Archaeologists discover Southeast Asia’s largest ancient kiln site at Torp Chey

The new excavation at Torp Chey by the Cambodian team, jointly funded by APSARA Authority and the Nalanda-Sriwijaya Centre of the Institute of Southeast Asian Studies in Singapore, has unveiled a large kiln structure constructed against a natural slope. The kiln has four separate firing chambers heated by a single firebox. The firing chambers are separated by three additional firing trenches. Other features of the kiln include one gate (door) in the southern wall of a firing chamber, and an air vent toward the back of the kiln with three smoke holes. The three firing trenches located between the firing chambers may suggest side-stoke ports where additional fuel (wood) and oxygen could be added in order to manage the temperature and atmosphere inside the kiln.

When one compares the Torp Chey kiln to other known Khmer kiln sites, the difference in magnitude is quite clear. According to Piarawat Thammaseesuwan, other excavations in Cambodia, such as those at Tani, Anlong Thom, and Sarsey (belonging to what is known as the Phnom Kulen group of kilns) have revealed oval cross-draft kilns with single firing chambers built atop sloping mounds, usually measuring 3.8 to 3.6 meters in width and 6 to 8 meters in length. The Burniam kilns, which are located in northeast Thailand and also attributed to the Khmer Empire, are structurally similar to those found in Phnom Kulen, and are fairly long cross-draft kilns at 12 meters. The excavated Torp Chey No. 2 kiln mound, with a length of 21 meters, seems to suggest manufacture at an industrial scale larger and more extensive than anyone might have previously thought. Given that this kiln mound is merely a middle-sized mound among a group of twelve found within the same area, the potential to find one of an even larger size seems good.

According to Dr. Ea Darith, Mr. Robert McCarthy, who is a stone specialist working with the Japan-APSARA for Safeguarding Angkor (JASA) project, has linked the sandstone chips that formed the foundation layer on top of the natural soil of the No. 2 kiln mound to those from the Torp Chey rest house, the Jayavarman VII structure located approximately 60 meters north of the excavation dated to the late 12th to early 13th centuries. While the brown-glazed pottery found in association with the site also indicates a similar date, further carbonisation dating may narrow down the site use period to a more precise span of time.

Some researchers who have visited the Torp Chey excavation site have reported on how it resembles some ancient kilns found in China. Dawn Rooney, who has written several books on Southeast Asian ceramics, the Khmers were second only to the Chinese in mastering the technique of producing stoneware (a less porous type of pottery), and in the ability to produce glazed (a coating of silica that can be used to smoothen and to decorate the surface of pottery). While researchers are looking into possible direct technological transfers between the Khmer and the Chinese potters – which have thus far been relegated to the realm of popular myths – the archaeological evidence and academic consensus so far is that Khmer potters were inspired by Chinese imports, but that they developed the technologies of kiln construction and glazing independently. As mentioned earlier, while the brown-glazed pottery associated with the Torp Chey site suggests a later date of 12th to 13th centuries and does not address earlier associations between the Chinese and Khmer (which relates to pottery with a green glaze produced as early as the 10th century), the Torp Chey site excavation does suggest that the Khmer were using fairly labor-intensive and sophisticated methods in order to control and maintain kiln firing temperatures, and were producing pottery in large quantities, which has implications for economic organization and coordination.

Dr. Ea Darith of APSARA Authority has proposed that further work be conducted at the site, including conservation, management, public outreach, as well as research. Looting is probably the biggest threat to the site; M. Hendrickson, who published the survey report in 2008, reported that the crown of kiln No. 1 was already looted and that a local villager had indicated that large complete jars had been found there. According to Chhay Visoth, who has discussed the conservation of the Thnal Mrech kiln site (located on Phnom Kulen), before the 1990s the Thnal Mrech site was protected by the law and local popular beliefs; more specifically, by the soul of a local spirit (neak rp). As the villagers believed that any person who destroyed or disturbed the site would cause himself and his relatives to fall gravely ill, they would not even dare to take a small piece of pottery home and this allowed the kiln sites to be fairly well preserved. However, after the restoration of peace in Cambodia in the 1990s, treasure hunters hired impoverished local villagers (who did not know that they were destroying their heritage) to dig up such artifacts. The best pottery often entered the antiquities black market after being sold to middlemen and art dealers.

It is hoped that by educating the local residents about the significance of the Torp Chey site, by hiring locals to maintain and guard the site, and by erecting information panels in English and Khmer to explain the motives for and results of the kiln excavation, further looting can be prevented. Dr. Ea Darith hopes that it will be possible to construct a small visitor center including an exhibition of some artifacts found at the site, and to conserve and open a kiln structure for the public to visit. Dr. Ea Darith’s Cambodian team also hopes to continue research along the ancient road from Beng Mealea to Bakan in order to learn more about the significance of the road in the past, in relation to other structures that have been found, particularly between the kilns, the temples, and other water structures.

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