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The perforated stones of the Doi Pha Kan burials (Northern Thailand): A Mesolithic singularity?

*Les pierres perforées des sépultures de Doi Pha Kan
(Nord de la Thaïlande) : une singularité mésolithique ?*

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ABSTRACT

Throughout continental Southeast Asia, the Hoabinhian techno-complex stands out in clear contrast with the universal chrono-cultural model essentially established on the basis of western prehistory. Following this model, early authors considered perforated stones and associated lithic artefacts as markers of what was then believed to pertain to a Southeast Asian Mesolithic. However, Southeast Asian Mesolithic has progressively been abandoned in favour of a ubiquitous Hoabinhian spanning from 30,000 to 3000 BP. Here, we present and discuss the discovery of perforated stones at the Doi Pha Kan site in northern Thailand. Perforated stones have almost never been found in undisturbed stratigraphic conditions nor dated with any sufficient degree of certainty. At Doi Pha Kan site, such a kind of artefacts was found in burials intersecting sedimentary layers that could be ascertained as Hoabinhian. In contrast with similar perforated stones described in the literature, that found at Doi Pha Kan are well-dated (13,000 BP), thus providing a time-reference for a putative Southeast Asian Mesolithic. We therefore advocate that such non-Hoabinhian artefacts support the early authors' hypothesis of the existence of a Southeast Asian Mesolithic. Finally, the funerary practices, the unusually high stature of individuals found at Doi Pha Kan in conjunction with the particular lithic assemblages further contributes to raise the question of the co-occurrence of several cultures or populations at the Pleistocene–Holocene interface in continental Southeast Asia.

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R É S U M É

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En Asie du Sud-Est continentale, le Hoabinhien se démarque clairement du modèle chronoculturel universel établi par la préhistoire occidentale. Sur la base de ce modèle universaliste, les premiers auteurs ont considéré les pierres perforées et les objets lithiques associés comme des marqueurs de ce qui se rapporterait à un Mésolithique du Sud-Est asiatique. Cependant, cette notion de Mésolithique régional a été abandonnée au profit d'un Hoabinhien ubiquiste présent de 30 000 à 3000 ans BP. Nous présentons et discutons la découverte de pierres perforées sur le site de Doi Pha Kan dans le Nord de la Thaïlande. Les pierres perforées n'ont presque jamais été mises au jour dans des contextes stratigraphiques intacts ni datés avec suffisamment de précision. À Doi Pha Kan, ce matériel lithique a été trouvé dans des sépultures intrusives de niveaux archéologiques hoabinhiens. Contrairement à celles, identiques, décrites dans la littérature, les pierres perforées mises au jour à Doi Pha Kan sont bien datées (13 000 BP), ce qui procurerait une base chronologique fiable pour représenter un possible « Mésolithique » du Sud-Est asiatique tel que le décrivent les auteurs pionniers travaillant dans cette région. En définitive, les pratiques funéraires, la stature inhabituelle des individus inhumés à Doi Pha Kan et leur association avec ce type d'assemblage lithique contribuent à soulever la question de l'existence conjointe de plusieurs cultures ou populations à la limite Pléistocène–Holocène en Asie du Sud-Est continentale.

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1. Introduction

Bored stones, perforated stones, weight stones or donut stones are terms frequently coined to designate a range of round shaped stone artefacts with a central perforation. Globally, such artefacts do not appear to be a marker of any particular period. Classically associated with the European Mesolithic (Case, 1952), perforated stones are also known during the 2nd and 1st millennia BC in Taiwan or during Metal Age in Korea and Japan (Solheim, 1996) or historical periods (*id est* 900 to 1650 AD) in America (Koerper et al., 2009; Molitor, 2000; Moore, 1991) or even in New Guinea (Watson and Cole, 1977) and around 6000 BP in Papua (Gorecki and Gillieson, 1989). In Africa, some perforated stones were uncovered from older periods, such as at Matupi Cave in Democratic Republic of Congo, dated to 20,000 years BP (Van Noten, 1977) or at Border cave in South Africa, dated between 33,000 and 45,000 years BP (Beaumont et al., 1978). In India, while there are known examples of bored stones from the Upper Palaeolithic, such artefacts only became common during the Neolithic and Chalcolithic periods (Misra, 2001). In Southeast Asia, perforated stones were mainly uncovered out of any stratigraphic context and their chronology still remains unclear. In this paper, we first present a review of the regional archaeological literature, which allows us to reappraise the occurrence of this type of artefacts in Southeast Asia. Further, we present and discuss the perforated stones found in association with the burials of Doi Pha Kan in northern Thailand. In contrast with previous reports from Southeast Asia, this new find in a well-described stratigraphic context provided reliable dating of perforated stones and sheds new light on the early authors' hypothesis of the existence of a Southeast Asian Mesolithic distinct from the Hoabinhian.

2. Regional occurrences of perforated stones

In Southeast Asia, many archaeological sites have yielded perforated stones, but most of them were discovered out of stratigraphic context and/or without dating. Perforated stones were often uncovered in sites where burials are present, which raises the question of their exact dating due to the intrusive position of the burials in the deposits and due to the lack of detailed taphonomic description provided by authors in the past. It has been hypothesized that such perforated stones might have been used as clubheads, maceheads, weightstones for digging sticks, ring stones, net sinkers, bark beaters, spindle whorls, or even recently (cf. Tomasic, 2012) to make rope. Irrespective of their function, within continental Southeast Asia, they occur across a wide belt that mainly extends from northern Southeast Asia to southern China (Fig. 1).

Perforated stones have mainly been found (Table 1) and described in southern Chinese provinces. Such artefacts were described as weight stone in the Cave A at Wuming, near Paochiao, Guangxi province (Pei, 1935). A stratigraphy established by Teilhard et al. (1935) attributed this material to the very late Paleolithic to Mesolithic, without any further supporting evidence and even though most of the cultural deposits had been disturbed by modern local populations. In the same province, in the layer 6 of the eastern deposits of Bailiandong cave, according to Qu et al. (2013) “a crude weight stone associated with hematite powder, choppers and crudely made ground tools” was affiliated to a Mesolithic cultural stratum dating back to approximately $14,650 \pm 230$ BP. Other similar perforated stones dated between 7140 ± 60 BP and 9520 ± 90 BP have been found in the eastern layer 2 of Bailiandong cave as well as in the eastern layer 3, with a date of $11,180 \pm 580$ BP (Guoxing, 1994). At Dingsishan, a partly

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