

# Rediscovering the Capital of Majapahit

Mystery has surrounded the exact location of the 14<sup>th</sup> century Javanese royal palace of Majapahit and the lay-out of its outlying city, the last Hindu-Javanese capital. As a symbol of a potent pre-colonial state, the site of Majapahit has been left neglected for centuries, seen as too politically sensitive to be preserved by the Dutch colonial government. Now, with revolutionary technology and a rediscovered map at their disposal, **Amrit Gomperts**, **Arnoud Haag**, and **Peter Carey** have pinpointed the royal site in the hope that the Indonesian people and their government will invest in its preservation.

**T**he Republic of Indonesia partly bases its claim to national unity on the last Hindu-Javanese kingdom of Majapahit (1293 - 1510s). The first king, Wijaya (reigned 1294 - 1309), began the construction of the royal palace of Majapahit in present-day Trowulan, some 55 kilometres southwest of Surabaya, on the eve of the Mongol-Chinese invasion of Java in 1293. In the second quarter of the 14<sup>th</sup> century, the famous Prime Minister Gajah Mada (in office 1331 - 1364) initiated an expansionist policy. This enabled the Hindu-Javanese kingdom to exert its political influence beyond Java to other parts of the archipelago from the Malay Peninsula to present-day Papua. The kingdom fell into decline in the early 15th century.

Throughout the entire colonial period (1619 - 1942), the Dutch were aware of Majapahit's imperial legacy – a form of pre-colonial Javanese state which continued to cast its long shadow over the Dutch-governed East Indies: the Java War (1825 - 1830) leader, Prince Diponegoro (1785 -1855), for example, referred to its possible revival as a 'great and mighty empire' as he sailed along the islands in the eastern archipelago on his voyage into exile in Sulawesi in May - June 1830 (Carey 2008: 590). So potent was Majapahit's historical image that no colonial government was willing to facilitate its revival. This was particularly the case in the early 20<sup>th</sup> century, when early Indonesian

nationalist leaders, who understood the need for nation-states to use historic symbols for the legitimization of their cultural and national identity, began to use Majapahit as a claim for Indonesian sovereignty over the Dutch-controlled archipelago. When Sutan Sjahrir (1909 - 1966) addressed the UN Security Council at Lake Placid in New York State on 14 August 1947, he referred explicitly to Sriwijaya and Majapahit as the historical forerunners of a united Indonesia. After Indonesia's independence in 1945, Majapahit became the symbol par excellence of the young republic's territorial integrity. Today, Trowulan is often visited by high-ranking Indonesian politicians and army officers for the purpose of meditation at the Hindu-Javanese ruins. The powerful associations linked to the name 'Majapahit', however, stand in sharp contrast to the status of the present-day remains of the vanished court-city. Nowhere is the statement 'archaeology is politics' more valid than in the case of Majapahit.

Although nearly everyone in Indonesia is convinced that the Majapahit capital was situated at Trowulan, archaeologists still argue about the exact location of the royal palace and the lay-out of the surrounding city. We, the authors, started our research by posing the following question: where exactly was the Majapahit royal palace situated? We decided to adopt simple but classical archaeological methods: reading Javanese texts, consulting a wide variety of cartographic sources and interpreting what remains in situ in the present-day Trowulan landscape. We were able to benefit from technologies which have revolutionised our knowledge of the world in the past decade: the GPS satellite positioning system, GIS (Geographical Information Systems) software, and Google Earth. Moreover, during the course of our research, the possibility gradually dawned on us that the exact location of the royal city may have already been indicated by the Dutch archaeologists of the Netherlands East Indies Archaeological Service (Oudheidkundige Dienst). Even so, we had to prove it. Adopting the systematic approach of a critical review of existing scholarly literature, we came across a few anomalies and surprises. This short communication gives a summary of findings presented in our recent articles (Gomperts et al. 2008a, 2008b, 2010 forthcoming, Gomperts 2010 forthcoming).

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## The 'lost' map found

Interest in the archaeology of the vanished 14th century royal city of Majapahit really started during the British occupation of Java (1811 - 1816) when Lieutenant-Governor Thomas Stamford Raffles (1781 - 1826; in office 1811 - 1816) ordered the Dutch army surveyor, Captain J.W.B. Wardenaar (- 1869), to make a plan of the site of the ancient royal capital. Although Wardenaar's October 1815 plan was since considered lost, the plan's legend – based on information the engineer captain gleaned from local villagers – and a few drawings with handwritten notes, which were donated to the Batavian Society of Arts and Letters (Bataviaasch Genootschap van Kunsten en Wetenschappen) after Wardenaar's death in 1869, enabled the mining engineer and pioneer of modern volcanology, Rogier Verbeek (1845 -1926), to attempt a reconstruction of the map in 1887.

However, a few uncertainties remained about Verbeek's identifications. It took us two years of research to trace the lost map of Majapahit in the 1939 Drake Collection of the British Museum on 12 March 2008. The map at scale 1:12, 150 shows the location of 15 main archaeological features in the area, including the well-known – and still extant – remains of the Bajang Ratu gate, the Sĕgaran tank, Candi Br ahu and other Hindu-Buddhist sites, as well as a few temples which have since vanished. When we finally projected a digital scan of Wardenaar's plan of Majapahit as a half-transparent overlay over the available high-resolution satellite image of Google Earth, it was a sensation (Wardenaar 1815).

The plan appeared to be geometrically highly accurate, allowing us to georeference – that is, to apply geographical coordinates – with GPS mapping software to an accuracy of 30 - 50 metres and to make an accurate verification of the mapped spots on site with a GPS receiver. From the Plan of Majapahit and the accompanying legend and notes, we were able to pinpoint the location of the vanished royal palace in the hamlet of Kĕdaton – a Javanese toponym which significantly refers either to the private royal quarters in a palace or to the royal palace itself. Also traceable was the place where the Majapahit kings were seated – flanked by four royal elephants – while watching formal festivities held on the great expanse of the large Sĕgaran (literally,

‘The Little Sea’) tank, the most prominent surviving archaeological site at Trowulan today.

We now possessed a benchmark which allowed us to relate references in Javanese texts to accurate sites on the ground. Furthermore, Wardenaar’s plan shows the original position of the statue of Joko Dolog (literally, ‘The Fat Youth’) which represents a Buddhist Aksobhya (literally, ‘The Imperturbable One’) with his right hand touching the ground in emulation of the Lord Buddha’s classic calling the earth to witness gesture (Fig. 1). The statue was moved to Surabaya in 1817 and its original position was lost. On the basis of the georeferenced position of Joko Dolog’s statue on Wardenaar’s plan, we were able to identify the exact spot where the statue had stood in 1815. The Buddhist identity of the area is further confirmed by a villager who witnessed the excavation of a large statue representing the Hārītī, the Buddhist guardian goddess of children whom parents of prematurely deceased children worshipped. The Javano-Sanskrit inscription on the pedestal of Joko Dolog’s statue refers both to the Buddhist sage Bharada, who is said to have marked the political boundary when King Airlangga (reigned, c. 1019 - 1052) divided his realm into the kingdoms of Janggala (Jīwana) and Pañjalu (Daha), and the consecration of the statue at the cemetery of Wurare by King Kērtanāgara (reigned 1268 - 1292) in 1289.

In the future, we will analyse the archaeological evidence and argue that the position of Joko Dolog in 1815 coincides with the legendary cemetery Wurare (from awu rare, literally ‘children’s ashes’) which was also known as Lēmah Tulis and Lēmah Citra (Fig. 2). Moreover, in our view, the statue itself represents the image of Bharada, the legendary figure who presided over the political division of Java in AD 1052, a conclusion also arrived at independently by the art historian, Pauline Lunsingh Scheurleer (personal communication, 10 October 2009).

## A Balinese account

18th century Balinese rulers took an active interest in the Majapahit ruins at Trowulan. During the Surapati insurgency (1686 - 1703) and



*Fig 1: The statue of Joko Dolog, portraying Bharada, the mythical figure who – according to the tradition – drew the dividing line between the kingdoms of Janggala and Pañjalu in 1052.*

its aftermath up to the time of the 1718 Surabaya War, sizeable Balinese armies were present in East Java. The first ruler of the Balinese kingdom of Mengwi, Gusti Agung Anom, made a pilgrimage to the site of the royal city in 1714. The official historiography of the Balinese court of Klungkung, the Middle Javanese Kidung Pamañcangah, written in the beginning of the 19<sup>th</sup> century by an anonymous Balinese author, refers to the ancient capital of Majapahit and to several landmarks within the town, most of which can still be identified on site on the basis of Wardenaar’s mapping. In reverse order, the Middle Javanese text describes how from north to south the following can be found: the Sēgaran tank, the alun-alun square, the pangastryan or wanguntur audience-yard, and the royal palace itself. We conclude that, as with Wardenaar’s mapping process, the description of Majapahit in the Kidung Pamañcangah relies on an oral tradition, probably based on a Balinese visit to Trowulan in the 17<sup>th</sup> or early 18<sup>th</sup> century (Gomperts 2010).

## Stutterheim's work

During the Dutch colonial assault on and sacking of the Balinese court of Cakranegara in Lombok in 1894, the scholar J.L.A. Brandes (1857 - 1905) managed to save the Old Javanese text *Nāgarakērtāgama*. In the text, the court poet Prapañca describes the lay-out of the Majapahit royal palace and city a few years before 1365. Ever since Brandes' discovery, the archaeological identification of the Majapahit royal palace has focussed on the textual exegesis of Prapañca's intricate formulation in the Old Javanese language. To date, at least eight different translations and several reconstructive mappings of Majapahit have been published on the basis of this text. However,

Prapañca's description is couched in such arcane Old Javanese that the differing spatial interpretations based on his text have only served to confuse Trowulan archaeology. In our view, both Wardenaar's mapping and the description in the *Kidung Pamacangah* are sufficiently reliable and detailed for the identification of the site of the royal palace. In July 1941, the Dutch archaeologist W.F. Stutterheim (1892 - 1942) wrote a review of all the available interpretations. This posthumously published monograph (Stutterheim 1948) provided the most realistic translation and interpretation of Prapañca's text. Indeed, as soon as we had projected Stutterheim's reconstructive plan on several maps with GIS software, it became apparent that he had plotted his plan on topographic maps of the area, and had a definite location of the palace in mind when he finished his draft monograph (a later version of which was completed in February 1942 just before the fall of the Netherlands East Indies to the Japanese). Hence, without explicitly saying so, Stutterheim based his interpretation of Prapañca's description on an archaeological analysis of the remains and landscape of Trowulan (Gomperts et al. 2008b).

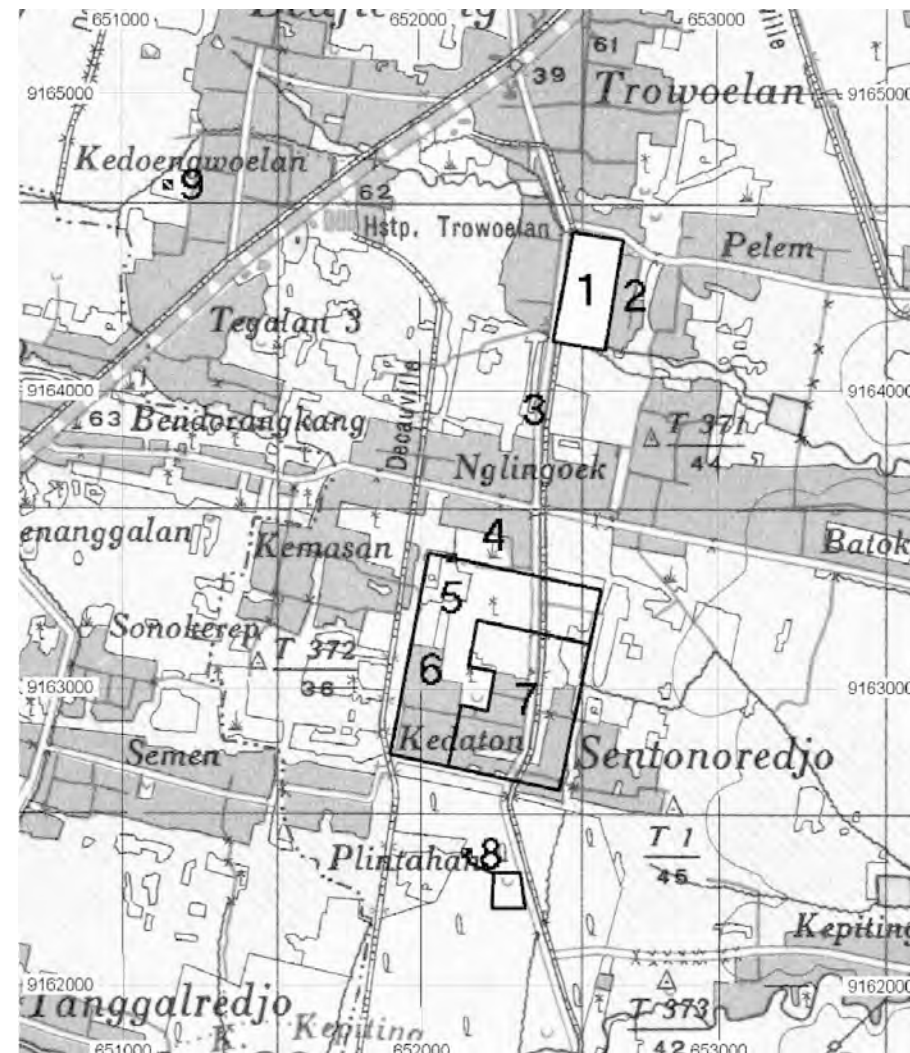


Fig 2:  
A few important sites in the 14th century Majapahit royal capital drawn on a 1941 topographic map:  
1. Sēgaran Tank  
2. Market  
3. Large square or alun-alun  
4. The wanguntur or pangastryan audience-yard  
5. Palace-gate  
6. Royal palace  
7. Area of the private royal quarters in the palace  
8. Islamic graves of members of the Majapahit royal family at Trolayo cemetery  
9. The statue of Joko Dolog at the former Buddhist cemetery of Wurare.

Moreover, the eight-pointed aureole is the emblem of the Majapahit royal family. It is depicted on several Islamic graves at the cemetery of Troloyo. Stutterheim (1948:105, n.246) rightly concludes that these graves belong to members of the Majapahit royal family who adopted Islam from the 1370s. The close proximity of the Troloyo graves to the royal palace on the map underlines the importance of the new religion, Islam, at the end of 14<sup>th</sup> century Majapahit (Fig. 2).

Thus, we now possess three different sources – Wardenaar's plan, the description in the *Kidung Pamañcangah* and Stutterheim's monograph - which all independently and unambiguously situate the vanished royal palace in the hamlet of Kēdaton.

During the course of our identification of the location of the Majapahit royal palace, we also discovered a few small errors in Stutterheim's translation of Prapañca's text. These have quite important spatial implications for the lay-out of the royal city. For example, remains of outer and inner palace walls marked on the archaeological maps and still extant in the 1920s allow us to determine the exact footprint of the vanished royal palace as well as the position of the market. The total length of the outer palace walls appear to have measured some 2.5

kilometres in circumference. Therefore, we conclude that the Majapahit capital had a much smaller royal palace than those of the mid 18<sup>th</sup> century central Javanese courts of Yogyakarta and Surakarta. Indeed, our map shows almost the entire area of the Majapahit capital in the 14<sup>th</sup> century (Fig. 2). From the area on our map and the population densities, we are able to estimate that the capital had a population not exceeding 25,000 inhabitants.

## Site destructions

The first British Resident of Japan (Mojokerto) and Wirasaba (Mojoagung), Lieutenant H.G. Jourdan, completed his report of the area in April 1813 following the British annexation (Jourdan 1813 : 352 - 64). In his report, we find reference to the production of bricks. Several 19<sup>th</sup> century Dutch reports mention the massive clearance of brick remains from grounds, cadastrally allocated to colonial entrepreneurs in the sugar industry. Indeed, anyone who visits Trowulan today will be able to witness that the tradition of brick-making still remains central to the local economy of Trowulan.

However, the process of removing top-soils for on-site fabrication of commercial building bricks in improvised pits has now reached industrial levels as the high-resolution satellite imagery of Trowulan available at Google Earth testifies. On the basis of a number of small-scale topographic maps, observations on site and digital elevation models (DEM) projected over historic maps, the scale of site destructions and removal of soils is immediately apparent. We estimate that at least 20 million cubic metres of soil with brick remains have been removed since Wardenaar's plan was made in 1815. In fact, major parts of the foundations of the palace walls still extant in the 1920s have vanished since the 1980s. The demolition of medieval brick-walled wells happened before our very eyes when we visited the site in mid December 2008.

All this is a direct consequence of the fact that the Oudheidkundige Dienst – perhaps under pressure from local Dutch sugar estate owners – never implemented policies for protecting the Majapahit remains in Trowulan. Dedicated and professional archaeological excavations are more necessary than ever at the present time. For example, the local

farmer, who owns the land at the spot where Stutterheim identified the palace gate, recently informed us that substantial brick foundations exist there. We also recommend a professional excavation of the site of Joko Dolog before local treasure hunters destroy what is left of the once legendary cemetery of Wurare. The implementation of a robust regime of archaeological site preservation is imperative to ensure that future generations of archaeologists are not deprived of access to the glory that was pre-colonial Java.

## Concluding thoughts

We have now reached the end of this short communication. May it inspire the Indonesian authorities and its talented people to a better appreciation of their historical heritage, and encourage them to save as much as possible for posterity. As former President Sukarno so frequently observed: no nation can survive without a knowledge of its

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historical past. Majapahit embodies in its urban archaeology the transition from Java's Hindu-Javanese past to the modern Islamic society of present-day Indonesia. The 14<sup>th</sup> century city was not only the last Hindu-Javanese capital, it was also the first urban community where members of a Javanese royal family adhered to the new Islamic faith. The royal capital thus marks the intersection of Indonesia's modern age.

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