



ABSTRACT SUBMISSION

From Remote Sensing to Fieldwork: Uncovering the Archaeological Landscape of Abu Ghraib, Iraq

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Abstract

The Iraqi-Italian archaeological survey in the Abu Ghraib district (Iraq), an area of 570 km² located in the narrowest stretch between the Euphrates and Tigris rivers, was conducted jointly by the University of Bologna and the State Board of Antiquities and Heritage (SBAH) to investigate the archaeological landscape and its transformations over time there. The Abu Ghraib district has never before been the subject of systematic archaeological investigations, remaining on the margins of major projects focusing on Mesopotamia since the mid-20th century (Bob Adams in his Akkad survey between 1956 and 1957 explored only a small portion in the East of the district). The field campaigns, carried out in 2023 and 2024, integrated prior remote sensing analysis with on-site verification, combining the use of CORONA satellite imagery to identify archaeological sites and reconstruct paleochannels with the implementation of a GIS system for spatial data management and analysis. The use of artificial intelligence models also supported the automated identification of potential sites. The investigation led to the identification of 81 new settlements, ranging from the Akkadian to the Islamic period, outlining settlement and water networks dynamics. The study also documented significant site destruction due to various anthropogenic factors.

Keywords

Abu Ghraib, survey, remote sensing, artificial intelligence, Iraq

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