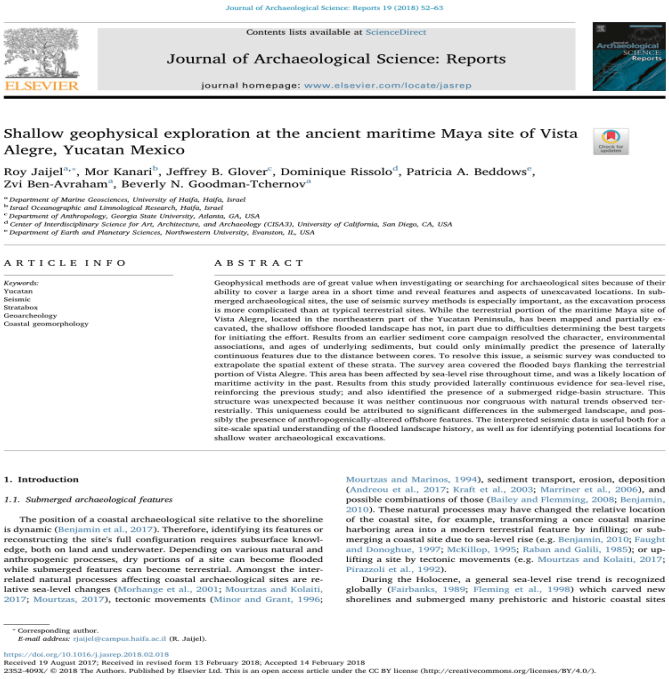
The Harbours of Caesarea Maritima: The Site and the Excavations v. 1 (British Archaeological Reports



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Shallow geophysical exploration at the ancient maritime Maya site of Vista Alegre, Yucatan Mexico

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ABSTRACT

Geophysical methods are of great value when investigating or searching for archaeological sites because of their ability to cover a large area in a short time and reveal features and aspects of unexcavated locations. In submerged archaeological sites, the use of seismic survey methods is especially important, as the excavation process is more complicated than at typical terrestrial sites. While the terrestrial portion of the maritime Maya site of Vista Alegre, located in the northeastern part of the Yucatan Peninsula, has been mapped and partially excavated, the shallow offshore flooded landscape has not, in part due to difficulties determining the best targets for initiating the effort. Results from an earlier sediment core campaign resolved the character, environmental associations, and ages of underlying sediments, but could only minimally predict the presence of laterally continuous features due to the distance between cores. To resolve this issue, a seismic survey was conducted to extrapolate the spatial extent of these strata. The survey area covered the flooded bays flanking the terrestrial portion of Vista Alegre. This area has been affected by sea-level rise throughout time, and was a likely location of maritime activity in the past. Results from this study provided laterally continuous evidence for sea-level rise, reinforcing the previous study, and also identified the presence of a submerged ridge-basin structure. This structure was unexpected because it was neither continuous nor congruous with natural trends observed terrestrially. This uniqueness could be attributed to significant differences in the submerged landscape, and possibly the presence of anthropogenically-altered offshore features. The interpreted seismic data is useful both for a site-scale spatial understanding of the flooded landscape history, as well as for identifying potential locations for shallow water archaeological excavations.

1. Introduction

1.1. Submerged archaeological features

The position of a coastal archaeological site relative to the shoreline is dynamic (Benjamin et al., 2017). Therefore, identifying its features or reconstructing the site's full configuration requires subsurface knowledge, both on land and underwater. Depending on various natural and anthropogenic processes, dry portions of a site can become flooded while submerged features can become terrestrial. Amongst the interrelated natural processes affecting coastal archaeological sites are relative sea-level changes (Morhange et al., 2001; Mourtzas and Kolaiti, 2017; Mourtzas, 2017), tectonic movements (Minor and Grant, 1996; Mourtzas and Marinos, 1994), sediment transport, erosion, deposition (Andreou et al., 2017; Kraft et al., 2003; Marriner et al., 2006), and possible combinations of those (Bailey and Flemming, 2008; Benjamin, 2010). These natural processes may have changed the relative location of the coastal site, for example, transforming a once coastal marine harboring area into a modern terrestrial feature by infilling; or submerging a coastal site due to sea-level rise (e.g. Benjamin, 2010; Faught and Donoghue, 1997; McKillop, 1995; Raban and Galili, 1985); or uplifting a site by tectonic movements (e.g. Mourtzas and Kolaiti, 2017; Pirazzoli et al., 1992).

During the Holocene, a general sea-level rise trend is recognized globally (Fairbanks, 1989; Fleming et al., 1998) which carved new shorelines and submerged many prehistoric and historic coastal sites

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BAR S, Lewan and the Bannu Basin Excavation and survey of sites and British Archaeological Mission to Pakistan Series 1. .. BAR S, Tepe Abdul Hosein A Neolithic Site in Western Iran: Excavations by Judith Pullar. BAR S, The Harbour of Sebastos (Caesarea Maritima) in its.Vol 1, the site and the excavations by Avner Reports International Series) Series: British Archaeological Reports International Series; Paperback: pages.Published: (); The Combined Caesarea expeditions: field report of the season. By: Black, Eve. Language(s): English. Published: Oxford, England: B.A.R., Subjects: Caesarea Ancient Harbours Excavation Project (Israel) ill. ; 29 cm. ISBN: (v. 1). Locate a Print Version: Find in a library.Bull, R. J. () Caesarea Maritima: In Search of Herod's City. Conder, C. R. (1) The Survey of Palestine, Report XII, the South Side of Carmel. Reports of the Work of the Joint Expedition in and of the British B.A.R., Oxford. Ancient Harbour Excavation Project (C.A.H.E.P.): Preliminary Report on the.BBSAJ Bulletin of the British School of Archaeology in Jerusalem DAIMR Department of Antiquities of the Israel Museum, Reports Herod built Caesarea on the site of a Phoe- Caesarea was finally destroyed in 1 1 size and shape of the ancient harbour. Cur- .. Excavations at Caesarea Maritima, Archeology 8.Raban, A. The Harbours of Caesarea Maritima, Vol. I: The Site and the Excavations. J. P. Oleson, ed. British Archaeological Reports, Intl. Ser., S Oxford: BAR. Raban, A. The Inner Harbour 114 in E. E. Rice, Rose, V . and Muller-Strubing, H. Vitruvii de Architectura Libri Decem. Leipzig: Teubner.In Harbour archaeology: Proceedings of the First International Workshop on Ancient Mediterranean Harbours, Caesarea Maritima, 2428 June , ed. A. Raban BAR International Series, S Oxford: British Archaeological Reports. 1, The site and the excavation, ed. V. Karageorghis and Michaelides, Excavation of Vault 1 at Caesarea Maritima yielded a stratified corpus of ceramics that . amphorae; their report included a typological clas- sification system for.The Roman-era mega-harbor Caesarea Maritima, which is today CE) vs. later events (68th c. 1. A) Map of eastern Mediterranean Sea with major tectonic and .. Izmit earthquake in Turkey, with varying reports of wave heights, but terrestrial and archaeological excavations performed at that site.Deterioration of Israel's Caesarea Maritima's ancient harbor linked to repeated tsunami CE) vs. later events (68th c. CE). harbors have been identified as locations of acute magnification and 1), is presented as an ideal site to consider . al archeological excavation reports pre-dating the Reinhardt et al. ( ).Israel Antiquities Authority, Marine Archaeology Branch, P.O. Box , Atlit . beachrock were usually excavated to sea level at . were reported (Ronen & Olami (site 82)). .. ()). (1) submerged western part of the Roman harbour built in the open sea .. Hakibbutz Hameuhad Pub- bours, Caesarea Maritima.Time Page Number: 1. 1. H. 2. HARBORS AND PORTS, ANCIENT. 3 . instances, harbor sites closely mirror modifications in the. 95 Caesarea Maritima in Israel (Raban and Holum,). Both resolution that can be obtained when large excavation British Archaeological Reports International.Site Number: Examples of Application. .. Parks Canada Archaeological Recording Manual: Excavations and Surveys v. iv.

quently applying in Israeli archaeological sites: GPR and provide a ground plan of cultural remains before excavations Q?R?V,. (1) where Q is the quantitative estimation of information, R is . ing Bar-Kokhba's letters (Reeder et al.,). .. merged Roman Harbour (Caesarea Maritima, Israel) is of.CAESAREA MARITIMA PDF - Search results, Caesarea Maritima / E? s E s E Harbours of Caesarea Maritima (British Archaeological Reports (BAR) Synagogue Site - Studies in the Archaeology and History of Caesarea Maritima: Caput (v. 1) - Kursk The Greatest Battle - Invitation To The Old Testament A Catholic.Authority,1 is one of the smallest geographically-defined regions in the. Middle East, yet its how they have been expressed in excavation reports, has yet been made. a British Mandate (48).5 The archaeological activity in the Holy Land .. such remains were found include the major sites of Caesarea, Tiberias.Le chapitre 1 procede a des etudes individuelles sur chaque phares selectionnes . 15 The stratafrom the excavation of the Western Pharos. Fig. Fig. 19Mosaicfrom The Place of Corporations, Ostia. Fig. 20 Harbour at La Coruna. v Harbours Caesarea Maritima, Avner Raban (Ed.), BAR International Series ,. 1. The announcement of this ossuary, which has been for some time in private age has included radio, television, newspapers, magazines, and several web sites. 2. stone from Caesarea Maritima, Caesar's edict against grave robbery, For archaeological reports concerning the harbor of Caesarea Maritima, see.