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Editorial Address : **BALAI ARKEOLOGI PROVINSI DAERAH ISTIMEWA YOGYAKARTA**

Jl. Gedongkuning 174, Kotagede, Yogyakarta 55171

Telp/fax 0274 – 377913

Website : www.arkeologijawa.kemdikbud.go.id

E-mail : berkala.arkeologi@kemdikbud.go.id

balar.yogyakarta@kemdikbud.go.id

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PREFACE

Honorable readers,

It has been two years since Berkala Arkeologi has started to pioneer several changes both in the editorial and management side. In 2020, these efforts have been showing positive impacts for this journal. Starting from developing in the management of online pages, improving the consistency of environmental styles, to publishing in two languages. All these have led Berkala Arkeologi to enter the indexation of the Directory of Open Access Journal (DOAJ), increasing the number of visits to online pages, as well as the citation number. Our gratitude goes to the readers who have supported and accompanied 40 years of this journal's journey.

Closing the editorial process in 2020, like the May 2020 edition, in this November 2020 edition, Berkala Arkeologi published in two language versions, Bahasa Indonesia and English. Seven manuscripts in the editorial process use Bahasa Indonesia, which then were translated into English, after being declared fit for publication by the Editor and Mitra Bebestari. One other text is in English and is not translated into Indonesian. The translation from Indonesian to English is intended to be enjoyed by wider readers.

Berkala Arkeologi Volume 40 Edition No. November 2, 2020 presents eight articles from various archaeological studies, both prehistoric archeology and historical archeology, with various methods. Three articles from prehistoric archeology, three articles on archaeological history of Hindu-Buddhist history, one article on archeology of Islamic-colonial history, and one article on photogrammetric methods.

The first article entitled: "It's Time to Look to The West: A New Interpretation on Homo Erectus Findings Distribution of Java" was written by Harry Widiyanto and Sofwan Noerwidi. This paper is based on the latest paleontological data showing Pleistocene sites from the western part of Java Island, namely: Rancah, Semedo, and Bumiayu. The purpose of this paper is to present the significance of archaeological, paleontological, and especially paleoanthropological data from these sites, and their implications for determining future quaternary prehistoric research strategies. The next article entitled: "Gua Batu: Prehistory Occupation of Pegunungan Meratus, Kalimantan Selatan", written by Nia Marniati Etie

Fajari and Muhammad Wishnu Wibisono. This article discusses the results of excavations carried out in Gua Batu Cave in 2018. Based on the data obtained, it is known that Gua Batu are dwelling caves with living activities that rely on the surrounding resources. Exploration of environmental resources can be seen in the use of several types of terrestrial and aquatic fauna as one of the main food sources. Various types of equipment were made using rocks, as well as food scraps in the form of bone fragments and shells.

The next article also discusses prehistoric archaeological studies of stone artifact technology. The article entitled "The Development of Early Holocene Shale Artifact Technology in Leang Batti, South Sulawesi" was written by Suryatman, Fakhri, Ratno Sardi, and Budianto Hakim. This paper discusses the technological development of stone artifacts found in prehistoric cave sites in South Sulawesi that demonstrate the cognitive abilities of cave inhabitants. Initially, the technological capabilities of the stone artifact were used as a tool directly without modification, then a modification of the shale tool with the Toalean techno-complex was developed. This is evidenced by the shale size which has changed due to the modification of the shale technology character.

The next article is a study of the proto-historical period with the title "Preliminary Study of Environmental Influence in Wonosari Basin Selection as Settlement Location" written by Harriyadi. The Wonosari Basin is a form of upland land inhabited by humans in a sustainable manner from proto-historical times to Hindu - Buddhist. Using site distribution data, this study reveals environmental factors considered by humans in the Wonosari Basin. Spatial analysis was performed by overlaying the site distribution map with environmental variables of water resources, slopes, soil types, and rocks. The results show that the Wonosari Basin was chosen because it has greater water potential than other forms of land in the Gunung Sewu area. In addition, this area has a large flat area making it easier to access the utilization of natural resources.

The next article entitled "Recommendations on Cultural Heritage Site Management Plan for The Punjulharjo Boat in Rembang, Central Java" was written by Agni Sesaria Mochtar. Punjulharjo boats are made of wood and built using a traditional Southeast Asian boat technique called the *lashed-lug* tradition. After being dismantled, the boat's findings were conserved in early 2018. It became a problem after the Punjulharjo boat was displayed to the public, due to the absence of a proper management plan. This paper offers recommendations for management plans in accordance with international standards.

The next article discusses the historical archeology of Hinduism and Buddhism entitled: "Serpent Sculpture on Telaga Batu Inscription: An Interpretation Based On Pierce Semiotic Approach" by Muhamad Alnoza. The inscription is an archaeological relic as well as a written source that can reconstruct the history of Srivijaya culture that developed between the 7th - 11th century AD. The Telaga Batu inscription is different from other inscriptions because it is the only one that has an ornament in the form of a living creature, which is a seven-headed snake. This paper attempts to answer the meaning of this figure using Pierce's semiotic method. Based on this research, it is known that the meaning of the seven-headed snake figure is a form of protector of Datu which is analogous to Buddha.

The next article on Islamic-Colonial historical archeology is entitled: "The Characteristics of *Kuta* Bataguh In Kapuas, Central Kalimantan" by Sunarningsih, Hartatik, Ida Bagus Putu Prajna Yogi, Unggul Prasetyo Wibowo, Nugroho Nur Susanto, and Restu Budi Sulisty. *Kuta* Bataguh is located in Bataguh and East Kapuas Districts, Kapuas Regency, Central Kalimantan. The discussion is more on reconstructing the characteristics of *Kuta* Bataguh, through interpretive descriptive research. This paper concludes that the characteristic description of *Kuta* Bataguh is a large permanent residence that is divided by a river flow. Based on the pattern, function and extent of settlements, it is assumed that the local rulers in Bataguh in their socio-political organization are equal to the *early state*.

Finally, an article on the development of methods in the reconstruction of sculptures inscription, entitled: "The Use of Photogrammetry Techniques in Reconstruction of Stone Carvings" by Goenawan A. Sambodo, Yoyon K. Suprpto, and Eko Mulyanto Yuniarno. The paper discusses and tests photogrammetric techniques to determine the depth of the carving on the stone inscription. It is hoped that the photogrammetric technique can clarify the old sculpted characters so that reconstruction can be carried out. Photogrammetry techniques have not been widely used by Indonesian researchers to help analyze the contents of the inscriptions. It is hoped that photogrammetric techniques can help epigraphs in reading the inscriptions which are the backbone of the writing of Indonesia's ancient history.

Those are the eight articles that have quite a variety of studies, from prehistoric archeology-historical archeology (Hindu-Buddhist-Islamic-Colonial) to photogrammetric methods. Hopefully the eight articles will add insight and progress, in science in general and archeology in particular. Feedback and constructive suggestions from readers are needed for the progress of this Archeology Periodic scientific journal. We hope that in the next editions of the articles we publish, there will be more variations for the advancement and development of archeology, both theory, method and other research results.

Regards,

Berkala Arkeologi Editors

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Kata kunci yang dicantumkan adalah istilah bebas. Lembar abstrak ini
boleh digandakan tanpa izin dan biaya

<p>DDC 959.801 Harry Widiyanto dan Sofwan Noerwidi (Balai Arkeologi Provinsi D.I. Yogyakarta) Saatnya Menengok ke Barat: Sebuah Interpretasi Baru Tentang Distribusi Temuan <i>Homo Erectus</i> di Jawa <i>J. Berkala Arkeologi November 2020</i>, vol 40 no.2, hal. 153-178</p> <p>Data paleontologis menunjukkan bahwa awal penghunian Jawa terjadi pada batas Plio-Pleistosen sekitar 2.4 juta tahun lalu, namun fosil <i>Homo erectus</i> tertua yang ditemukan di Sangiran, berasal dari lapisan 1.5 juta tahun lalu. Belakangan ini, ditemukan situs-situs Pleistosen, dari bagian barat Pulau Jawa, yaitu Rancach, Semedo, dan Bumiayu. Tulisan ini bertujuan untuk menampilkan signifikansi data arkeologi, paleontologi dan terutama paleoanthropologi dari situs-situs tersebut, serta implikasinya bagi penentuan strategi penelitian prasejarah kuartar di masa depan. Metode pengumpulan data meliputi studi pustaka, dan survei pada ketiga situs tersebut. Analisis data dilakukan pada data geologis, arkeologis, paleontologis dan paleoanthropologis. Hasilnya, distribusi lateral <i>Homo erectus</i> semakin luas di bagian barat Jawa, dengan kronologi 1.8-1.7 juta tahun, lebih tua dibanding <i>Homo erectus</i> tertua dari Sangiran. Sebuah jendela baru tentang kedatangan <i>Homo erectus</i> di pulau Jawa telah teridentifikasi. Implikasinya, sudah saatnya penelitian prasejarah kuartar intensif dilakukan di bagian barat pulau ini.</p> <p>(Penulis)</p> <p>Kata Kunci: Persebaran; <i>Homo erectus</i>; Jawa; Awal Pleistosen; Rancach; Semedo; Bumiayu</p>	<p>DDC 959.801 Harriyadi (Pusat Penelitian Arkeologi Nasional) Tinjauan Awal Pengaruh Lingkungan Dalam Pemilihan Cekungan Wonosari Sebagai Lokasi Hunian <i>J. Berkala Arkeologi November 2020</i>, vol 40 no.2, hal. 219-242</p> <p>Cekungan Wonosari merupakan bentuk lahan dataran tinggi yang dihuni oleh manusia secara berkelanjutan. Kajian ini bertujuan untuk mengungkap faktor lingkungan yang dipertimbangkan oleh manusia di Cekungan Wonosari pada masa proto-sejarah hingga masa hindu-buddha. Data yang digunakan berupa sebaran situs masa proto-sejarah dan Hindu - Buddha di Cekungan Wonosari. Analisis dilakukan secara spasial dengan cara melakukan overlay antara peta sebaran situs dengan variabel lingkungan berupa sumber daya air, lereng, jenis tanah, dan batuan. Hasil dari kajian menggambarkan bahwa Cekungan Wonosari dipilih menjadi lokasi hunian karena memiliki potensi air yang lebih besar dibanding bentuk lahan lain di Kawasan Gunung Sewu. Selain itu, Cekungan Wonosari memiliki area datar yang luas sehingga mempermudah aksesibilitas untuk pemanfaatan sumber daya alam.</p> <p>(Penulis)</p> <p>Kata Kunci: Wonosari; Lingkungan; Spasial; Hunian</p>
<p>DDC 930.13 Nia Marniati Etie Fajari dan Muhammad Wishnu Wibisono (Balai Arkeologi Kalimantan Selatan, Vajra Amarta Reksa) Gua Batu: Hunian Prasejarah Di Pegunungan Meratus, Kalimantan Selatan <i>J. Berkala Arkeologi November 2020</i>, vol 40 no.2, hal. 179-194</p> <p>Studi awal di perbukitan karst Pegunungan Meratus di Kabupaten Kotabaru menemukan ceruk dan gua yang diindikasikan memiliki jejak hunian prasejarah. Salah satunya adalah Gua Batu yang berada di Desa Batangkulur, Kelumpang Barat. Artikel ini mendiskusikan hasil ekskavasi yang dilakukan di Gua Batu pada tahun 2018. Permasalahan yang diajukan adalah apa bukti hunian dan bagaimana kehidupan manusia pada masa lalu di Gua Batu. Data diperoleh dari ekskavasi yang membuka lubang uji pada dua lokasi yang berbeda. Temuan ekskavasi dianalisis secara kuantitatif dan kualitatif. Analisis kuantitatif dilakukan untuk mengetahui kuantitas dan persentase temuan. Analisis kualitatif meliputi klasifikasi awal, yang membagi data arkeologi sesuai dengan jenis, bentuk, dan gayanya. Hasil analisis menunjukkan bahwa Gua Batu merupakan gua hunian dengan aktivitas hidup yang mengandalkan pada sumber daya di sekitarnya. Eksploitasi sumber daya lingkungan terlihat pada pemanfaatan beberapa jenis fauna darat dan air sebagai salah satu sumber makanan yang utama. Berbagai jenis peralatan dibuat dengan memanfaatkan batuan, serta sisa makanan berupa pecahan tulang dan kerang.</p> <p>(Penulis)</p> <p>Kata Kunci: Gua Batu; prasejarah; Pegunungan Meratus; gua hunian</p>	<p>DDC 959.801 Agni Sesaria Mochtar (Balai Arkeologi Provinsi D.I. Yogyakarta) Rekomendasi Rancangan Pengelolaan Situs Cagar Budaya Perahu Punjulharjo Di Rembang, Jawa Tengah <i>J. Berkala Arkeologi November 2020</i>, vol. 40 no.2, hal. 243-266</p> <p>Perahu kayu Punjulharjo adalah salah satu alat transportasi air tradisional yang dibuat dengan teknik tambuku-terikat khas Asia Tenggara. Perahu ini ditemukan pada tahun 2008, kemudian diekskavasi dan setelahnya dibongkar untuk dikonservasi dalam proses yang cukup panjang. Pada awal tahun 2018, kayu-kayu lambung kapal direkonstruksi dan dipamerkan kepada masyarakat. Perahu ini telah ditetapkan sebagai situs cagar budaya berdasarkan Peraturan Menteri Kebudayaan dan Pariwisata No.57 tahun 2010. Akan tetapi, belum ada perencanaan pengelolaan yang dapat menjamin kelestarian situs Perahu Punjulharjo ini. Rekomendasi dalam rancangan pengelolaan ini disusun dengan mengacu pada standar internasional rencana pengelolaan situs cagar budaya. Data untuk penyusunan rencana pengelolaan ini diperoleh dari pengamatan langsung di situs dan dilengkapi dengan penelusuran referensi terkait. Rencana pengelolaan ini menjabarkan strategi dan langkah-langkah pengelolaan yang perlu diterapkan untuk perlindungan dan pelestarian situs, yang diharapkan dapat digunakan sebagai acuan bagi Pemerintah Daerah Kabupaten Rembang sebagai pengelola situs perahu Punjulharjo.</p> <p>(Penulis)</p> <p>Kata Kunci: Perahu; Punjulharjo; pengelolaan; maritim; museum semi-terbuka</p>
<p>DDC 959.801 Suryatman, Fakhri, Ratno Sardi, dan Budianto Hakim (Mahasiswa Magister Arkeologi Universitas Hasanuddin, Balai Arkeologi Sulawesi Selatan) Perkembangan Teknologi Artefak Serpigh Batu Pada Paruh Awal Holosen Di Leang Batti, Sulawesi Selatan <i>J. Berkala Arkeologi November 2020</i>, vol 40 no.2, hal. 195-218</p> <p>Penelitian yang intensif di gua-gua prasejarah Sulawesi Selatan telah menunjukkan kemampuan kognitif penghuni Sulawesi yang mungkin jarang dimiliki populasi lain di Wallacea. Pada paruh awal Holosen kemampuan yang diperlihatkan adalah memodifikasi alat serpigh yang dikenal dengan tekno-kompleks Toalean. Namun demikian, gambaran perkembangan teknologi artefak batu pada masa antara sebelum hingga awal perkembangan tekno-kompleks Toalean masih jarang diteliti secara intensif. Situs Leang Batti adalah situs hunian yang dapat mengisi kekosongan informasi melalui studi teknologi artefak serpigh. Artefak berjumlah 1376 buah diklasifikasi dan dianalisis pada serpigh dengan mengamati dinamika morfometrik dan teknologi tipe alat antara Holosen Awal hingga Tengah. Hasil penelitian menunjukkan bahwa pada Holosen Awal, teknologi yang dominan adalah serpigh yang digunakan sebagai alat secara langsung tanpa dimodifikasi. Pada fase Holosen Tengah, ukuran serpigh mulai mengalami perubahan karena pengaruh Toalean dengan karakter teknologi serpigh yang dimodifikasi mulai masuk dalam konsep dasar sipembuat alat, namun tidak terlalu kuat.</p> <p>(Penulis)</p> <p>Kata Kunci: Leang Batti; Artefak batu; teknologi; Holosen Awal-Tengah; Toalean</p>	<p>DDC 959.801 Muhamad Alnoza (Departemen Arkeologi FIB UI) Figur Ular Pada Prasasti Telaga Batu: Upaya Pemaknaan Berdasarkan Pendekatan Semiotika Peirce <i>J. Berkala Arkeologi November 2020</i>, vol 40 no.2, hal. 267-286</p> <p>Sriwijaya adalah kerajaan yang berkembang antara abad ke-7 sampai dengan 11 M. Prasasti menjadiinggalan arkeologis sekaligus sumber tertulis yang dapat merekonstruksikan sejarah kebudayaan Sriwijaya. Prasasti Telaga Batu menjadi berbeda dengan prasasti lainnya, karena satu-satunya yang memiliki ornamen berbentuk mahluk hidup dan isinya yang paling panjang di antara yang lain. Ornamen yang terdapat pada Prasasti Telaga Batu adalah berbentuk ular berkepala tujuh. Kajian ini berusaha untuk menjawab makna figur ular berkepala tujuh tersebut dengan metode semiotika triadik Peirce. Makna tersebut dapat merekonstruksi konsep dibalik pembuatan figur ular berkepala tujuh beserta alasan mengapa perlu dibuat figur tersebut digambarkan pada Prasasti Telaga Batu. Dalam menjawab pertanyaan tersebut digunakan rangkaian tahapan penelitian arkeologi, meliputi pengumpulan data, analisis data dan interpretasi. Figur ular pada Prasasti Telaga Batu pada akhirnya dapat dimaknai sebagai perwujudan pelindung Datu dan juga wujud sang Datu sebagai Buddha.</p> <p>(Penulis)</p> <p>Kata Kunci: Buddha; Datu; Dewaraja; Mucalinda; Sriwijaya</p>

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Sunarningsih, Hartatik, Ida Bagus Putu Prajna Yogi,
Unggul Prasetyo Wibowo, Nugroho Nur Susanto, Restu Budi Sulistiyo (Balai Arkeologi
Kalimantan Selatan, Museum Geologi-Badan Geologi, Bandung)
Karakteristik *Kuta* Bataguh Di Kapuas, Kalimantan Tengah
J. Berkala Arkeologi November 2020, vol. 40 no.2, hal. 287-308

Kuta Bataguh secara administratif berada di Kecamatan Bataguh dan Kapuas Timur, Kabupaten Kapuas, Kalimantan Tengah. Tujuan penelitian adalah untuk merekonstruksi karakteristik *Kuta* Bataguh. Penelitian ini bersifat deskriptif interpretif dengan penalaran induktif. Pengumpulan data menggunakan survei, ekskavasi, wawancara, dan studi pustaka. Analisis yang digunakan adalah analisis lingkungan, stratigrafi, artefaktual, ruang, dan analisis pertanggalan absolut. Kegiatan survei (permukaan dan udara) dan ekskavasi dilakukan di dalam dan di luar pagar benteng baik di arah muara maupun hulu Sungai Karinyau. Hasil penelitian memberi gambaran bahwa karakteristik *Kuta* Bataguh adalah tempat tinggal permanen yang luas dan dibelah oleh aliran sungai. Dengan berpatokan pada pola, fungsi, dan luasnya pemukiman ini, dapat diasumsikan bahwa penguasa lokal di Bataguh dalam organisasi sosial politiknya sudah setara dengan *early state*.

(Penulis)

Kata Kunci: Karakteristik; pemukiman berbenteng; *Kuta* Bataguh; Kalimantan Tengah

DDC 411.7

Goenawan A Sambodo, Yoyon K. Suprpto, Eko Mulyanto Yuniarno (Departemen
Teknik Elektro dan Departemen Teknik Komputer, Institut Sepuluh Nopember,
Surabaya)

Penggunaan Teknik Fotogrametri Dalam Rekonstruksi Pahatan Pada Batu Prasasti
J. Berkala Arkeologi November 2020, vol. 40 no.2, hal 309-328

Penelitian ini membahas dan menguji teknik fotogrametri untuk mengetahui kedalaman pahatan pada batu prasasti sehingga rekonstruksi dapat dilakukan guna memperjelas bekas pahatan aksara yang ada. Diharapkan akan dapat memunculkan gambar pahatan dengan lebih jelas sehingga pada akhirnya pahatan tersebut dapat dibaca. Prasasti adalah tulang punggung penulisan sejarah kuna Indonesia. Arti penting prasasti ini belum dapat digunakan dengan maksimal karena banyak prasasti yang ditemukan dalam keadaan aus pahalannya, baik karena kerusakan yang disebabkan oleh faktor alam maupun manusia. Teknik Fotogrametri belum banyak digunakan oleh peneliti dari Indonesia untuk membantu menganalisis benda cagar budaya yang ada terutama prasasti. Selain mengulas beberapa teknik fotogrametri dikemukakan pula percobaan teknik fotogrametri yang telah dilakukan khususnya yang berhubungan langsung dengan prasasti. Rekonstruksi yang dilakukan tidak dimaksudkan untuk membaca dan mengartikan hasil pembacaan aksara prasasti, akan tetapi lebih kepada memberi pandangan baru dan potensi penggunaan teknik fotogrametri bagi para ahli epigrafi tentang cara lain dalam memperjelas bekas pahatan yang telah aus.

(Penulis)

Kata Kunci: Rekonstruksi; Prasasti; Fotogrametri; Dokumentasi

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DDC 959.801

Harry Widiyanto and Sofwan Noerwidi (Regional Agency for Archaeological Research in D.I. Yogyakarta Province)
It's Time To Look To The West: A New Interpretation On Homo Erectus Findings Distribution Of Java
J. Berkala Arkeologi November 2020, vol 40 no.2, pp. 153-178

Paleontological data indicate that the beginning of Java Island's occupation occurred at the Plio-Pleistocene boundary, around 2.4 Mya. However, the oldest *Homo erectus* fossil was found in Sangiran, around 1.5 Mya. Recently, Pleistocene sites were discovered from the western part of Java, e.g. Rancah, Semedo, and Bumiayu. This paper describes the significance of archeological, paleontological, and especially paleoanthropological data from the new sites, and their implications to the future Quaternary prehistory research strategies determination. Data collection methods include literature study and surveys, while analysis is carried out on the geological, archeological, paleontological, and paleoanthropological data. The result shows the dispersal of *Homo erectus* is extended to the western part of Java, between 1.8-1.7 Mya, older than the oldest *Homo erectus* of Sangiran. A new window of the human arrival on this island is identified. So, it is time to look to the west, and intensive research should be carried out to those areas.

(Author)

Keywords: Dispersal; *Homo erectus*; Java; Early Pleistocene; Rancah; Semedo; Bumiayu

DDC 959.801

Harriyadi (The National Research Center of Archaeology)
Preliminary Study On Environmental Influence In Selecting Wonosari Basin As Settlement Location
J. Berkala Arkeologi November 2020, vol 40 no.2, pp. 219-242

Wonosari Basin is a plateau area and has been inhabited by humans continuously. This research goal is to determine the environmental factors that considered by humans to settle in Wonosari Basin in proto-history until Hindu-Buddhist period. Data used in this study are proto-history and Hindu-Buddhist sites distribution in Wonosari Basin. Analysis is conducted by spatial approach through map overlaying between sites distribution and environmental variable such as water source, slope, soil, and rock formation. This study shows that Wonosari Basin has been selected by human to settle because it has greater water source compared to other landform area in Gunung Sewu. In addition, Wonosari Basin has large flat area which simplify accessibility to utilize natural resource.

(Author)

Keywords: Wonosari; Environment; Spatial; Settlement

DDC 930.13

Nia Marniati Etie Fajari and Muhammad Wishnu Wibisono (Regional Agency for Archaeological Research in South Kalimantan Province, Vajra Amarta Reksa)
Batu Cave: Prehistoric Occupation Of Meratus Mountains, South Kalimantan
J. Berkala Arkeologi November 2020, vol 40 no.2, pp. 179-194

Preliminary studies in the karst hills of the Meratus Mountains in Kotabaru Regency found rock-shelters and caves that were indicated to have traces of prehistoric dwellings. One of them is Batu Cave which is in Batangkulur village, Kelumpang Barat district. This article discusses the results of excavations carried out in Batu Cave in 2018. The problems raised on proof of occupancy and how human life in the past in Batu Cave. Archeological data were obtained from excavations by using test-pit at two different locations. The excavation findings analyses are quantitative and qualitative. Quantitative analysis was carried out to find out the quantity of findings. The qualitative analysis includes an initial classification, which divides archeological data according to the type, form and style. The results show that Batu Cave are cave dwelling with living activities that rely on the surrounding resources. Exploitation of environmental resources is seen in the use of several types of terrestrial fauna and water as one of the main food sources. Various types of tools were made using rocks, as well as bones and shells.

(Author)

Keywords: Batu Cave, prehistory; Meratus Mountains; cave dwelling

DDC 959.801

Agni Sesaria Mochtar (Regional Agency for Archaeological Research in D.I. Yogyakarta Province)
Recommendations On Cultural Heritage Site Management Plan For The Punjulharjo Boat In Rembang, Central Java
J. Berkala Arkeologi November 2020, vol. 40 no.2, pp. 243-266

The Punjulharjo boat is a wooden watercraft, built in the traditional Southeast Asian boat building technique called lashed-lug tradition. It was found in 2008, excavated, and later was dismantled for a lengthy conservation process. In early 2018, the hull was reassembled to be displayed for public. The site where the boat was found, and now displayed, has been listed as a heritage site under the Regulation of The Minister of Culture and Tourism No. 57 of 2010, but a management plan of it is still non-existent. Recommendations in this proposed management plan was amassed in accordance to international standards on site management plan. Data was collected from direct site observation, with the assistance of consultations to related references. This plan outlines objectives and strategy in managing the Punjulharjo site, and hopefully can serve as guidelines for the Regional Government of the District of Rembang as the manager of the site.

(Author)

Keywords: Punjulharjo; boat; management; maritime; semi-open museum

DDC 959.801

Suryatman, Fakhri, Ratno Sardi, and Budianto Hakim (Graduate Students of Archaeology, Hasanuddin University, Regional Agency for Archaeological Research in South Sulawesi Province)
Development Of Stone Flake Artifact Technology In The Early Half Of Holocene At Leang Batti, South Sulawesi
J. Berkala Arkeologi November 2020, vol 40 no.2, pp. 195-218

Intensive research in prehistoric caves in South Sulawesi has shown the cognitive capability of Sulawesi inhabitants that might not be possessed by other explorers in Wallacea. In the early half Holocene, the ability shown was to modify the shale tool known as the Toalean techno-complex. However, the view of the development of stone artifact technology in the period between before and early development of the Toalean techno-complex is rarely studied intensively. Leang Batti site is the occupation sites that can fill the information gap through the study of flakes artifact technology. 1376 artifacts were classified and analyzed for flakes by observing morphometric dynamics and tool type technology between the Early to Middle Holocene. The results that in the Early Holocene, the dominant technology was large flakes without modification. In the Middle Holocene, the size of the flakes began to change due to the influence of Toalean with the character of the modified flake technology began to enter in the basic concept of making tools, but not too strong.

(Author)

Keywords: Leang Batti, Stone Artifact; technology; Early-middle Holocene; Toalean

DDC 959.801

Muhamad Alnoza (Archaeology Department, FIB UI)
Serpent Sculpture on Telaga Batu Inscription: An Interpretation Based On Peirce Semiotic Approach
J. Berkala Arkeologi November 2020, vol 40 no.2, pp. 267-286

Sriwijaya is a kingdom that developed between the 7th and 11th centuries AD. The inscriptions become archaeological remains as well as written sources that can reconstruct Sriwijaya's cultural history. The Telaga Batu inscription as one of Sriwijaya inscriptions is different from other inscriptions because it has the only ornament in living creature shape and it is the longest inscription among the others. The ornaments found on the Telaga Batu Inscription are in the form of a seven-headed snake. This study attempts to answer the meaning of the seven-headed snake figure with Peirce's triadic semiotic method. In answering these questions, a series of stages of archaeological research are used, including data collection, data analysis and interpretation. The snake figure in the Telaga Batu inscription can eventually be interpreted as a manifestation of the Datu's protector and the form of the Datu as a Buddha.

(Author)

Keywords: Buddha; Datu; Dewaraja; *Mucalinda*; Sriwijaya

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DDC 411.7

Sunarningsih, Hartatik, Ida Bagus Putu Prajna Yogi,
Unggul Prasetyo Wibowo, Nugroho Nur Susanto, Restu Budi Sulistiyo (Regional
Agency for Archaeological Research in South Kalimantan Province, Museum of
Geology-Agency of Geology, Bandung)
The Characteristics Of *Kuta* Bataguh In Kapuas, Central Kalimantan
J. Berkala Arkeologi November 2020, vol. 40 no.2, pp. 287-308

Kuta Bataguh is administratively located in Bataguh and East Kapuas Districts,
Kapuas Regency, Kalimantan Tengah. The research aims to reconstruct the
characteristics of *Kuta* Bataguh. This research is using interpretive-descriptive method
with the inductive reasoning. Data collection used surveys, excavations, interviews, and
literature study. The analysis included environmental, stratigraphic, artifactual, spatial,
and absolute dating analysis. Survey (surface and aerial) and excavation activities were
carried out inside and outside the fence, both downstream and upstream of the Karinyau
River. The results illustrate that the characteristics of *Kuta* Bataguh are a large
permanent settlement that is split by a river. The fortified settlement of *Kuta* Bataguh
was the leader residence of Ngaju community group (as the center of power). By
referring to the pattern, function and extent of this settlement, it can be assumed that the
local authorities in Bataguh are on par with early state in their socio-political
organization.

(Author)

Keywords: Characteristics; fortified settlement; *Kuta* Bataguh; Central Kalimantan

DDC 411.7

Goenawan A Sambodo, Yoyon K. Suprpto, Eko Mulyanto Yuniarno (Electrical
Engineering and Computer Engineering Department, Sepuluh Nopember Institute,
Surabaya)
Application Of Photogrammetry Techniques In Reconstructing The Carving On Stone
Inscriptions
J. Berkala Arkeologi November 2020, vol. 40 no.2, pp 309-328

This research discusses and applies photogrammetry techniques to determine the
depth of the script carvings on some worn-out stone inscriptions so images of scripts can
be more readable. Inscriptions are the backbone of ancient Indonesian historical
writings. Unfortunately the significance of many such ancient inscriptions can not yet be
used optimally since many inscriptions are found in a state of having poor legibility, and
this due both to natural as well as human factors. To this day, photogrammetry
techniques have not been widely used by Indonesian researchers in order to help analyze
existing cultural heritage objects, especially stone inscriptions. In addition to previous
photogrammetric techniques reviews, this article also brings forward my experiment on
the photogrammetric techniques, especially those directly related to the stone
inscriptions. The reconstruction was not intended to interpret the meaning of the scripts,
but rather to give epigraphists a new insight into other ways of clarifying worn-out
scripts.

(Author)

Keywords: Reconstruction; Inscription; Photogrammetry; Documentation