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The Liangan Temple Site in Central Java

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Candi Liangan was accidentally discovered in 2008 by inhabitants of the nearby village of Liangan, Temanggung, Central Java. The site was buried beneath meters of volcanic debris deposited by *lahars*, pyroclastic flows and ash falls. Organic materials had been burnt but at the same time the site had been sealed and preserved, waiting for archaeologists to unearth it. It is thus no wonder that Candi Liangan has yielded a wide range of archaeological material, from earthenware to plant remains and *in situ* wooden structures. Because of its exceptional state of preservation, Candi Liangan provides a unique perspective on the life of a religious community of 9th-century Central Java.

In a field where scientific monographs are few and far between, we commend Novida Abbas, the Balai Arkeologi Yogyakarta and Kepel Press for presenting us with a useful volume about a site that is essential for Javanese archaeologists but widely unknown to the public. *Liangan: Mozaik Peradaban Mataram Kuno di Lereng Sindoro* was first published in 2014. Whereas the first edition was not intended for sale, the 2016 version is distributed nationwide through Gramedia bookstores. Those outside Indonesia will be pleased to know that the first edition can be downloaded from the book repository of the Indonesian Ministry of Education and Culture (<http://repositori.perpustakaan.kemdikbud.go.id/>).

The volume is a compilation of eleven papers covering almost every aspect of the site. It includes studies in archaeology, geology, epigraphy, ceramology,

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architecture, paleobotany and paleoanthropology. Although it is overall a good book, *Liangan: Mozaik Peradaban Mataram Kuno di Lereng Sindoro* would have benefited from a more thorough editing process. The essays have been written as stand-alone papers and not as book chapters. Hence the reader encounters many unnecessary repetitions. For example, each essay begins with a general introduction about Candi Liangan, its location and discovery. Similarly, the two (very short) essays on local geology could easily have been merged into a single, more coherent chapter. Editing a book is a thankless task and the devil lies in the details. We note that the editor has not been able to ensure consistent spelling. Some reference lists are incomplete, while others contain works that are not mentioned in the text. The use of the copy and paste method in the architecture chapter has led to irritating repetitions of identical phrases within a single page. Although illustrations are plentiful, the print size is too small for the plans to be legible.

Having said this, we may turn to the content of the book. I am hardly qualified to review all the papers, but I would like to comment on a few issues raised in this volume. In his essay entitled “Menggali Peradaban Mataram Kuno di Liangan Tahap Demi Tahap,” Sugeng Riyanto presents a history of the archaeological research at Candi Liangan, from the discovery of the site in 2008 until mid-2014. Besides giving a chronology of the excavation process, Sugeng Riyanto also explains the successive hypotheses proposed by himself and his colleagues from the Balai Arkeologi Yogyakarta regarding the function of the different areas of the site. Because of the amount and variety of the material unearthed, Liangan was first identified as a settlement site. Nevertheless, as excavations went on, it became clear that it was most likely a religious site: all three courtyards housed sacred buildings. The relative richness of the site compared to most Central Javanese temples was actually due to its exceptional state of preservation and not to a difference in original function. Whether or not the temple was coupled with a settlement is a question that deserves further research. Hence, it is slightly confusing that the authors of the book seem sometimes to forget their own conclusion and refer to Liangan as a *kampung* and to certain structures as *houses*, without any argumentation. Sugeng Riyanto interestingly compares the structure of Candi Liangan to that of a Balinese *pura* and associates its courtyards with the *jaba pisan*, *jaba tengah* and *jeroan* of Balinese architecture. As Balinese temples most often include a kitchen, this would of course explain the cooking utensils and remains of food found during the excavation.

Sugeng Riyanto also presents the results of a survey of *kecamatan* Ngadirejo, identifying 13 sites dating back to the Hindu-Buddhist period.²

2. Both the text and the table (p. 56-57) mention 13 sites. Strangely enough, the pictures on p. 55 show sites that do not appear in Sugeng Riyanto's list, namely Piyudan, Kramat and Limbangan. In the absence of information regarding *desa* and *kecamatan*, I was not able to plot the latter on a map.

Although the author does not state this explicitly, we suppose that he only lists the sites that are still visible today. To try to reconstruct the ancient religious landscape as completely as possible, it would however be interesting to mention all the known sites, including those that have vanished. If one credits N.J. Krom's 1914 inventory, it appears that at least seven Hindu-Buddhist temples once stood within 10 km of Candi Liangan, and that twenty-five other sites have yielded archaeological material³ (see table below and fig. 1). The distribution of archaeological remains within the landscape suggests that Liangan was a few kilometers away from a road linking the Progo Valley to the region of Weleri, on Java's north coast. Sugeng Riyanto's remark that "Liangan did not stand alone" is thus an understatement.⁴ As often in Java, the chronology – either absolute or relative – of these archaeological sites has yet to be established. Nevertheless, the inscriptions discovered so far in the *kabupaten* of Temanggung point towards the 9th – early 10th century as the apex of the Hindu-Buddhist culture in the region.⁵ However, the Hindu-Buddhist presence in Temanggung is documented – although indirectly – as early as the middle of the 8th century. Indeed, the Wanua Tengah III inscription (dated 908 CE) tells us that, in 746 CE, *rake* Panangkaran gave land to the Buddhist monastery of Pikatan. The findspot of the inscription (*dusun* Kedunglo, *desa* Gandulan, *kecamatan* Kaloran, *kabupaten* Temanggung), as well as the toponyms mentioned in it, suggest that the monastery was located in the Temanggung area.

Data from the colonial period should not be overlooked. They can be quite useful to monitor potential archaeological sites. Contrary to what is said in the book under review (p. 165), Liangan did not suddenly appear in the archaeological literature in the 2000s. The village name is actually mentioned as early as 1911, in the *Notulen*.⁶ At that time, the *Bataviaasch Genootschap*

3. Stone sculptures, pedestals, bricks and/or stone blocks have been found in 19 of these sites. The other sites have yielded only small finds, such as metal objects, jewelry and/or ceramics. The amount of stones apparently found in Jamus, Nglarangan, Traji and Kentengsari suggest that those sites used to be temples as well.

4. In his list of 13 sites, Sugeng Riyanto mentions locations that are as far as 20 km from Liangan. In the present review article, I have limited the indexing to a radius of 10 km. For those wishing to know more about sites reported in the district of Temanggung during colonial times, see Krom 1914. Temples and presumed temple sites are also listed in Degroot 2009: 416-423.

5. To my knowledge, some 30 inscriptions are thought to come from the Temanggung area. The earliest is probably the Gondosuli I inscription (early 9th c.?), the latest the Wanua Tengah III inscription (908 CE) or, possibly, the Taji Gunung inscription (910 CE). For complete references, see Nakada 1982: I-9, 13, 15, 19, 21, 22, 31, 32, 49, 51, 52, 53, 61, 62, 64, 76, 95, 96, 97, 100, 104; Krom 1914, no 980; Sarkar 1971-1972 : cxi; Boechari 1985-1986: 52-57; Titi Surti Nastiti *et al.* 1982: 23-40; Wissemann Christie 2001. Note that the inscriptions of Mandang, Mulak, Kwak, Ra Tawun and Ra Mwi, mentioned by Nakada (1982) as coming from Magelang, actually come from the Temanggung area.

6. *Notulen van de Algemeene en Directievergaderingen van het Bataviaasch Genootschap van*

received a letter from the Resident of Kedoe, reporting the discovery, in a dry field in *dusun* Liangan, *desa* Poerbesari, of a few objects made of copper alloy – namely a pot with a lid, three pairs of bracelets and one pair of rings (Quarles de Quarles & Wettum 1911: 48). The pot was bought for the Batavia Museum, while the bracelets and rings were sent to Leiden (ibid. 1911: 61; *Notulen* 1911: lxxix).⁷

Findspots of archaeological remains and objects from Hindu-Buddhist culture within a 10 km radius of Candi Liangan⁸

Site/ <i>dusun</i>	<i>Desa</i> ⁹	<i>Kecamatan</i>	Distance ¹⁰	Description ¹¹	References ¹²
Kramat*	Tegalrejo	Ngadirejo	0.6 km	A statue of a bull with a sleeping woman, 1 bull, 4 pedestals, a heap of temple stones	No 961
Gedegan	Giripurno	Ngadirejo	0.8 km	5 metal platters found in the ground	No 957
Cepoko	Canggal	Candirotto	1 km	A bull	No 999
Gembyang	Kentengsari	Candirotto	1.1 km	A bull	No 998
Jumprit	Tegalrejo	Ngadirejo	1.1 km	A few temple stones	No 962
Perot */ Candi	Pringapus	Ngadirejo	2.5 km	Hindu temple, 2 inscriptions ¹³	No 958
Pringapus */ Candi	Pringapus	Ngadirejo	2.8 km	Hindu temple	No 959
Muggangsari	Munggansari	Ngadirejo	2.8 km	A gargoyle with a monkey, a small votive temple (?), a pilaster capital	No 955

Kunsten en Wetenschappen. It is replicated in Krom 1914: no 960.

7. Museum Nasional Indonesia, Jakarta (MNI), Inv. no 1672b (5164) and 1672c (5165), for the pot and the lid respectively.

8. Based on Krom 1914. Unless specified, all the sites are in the *kabupaten* of Temanggung. Spelling and administrative localization have been modernized and may vary compared with the names given in Krom 1914.

9. Spelling and administrative divisions according to the *Peta Rupa Bumi Digital Indonesia Seri I* published by BAKOSURTANAL in 2000–2001.

10. Distance from Liangan, as the crow flies. When the exact location of the findspot is not known, the point of reference is the centre of the *dusun*.

11. When the site is a temple, sculptures are not listed individually. A site is identified as a temple if remains of a stone/brick structure were found *in situ*. “Hindu temple” means that a *yoni*, a bull or another element of clearly Hindu iconography was discovered on the site as well.

12. Unless specified, references are to Krom 1914.

13. Inscriptions of Tulang Air I & II (850 CE). For references, see Nakada 1982: I/21.

Site/dusun	Desa	Kecamatan	Distance	Description	References
Nglaruk	Katakan	Ngadirejo	3.2 km	Bronze objects found in the ground: a kettle, a pot fragment, 3 small containers (one with a śrī), one lid	No 956
Nglarangan	Katakan	Ngadirejo	3.2 km	A Gaṇeśa, two stone bases, a bull, fragments of a doorjamb, two <i>linggas</i> , numerous loose bricks	No 835; Dwiyanto e.a. 1981: 10-12.
Butuh	Banjarsari	Ngadirejo	3.2 km	Several temple stones, two <i>linggas</i>	Dwiyanto e.a. 1981: 12.
Bongkol*	Candisari	Parakan	3.5 km	A Hindu temple atop a hill. Nearby: bull, Gaṇeśa, an inscription ¹⁴	No 954
Candi*	Candisari	Parakan	3.5 km	A <i>kāla</i> , a pedestal, a relief with a male figure, two pilaster bases with atlantes	No 952
Kebumen*¹⁵	Candisari	Parakan	3.7 km	A dilapidated temple, on a plateau, with a staircase on the east side, a pedestal	No 953
Ngadirejo	Ngadirejo	Ngadirejo	4 km	Inscribed copper plate ¹⁶	No 964

14. The Alih Tinghal inscription would have been found near Candi Bongkol and transferred to Magelang before being sent to Batavia. It is now in the Museum Nasional Indonesia, inv. no D. 83. It is dated to the third quarter of the 9th century. See Stutterheim 1932: 294; Damais 1970: no 107; Sarkar 1971-1972: no cxi.

15. Bongkol, Candi and Kebumen are possibly listed as Situs Candi, Batu Lapik Candi and Yoni Candi by Sugeng Riyanto, but the differences between the Dutch descriptions and what is still visible today make it difficult to identify which is which. Knowing their geographical coordinates would have helped.

16. The Mantyasih III inscription is part of a series of three inscriptions recording a *sīma* grant made by Balitung in 907 CE. The exact findspot of the inscriptions is unknown. The Mantyasih I inscription was in the collection of the *pangeran* of Solo. The Mantyasih II plate was said to have been found in East Java. About the Mantyasih III inscription, Brandes said that it comes from “Li Djok Ban, Ngadirejo, Kedu” (Brandes 1913: no cviii). Since the place names in the three inscriptions seem to refer to the Temanggung area, a Ngadirejo origin is assigned to the whole series – but the plates might have been found anywhere in the district of Ngadirejo. The Mantyasih III inscription was sent to Batavia and is now in the collection of the MNI, inv. no E. 19. For references, see Nakada 1982: I/97 and Boechari 1985-86: 57-59.

Site/dusun	Desa	Kecamatan	Distance	Description	References
Petirejo	Petirejo	Ngadirejo	4.3 km	A Gaṇeśa	No 965
Krawitan	Krawitan	Candiroto	4.4 km	A pedestal	No 997
Mangunsari	Mangunsari	Ngadirejo	4.4 km	Small gold objects ¹⁷	No 963
Tloyo	Karanggedong	Ngadirejo	5.5 km	15 large cut stones	No 966
Traji	Traji	Ngadirejo	5.6 km	A pedestal, a <i>lingga</i> , ornamented temple stones, Buddhist inscription ¹⁸	No 967
Tanurejo	Tanurejo	Parakan	6.1 km	Tympanum of a Dongson style drum, gold jewels, silver bowl, found in the ground ¹⁹	No 949
Gg Pertapan * ²⁰	Bagusan	Ngadirejo	6.6 km	Temple	No 971
Karangbendo	Tegalroso	Parakan	6.6 km	Niche with kneeling <i>ṛṣi</i>	No 969
Ketitang	Ketitang	Jumo	7.3 km	Female statue with gargoyle	No 993
Jetis kulon	Jetis	Parakan	8.2 km	Stone figure	No 948
Petarangan	Petarangan	Bulu	8.2 km	Inscription ²¹	Titi Surti Nastiti <i>et al.</i> 1982.
Piyudan*	Padureso	Jumo	8.5 km	A Gaṇeśa	No 995

17. A series of eleven gold leaves and four gold beads were sent to Batavia (MNI, inv. nos 5480 and 5481); a string of gold beads was sent to Leiden (Coenen & Krom 1914: 97).

18. The inscription in question is a fragment of the Kayumwungan/Karang Tengah inscription, dated 824 CE (MNI, inv. no D27 and D34). For further references, see Nakada 1982: I/13. Two of the place names mentioned in the inscription, namely Trihaji and Ptir, may most probably be matched with the modern villages of Traji and Petirejo, located some 4 km to the northwest of Parakan, along the Parakan-Ngadirejo road.

19. Sent to Batavia. MNI inv. nos 5151-5160 and 5172.

20. Listed as “Situs Bagusan” by Sugeng Riyanto.

21. Findspot of the Rukam inscription. See Titi Surti Nastiti *et al.* 1982: 23-28 and 36-40; Agni Sesaria Muchtar 2016: 149-164.

Site/dusun	Desa	Kecamatan	Distance	Description	References
Situs Watu Ambal*	Telahap	Parakan	8.8 km	Ancient stone staircase, 2 <i>linggas</i> , a small stone statue and a stone inscription ²²	No 950
Tretep	Tretep	Tretep	8.9 km	Two stone <i>caityas</i> (?), 3 pedestals, a Gaṇeśa, a <i>makara</i> and a bull, everything “from Mt Prahu”	No 988
Argopuro / Sigedong ²³	Sigedong	Tretep	9 km	Hindu temple, 2 inscriptions	No 989
Kentengsari	Purwosari	Sukorejo ²⁴	9.7 km	Numerous temple stones, an Agastya, <i>makara</i> gargoyles	Baskoro Tjahjono e.a. 2015: 333
Gondosuli*	Gondosuli	Bulu	10 km	Temple and two inscriptions ²⁵	No 983

Table 1 – Temples are in **bold**. Sites marked by an asterisk* are also listed by Sugeng Riyanto²⁶

The position of Candi Liangan on the northeastern slope of Mt Sundoro compels us to consider the possibility that it used to be a stop along a pilgrimage path to the Dieng Plateau. From Liangan, it is indeed possible to reach Dieng – which lies less than 25 km away – by taking the pass between Mt Sundoro and Mt Telerejo. Regarding the question of the relationship between Liangan and the surrounding landscape, we must in addition stress that the temple is located close to two significant landmarks: the source of the Progo River and Mt Sundoro. In the village of Jumprit, 1.5 km to the west-southwest of Liangan, there is a small cave called Umbul Jumprit, which is considered by Javanese people to be the source of the Progo River, the most prominent river of the Magelang-Yogyakarta area. The cave is held sacred by

22. Hoepermans (1913: 167) reports that an inscription was discovered in Telahap, slightly north of Parakan-Wonosobo road. He saw the inscription, broken into two fragments, in 1865 in front of the house of the *Controleur* in Magelang. It was already reported as lost by Verbeek (1891: no 235). For references, see Nakada 192: I/76.

23. I would like to seize the opportunity to correct a mistake. In Degroot 2009: 417, I misread Verbeek's report and wrongly listed Candi Argopuro as being in *desa* Lempuyang, *kecamatan* Candiroti. It should be *desa* Sigedong, *kecamatan* Tretep.

24. *Kabupaten Kendal*.

25. The Gondosuli II inscription (early 9th c.?) is carved on a large boulder and is still *in situ*. The Gondosuli I inscription, dated 827 CE, was carved on a stele and was already reported as lost by Brandes (1913: no iii). About Gondosuli II, see De Casparis 1950: 50–73. For references concerning Gondosuli I, see Nakada 1982: I/15.

26. Sugeng Riyanto gives a brief description of what remains of these sites. The state of preservation of the others in this list is unknown.

the *kejawen* and Buddhists alike.²⁷ As for Mt Sundoro, we know from the Kuṭi inscription that it was thought to be the abode of holy spirits (Sarkar 1971–1972: no xii). Liangan was thus certainly an ideal spot to establish a religious community. Whether or not the site supported a large population is another question. Liangan actually lies on an agricultural border: the area below the village is suited for wet-rice cultivation, but the ground located higher up on Mt Sundoro is not.

For ease of reading, I will give a short description of the site. Candi Liangan is a terrace sanctuary composed of at least four successive courtyards spread out over a northeast-southwest line. Its general plan follows the contours of the natural terrain but its axis is slightly offset from Mt Sundoro (fig. 2). The sanctuary has not been fully excavated yet and its northwest limit has yet to be identified.²⁸ Within the first – and highest – courtyard, six structures have been discovered: a row of five small stone terraces – probably remains of temples – in the southeastern half, and the foundation of a large *pendopo* in the northwestern half (fig. 3). Excavations in the second courtyard have brought to light the vestiges of two low stone terraces (fig. 2). A temple was found in the third courtyard (fig. 5) and a bathing place on the lowest terrace.²⁹ The two first courtyards are enclosed within a wall. A path, paved with river stones hugs the southeastern side of the sanctuary. To the southwest and southeast, several other structures have been discovered, mainly segments of retaining walls and remains of wooden buildings.

In his paper, Sugeng Riyanto briefly notes (p. 58) that the outline of the temples at Liangan fits the “classical Central Javanese profile – composed of a plinth, a torus and a *cyma* – which suggests that the sanctuary dates from the 9th c. CE.” Caution is advised before making such general statements. First of all, Central Javanese temples show a variety of profiles, some with a torus – like Liangan –, some without.³⁰ Second, given that we know very little of 10th–12th-c. temples, as well as of 8th-c. architecture, we should refrain from jumping too quickly to the conclusion that everything Central Javanese dates back to the 9th c.

Later in his text, Sugeng Riyanto notices that the majority of the coarse earthenware from Liangan was shaped using a potter’s wheel. This remark is not

27. Since the 1980s, Buddhist monks come to Umbul Jumprit to collect its sacred waters and used them during the large *waisak* ceremony at Candi Borobudur.

28. Today this part of the site is cut through by a small ravine where a streamlet flows.

29. This bath – or, more probably, water temple – was excavated after 2014 and is thus not mentioned in the book under review. It is a small but complex structure that underwent several modifications and repairs. It is hoped that the Balai Arkeologi Yogyakarta soon publishes a report about its excavation.

30. Candi Arjuna, Barong, Gebang, Gedong Songo, Kedulan, Ngempon, Semar, Kimpulan and Losari, for example, do not have a torus, even though they are located in Central Java and date back to the Central Javanese period. On the other hand, Candi Gunung Gangsir (East Java) and Candi Padang Roco (West Sumatra) also have a torus. For a short study on the profile of Central Javanese temples, see Degroot 2009: 193–203.

as self-evident as it seems. To my knowledge, for the Central Javanese period, unequivocal proof of the use of this technique for producing coarse ware is lacking: most of the horizontal traces seen on pots and potsherds could also be smoothing marks. We hope that the next book on Liangan will include the ceramological analysis of local earthenware that is sorely lacking in this one.

The second and third chapters of the book are dedicated to geology. Isa Nurnusanto's six-page paper ends with the conclusion that the temples were built atop a layer of pyroclastic fall and were buried under a sediment layer made of material from a pyroclastic flow that occurred some 1720 years ago.³¹ In the second essay about geology, Fadhlán confirms the presence of ancient *lahars*. Unfortunately, neither Isa Nurnusanto nor Fadhlán provides a stratigraphy. Hence, the relationship between the archaeological structures and the geological features remains unclear. In a paper published in 2016 (Oktory Prambada *et al.*), Oktory Prambada suggested that Liangan was covered by at least two different pyroclastic flows and one *lahar*. But the discovery of wooden structures burned in place also points to a massive pyroclastic fall. Further research is obviously necessary to fully understand the process through which Candi Liangan became submerged.

In “Wanua I Rukam, Nama Asli Situs Liangan?”, Agni Seseria Muchtar defends the theory that Liangan is the village destroyed by a *guntur* (debris flow, pyroclastic flow) mentioned in the 907 CE Rukam inscription. This is indeed a possibility, but the evidence is weak: pyroclastic flows and *lahars* are not rare phenomena on the slopes of Javanese volcanoes. The area located within an 8 km radius from Mt Sumbing's summit is considered prone to ash fall; river beds all the way down to Ngadirejo and Parakan are classified as “hazard zone II,” i.e. potentially affected by lava flows, *lahars* and pyroclastic flows.³² Under these conditions, Liangan is unlikely to be the only village of the region destroyed by volcanic activity. The Rukam inscription – the findspot of which is located between Mts Sumbing and Sundoro – could refer to any village on the slopes of one of these two volcanoes.³³ Although associating Rukam and Liangan seems slightly far-fetched, Agni Seseria Muchtar convincingly identifies two other villages mentioned in the Rukam inscription as modern-day Wunut (*kecamatan* Bulu, *kabupaten* Temanggung)

31. This early date shows how careful we need to be when using C¹⁴ results in a geologically unstable environment. In this case, only the eruption that produced the pyroclastic material has been dated. The landslide that brought the debris to the Liangan area is obviously of a later date.

32. As the crow flies. See Mulyana *et al.* 2007.

33. In 1865, a landslide in the village of Telahap revealed an ancient staircase that, in all likelihood, had laid buried under volcanic material. Two *lingga*-shaped boundary stones, a statue and fragments of an inscription were found nearby. The inscription – now lost – was only partly legible; it apparently recorded a *sīma* grant made by Balitung in 899 CE. Telahap might as well be the village destroyed by *guntur* from the Rukam inscription. And Telahap is much closer to Petarongan, the findspot of the inscription, than Liangan. On Telahap, see Krom 1914: no 950; Damais 1955: 117-118.

and Kedu (*kecamatan* Kedu, *kabupaten* Temanggung). The name Wunut is rare enough and the modern village is quite close – c. 3 km – to Petarongan, where the Rukam inscription was discovered. Regarding Kedu, one must however note that it is also the name of a river flowing from Mt Sumbing down to the modern district of Kedu.³⁴ It is thus possible that ancient Kdu was located on the mountain, close to Wunut.³⁵

The volume includes a lengthy chapter on architecture, written by Hery Priswanto and entitled “Struktur dan bangunan batu di situs Liangan.” When the book was written – in 2014 – excavations were still in progress and we understand that *Liangan: Mozaik Peradaban Mataram Kuno di Lereng Sindoro* is an interim report and not a definitive book on Candi Liangan. Still, Hery Priswanto’s essay could have been a bit less descriptive and a bit more analytical. All the more so as his description of the buildings abounds in gross errors. For example, one would expect the author not to confuse linear with square meters.³⁶ Besides, some measurements are obviously incorrect. According to Hery Priswanto, the raised platform at the centre of the *pendopo* of the second courtyard is “16.5 x 2.09 m²,” while the *pendopo* itself is only 8.40 x 8.45 m.³⁷ The same type of discrepancy is found in the description of *batur 2a*: its base supposedly measures 6.09 x 7.03 m and its upper surface 6.57 x 6.58 m – which is mathematically impossible. The description of *candi nomor 2* displays a misunderstanding of architectural principles: the author states that the pilasters (on the outer wall of the *cella*) are meant to reinforce the wall. Such pilasters are simply carved in the wall and have no load-bearing function in and of themselves – the wall in its entirety bears the structure. Pilasters give an appearance of supporting pillars, but are purely ornamental.

For a paper on architecture, too little thought has been given to building techniques. Stereotomy, for example, is only briefly mentioned for *candi nomor 2*. It is however clear from pictures that, besides notches, other systems were used to ensure cohesion between stone courses – such as stones cut at an angle, mortises and wedges (fig. 4). Stereotomy is especially important since its evolution is relatively well-known; it can thus help to confirm – or reject – a proposed chronology for the site. *Candi nomor 1*, for example, is built in a different way than *batur 2a*. Stones from *Candi nomor 1* have a uniform

34. The modern village of Kedu is located some 11 km away from Petarongan.

35. Mt Sumbing was sometimes referred to as Gunung Kedu. The Rukam inscription also mentions a *wanua i Galuh*. The name “Galuh” is still found in the area: it is the name of the river flowing southwestwards from the Reco Pass to the Serayu River basin. A river with a quite similar name – *sungai Galeh* – flows northeastwards from the Reco Pass to the Progo water system – the Reco Pass being on the watershed divide between the Serayu and Progo valleys.

36. Dimensions of all the buildings are given in the following format: “475 x 480 cm²”.

37. The small raised platform appears square on the plans in Sugeng Riyanto’s paper and on the picture published by Hery Priswanto, so that we cannot conclude straightaway that the mistake is just a typo and that the measurement should therefore be read 1.65 x 2.09 m.

format and are mostly likely laid in stretcher (fig. 5 and 6).³⁸ By contrast, stones from *batur 2a* have widely varying sizes and most are laid in shiner (fig. 7). In Central Java, the latter position is seen in structures dating from the mid 9th c. onwards (Dumarçay 1993: 19). This detail could thus suggest that *Candi nomor 1* and *batur 2a* belong to two different building stages. Moreover, the stones of *batur 2a* are roughly hewn and present traces of point or pick.³⁹ In Central Java, coarse blocks are often used in foundation but not in elevation. Their presence here might indicate that the building has never been completed.⁴⁰

The enclosure wall and the *pagar lempeng batu* are built according to a technique similar to that of *batur 2a*: a double cladding made of stones laid in shiner holds an infill of natural stones and dirt (fig. 8 and 9). This way of building seems to have become popular in Java from 830 CE onwards (Dumarçay 1993: 19). Even though they are built using the same principle, these two walls are different structures: the enclosure wall is thicker, shorter and does not have the same outline as the *pagar lempeng batu*. They might have been planned at different times. That Liangan was not conceived as an integrated whole is also suggested by its orientation. The orientation of *Candi nomor 1* – as well as that of the retaining wall marking the limit between the second and the third terraces – differs from the orientation of the upper terraces. Interestingly, the *pagar lempeng batu* was not built in one phase either. The southwest and northwest sections were built first, while the northeast section was constructed later, as it leans on the earlier sections and is not anchored into them (fig. 10).⁴¹ The building history of Candi Liangan is probably more complex than it looks at first sight.

The retaining wall in the southern part of the site is quite heterogeneous (fig. 11): some stones, mostly in the lower part of the wall, are laid in shiner, while others are placed in stretcher. Furthermore, the blocks that composed this wall present varied surface finishes: some have been smoothened, while others are only roughly hewn. Several stone blocks have even been re-used.⁴² A possible explanation is that the site was partially destroyed – due to a *lahar* or a landslide – while it was still in use and that it was repaired with the means

38. Possibly header. In order to determine the exact position of the stone (stretcher or header), one would have to partly dismantle the wall.

39. Tool-mark traces are visible on many stones – and not only at *batur 2a*. A close study might give interesting insights into the organization of the building site.

40. The fact that the buildings are plain and that excavations have not yielded ornamented stones could strengthen this hypothesis. But it might be that most of the buildings – except for the shrine of the third courtyard – had wooden superstructures.

41. The outline of the northeast section is also slightly different from the profile of the rest of the *pagar lempeng batu*.

42. Some stones have notches and were initially meant to be laid in shiner. Stones in reuse are mainly visible in the upper part of the wall. A few river stones have been used as well.

available.⁴³ A thorough architectural study of Candi Liangan, including newly excavated structures, will surely yield more interesting data.

Rita Istari's contribution⁴⁴ and Yusmaini Eriawati's paper⁴⁵ are lists of small finds rather than essays. Both of them have the merit of presenting the kind of material that is rarely published. But analytical work still needs to be done. As for Cristina Castillo's⁴⁶ and Katsunori Tanaka's⁴⁷ careful studies in paleobotany, comparative data are still too scarce for their conclusions to be placed within the broader Central Javanese historical context. The volume further includes a thorough anthropological study by Sofwan Noerwidi on human remains discovered in what appears to be a 9th–10th-c. grave⁴⁸. It ends with a general paper by Hari Lelono on the involvement of the local community in the research process and preservation of the site.⁴⁹

In conclusion, Novida Abbas' *Liangan: Mozaik Peradaban Mataram Kuno di Lereng Sindoro* is an important contribution to Southeast Asian archaeology. We hope that the Balai Arkeologi Yogyakarta soon publishes a second monograph on Liangan, in a larger format, supplemented by stratigraphic cross sections and presenting the work they have carried out since 2014.

References

- Agni Saseria Muchtar (2016). "Wanua i Rukam, Nama Asli Situs Liangan? (Kajian terhadap Prasasti Rukam 907 M sebagai data pendukung penelitian Situs Liangan)," in Novida Abbas (ed.), *Liangan. Mozaik Peradaban Mataram Kuno di Lereng Sindoro*: 149-163.
- Bakosurtanal *Peta Rupa Bumi Digital Indonesia Seri I* (2000-2001). Scale 1: 25 000. Bogor: Badan Koordinasi Survey dan Pemetaan Nasional.
- Baskoro D. Tjahjono, Agustijanto Indrajaya & V. Degroot (2015). "Prospection archéologique de la côte nord de Java Centre : le district de Kendal," *Bulletin de l'École française d'Extrême-Orient* 101: 327-356.
- Boechari (1985-1986). *Prasasti Koleksi Museum Nasional. Jilid 1*, Jakarta: Museum Nasional.
- Brandes, J.L.A. (1913) *Oud-Javaansche Oorkonden. Nagelaten Transscripties*, Batavia – 's Hage: Albrecht – M. Nijhoff. (Verhandelingen van het Bataviaasch genootschap van kunsten en wetenschappen LX).
- de Casparis, J.G. (1950). *Inscripties uit de Çailendra-tijd*, Bandung: Pjawatan Purbakala Republik Indonesia (Prasasti Indonesia I).

43. The retaining wall made of boulders that fences in the site on the southwest side might date from after this first destruction. Although its height is impressive, its construction does not require mastery of stone masonry techniques. Finding a wall with such a rough appearance in such a visible place is surprising since it contrasts with the quality of other retaining walls.

44. "Pendataan Temuan Lepas Tinggalan Arkeologi Situs Liangan dan Sekitarnya".

45. "Keramik Cina Dinasti Tang Abad IX Masehi dari Situs Liangan, Temanggung, Jawa Tengah".

46. "The rice remains from Temanggung. First evidence of tropical japonica in Indonesia".

47. "Report of DNA analysis for rice remains at Javanese settlement site, Indonesia".

48. "Sisa Rangka Manusia dari Situs Permukiman Mataram Kuna – Liangan, Temanggung, Jawa Tengah".

49. "Situs Liangan dan Masyarakat".

- Coenen W.J. & N.J. Krom (1914). "Notulen der zevende Directievergadering, gehouden op Maandag 17 Augustus 1914," *Notulen van het Bataviaasch genootschap van kunsten en wetenschappen* 52: 91-107.
- Damais, L.-C. (1955). « Études d'épigraphie indonésienne IV. Discussion de la date des inscriptions », *Bulletin de l'École française d'Extrême-Orient* 47: 7-290.
- (1970). *Répertoire onomastique de l'épigraphie javanaise (jusqu'à Pu Sindok śrī Īśānawikrama Dharmmotungadewa) : étude d'épigraphie indonésienne*, Paris: EFEO (Publications de l'École française d'Extrême-Orient 66).
- Degroot, V. (2009). *Candi, Space and Landscape. A study on the distribution, orientation and spatial organization of Central Javanese temple remains*, Leiden: Sidestone Press (Mededelingen van het Rijksmuseum voor Volkenkunde, 38).
- Dumarçay, J. (1993). *Histoire de l'architecture de Java*, Paris: École française d'Extrême-Orient (Mémoires archéologiques 19).
- Dwiyanto, D., G. Nitihaminoto, S. Pinardi (1981). *Laporan penjaminan lokasi Candi Perot, Prambanan: Suaka Peninggalan Sejarah dan Purbakala* (unpublished report).
- Hoepermans, N.W. (1913). "Hindoe-oudheden van Java," *Rapporten van den Oudheidkundigen Dienst in Nederlandsch-Indië*: 73-372.
- Krom, N.J. (1914). "Inventaris der Hindoe-oudheden op den grondslag van Dr. R.D.M. Verbeek's Oudheden van Java. Eerste deel," *Rapporten van den Oudheidkundigen Dienst in Nederlandsch-Indië*: 1-358.
- Mulyana, A.R., A. Martono, A.D. Sumpena, Riyadi & W. Suherman (2007). *Peta Kawasan Rawan Bencana Gunungapi Sundoro, Provinsi Jawa Tengah. Volcanic Hazard Map of Sundoro Volcano, Central Java Province*, Scale 1: 50 000. Bandung: Pusat Vulkanologi dan Mitigasi Bencana Geologi.
- Nakada, Kōzō (1982). *An Inventory of the Dated Inscriptions in Java*, Tokyo: Tokyo Bunko.
- Notulen (1911). "Lijst der voorwerpen, die in het jaar 1911 voor de Archeologische Verzameling zijn verkregen," *Notulen van het Bataviaasch genootschap van kunsten en wetenschappen* 49: lxxv-lxxxii.
- Oktory Prambada, Yoji Arakawa, Kei Ikehata, Ryuta Furukawa, Akira Takada, Haryo Edi Wibowo, Mitsuhiro Nakagawa, M. Nugraha Kartadinata (2006) "Eruptive history of Sundoro volcano, Central Java, Indonesia since 34 ka," *Bulletin of Volcanology* 78 (11): article id. 81, 19 pp. DOI: 10.1007/s00445-016-1079-3
- Quarles de Quarles, A.J. & B.A.J. van Wettum (1911). "Notulen van de zesde Directievergadering, gehouden op Maandag 4 September 1911," *Notulen van het Bataviaasch genootschap van kunsten en wetenschappen* 49: 72-97.
- Sarkar, H.B. (1971-1972). *Corpus of the inscriptions of Java. Corpus inscriptionum Javanicarum, Up to 928 A.D.* Calcutta: Mukhopadhyay.
- Stutterheim, W.F. (1932). "Van een tjandi, een grottempel en een oorkonde," in *Djâwâ. Tijdschrift van het Java-instituut* 12: 292-301.
- Titi Surti Nastiti, Dyah Wijaya Dewi & Richardiana Kartakusuma (1982). *Tiga Prasasti dari Masa Balitung*, Jakarta: Pusat Penelitian Arkeologi Nasional.
- Verbeek, R.D.M. (1891). *Ouheden van Java. Lijst der voornaamste overblijfselen uit den hindoetijd op Java met eene oudheidkundige kaart*, 's Gravenhage – Batavia: Nijhoff – Landsdrukkerij.
- Wisseman Christie, J. (2001). "Revisiting Early Mataram," in M.J. Klokke & K.R. van Kooij (eds), *Fruits of inspiration. Studies in honour of Prof. J.G. de Casparis*, Groningen: Forsten : 25-55.

Fig. 1 – Places of archaeological interest in kabupaten Temanggung. (V. Degroot)

Fig. 2 – Candi Liangan. Overview from the northeast (looking uphill). In the foreground, the *pendopo* of the second courtyard. In the background, *Candi nomor 2*. In the distance, Mt Sundoro. (Photography: V. Degroot)

Fig. 3 – Candi Liangan. Overview of the first courtyard from the south (looking downhill). To the right, the row of *batur* and *Candi nomor 1*. To the left, remains of a large *pendopo*. (Photography: V. Degroot)

Fig. 4 – Candi Liangan, first courtyard. *Batur 2b*.
Detail of the wall: stone block cut at an angle and wedges. (Photography: V. Degroot)

Fig. 5 – Candi Liangan, first courtyard. *Candi nomor 1*, seen from the southeast.
(Photography: V. Degroot)

Fig. 6 – Candi Liangan, first courtyard. *Candi nomor 1*.
Detail of the wall: stone blocks placed in stretcher. (Photography: V. Degroot)

Fig. 7 – Candi Liangan, first courtyard. *Batur 2a*.
Detail of the wall: stone blocks placed in shiner, infill of river stones and dirt. (Photography: V. Degroot)

Fig. 8 – Candi Liangan, enclosure wall along the south-eastern side of the first and second courtyard.
(Photography: V. Degroot)

Fig. 9 – Candi Liangan, border of the second and third courtyard.
Pagar lempeng batu, seen from the inside. (Photography: V. Degroot)

Fig. 10 – Candi Liangan, border of the second and third courtyard. *Pagar lempeng batu*, seen from the outside. Note the oblique junction between the first (to the left) and second (to the right) segments. (Photography: V. Degroot)

Fig. 11 – Candi Liangan, retaining wall to the south of the first courtyard. At the bottom left, blocks placed in shiner. Elsewhere, stones placed in stretcher. Note the river stone (top right) and the blocks in reuse (top left), as well as the difference in surface finish. (Photography: V. Degroot)