voice of America*, January 21. https://learningenglish.voanews.com/a/researchers-discover-lost-cities-in-amazon/7437863.html, accessed October 15, 2024.

Weissman, Miri. 2024. Ancient "Lost Cities" Come Alive in the Amazon Thanks to Laser. *Israel Hayom*, September 15. https://www.israelhayom.com/2024/09/15/ancient-lost-cities-discovered-in-amazon-rainforest/, accessed October 15, 2024.

Yuhas, Alan, and Jesus Jiménez. 2024. Remnants of Sprawling Ancient Cities Are Found in the Amazon. *New York Times*, January 23. https://www.nytimes.com/2024/01/23/science/ecuador-amazon-cities-discovery.html, accessed October 15, 2024.

Zahid, Nisha. 2024. Lost Silk Road Cities Discovered with Lidar Tech. *Greek Reporter*, October 23. https://greekreporter.com/2024/10/26/lost-silk-road-cities-discovered/, accessed November 6, 2024.

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