

The Shangshan Site, Pujiang County, Zhejiang

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The site of Shangshan is located in Pujiang County to the north of Qu'nan Village of Huangzhai Township, south of the Puyang River which is a tributary of Qiantang River. The site is located in a central region along the upper river valley of the Puyang River. The topography of the region surrounding the site is relatively flat and is roughly 50m above sea level however a few relatively level cultivated mounds are dotted across some of the landscape. The site of Shangshan is located on top of two opposing small mounds (one north and one south) which are between 3–5m high. The total surface area of the site is approximately 20000m². The three seasons of excavation at the site were carried out from 2001 to 2006. The site is divided into both northern and southern sections. Excavations covered a total of 1500m²

in the south and roughly 300m² in the north or a total of 1800m² (Figures 1 & 2).

In terms of the stratigraphy of the site, the southern portion of the site had 8 distinct levels, levels 8–5 correspond to the Shangshan cultural levels and level 4 corresponds to Hemudu cultural remains, whereas level 3 contains remains which are late than the Spring and Autumn to the Warring States period. The northern area of the site has five stratigraphic layers of which level 5 corresponds to Shangshan cultural remains whereas levels 4 and 3 are related to the Kuahuqiao cultural complex. All of the upper levels contain contemporary cultural remains.

This article will only present the remains related to the Shangshan cultural period.

Structural Remains

1. Ash pits: these are divided into pits of round, square and rectangular shapes. H121 opens onto level 4A and cuts through level 8. It is of rectangular shape and is 120cm long, 100cm wide with a rounded bottom and concave sides and was 28cm deep. In the eastern part of the pit two wide mouthed basins were found one on top of the other. In the northwestern corner another two wide mouthed basins were found and an additional one was found on the western side of the ash pit. In the south western corner a pottery pot was discovered along with a small basin. Judging from the placement of the cultural material in this pit, it appears to have been sacrificial in nature or a grave (Figure 3).

H447 opens onto layer 4 and was cut into primary soil. This pit is circular in shape and has a diameter of 60cm and 60cm deep. The walls of the pit tilt inwards and the bottom of the pit is flat and has a diameter of roughly 50cm. Very few cultural remains were found in this pit aside from a few pieces of red pottery shard with charcoal inclusions.

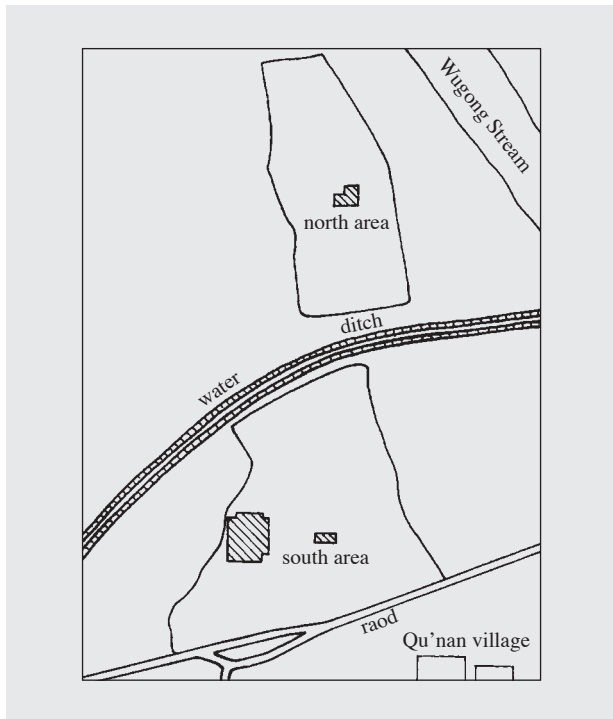


Figure 1. Illustration of distribution of the Shangshan site



Figure 2. The southern area of the excavated site (photo taken from south to north)

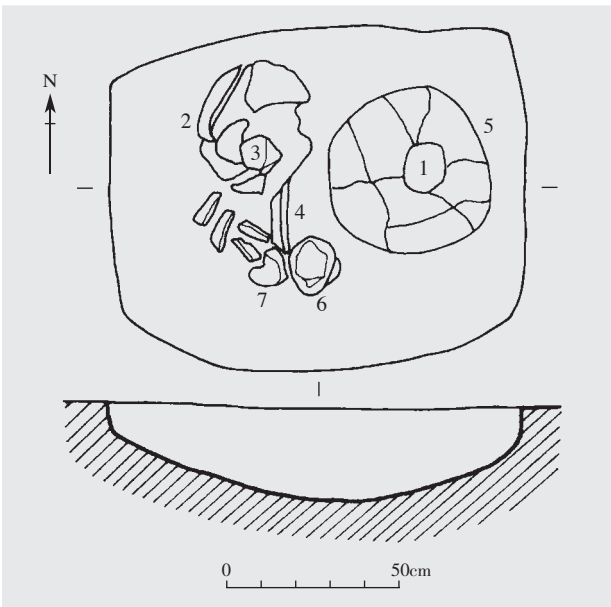


Figure 3. Plan and cross section of ash pit H121

H226 is located in the Grid T0810 of the southern zone. This pit opens onto level 3B and cuts through level 5. This pit is in the shape of an irregular ellipse and is 168cm long, between 90–110cm wide and 20cm deep. A large number of pottery shards were found in the pit which as well as repaired plates, pots and bowls



Figure 4. F1 (photo taken from southeast to northwest)

as well as grinding stones and stone balls, etc.

2. House remains: A small number of scattered small round holes were found across the site. It is possible that these holes were post holes creating following the decomposition of wooden beams. Under level 4 a group of holes which could be positively identified as postholes was found and was given the number F1 (house structure 1). The postholes of F1 were arranged in three lines which run from northwest to southeast and which were 14m long and separated from each other by 3m. Each line was composed of 10–11 postholes. All of the

postholes had straight walls and a rounded bottom and were between 27–50cm in diameter and between 70–90cm deep and the bottom of a few of these holes were lined with small rocks (Figure 4). This type of building is similar to the stilted building found at the site of Hemudu (7000 BP).

Cultural Material

The cultural material at this site is mostly composed of stone tools and pottery as well as a very small number of bone tools (temporarily omitted).

1. Lithic artifacts are consisted of chipped stone tools and ground stone tools.

Chipped stone tools are predominant in the assemblage, including two categories: flaked tools and pebble-core tools. They were primarily made through free-hand percussion, while some through bipolar percussion. Tools were modified through percussion retouch on ventral side, dorsal side, as well as alternat-

ing retouch on both sides.

Taking a flaked tool H129:5 for example, the tool retains clear bulb of percussion, points of striking platform, and waves of percussion on the ventral side. The convex edge of distal end was retouched alternatively. The width of this tool is longer than its length, which is about 7cm (Figures 5 & 6). Another example, flaked tool T0912 ⑤:6 is made on thick blank, remaining clear bulb of percussion and waves of percussion. The edges are modified by alternating retouch into a disc shape. Flake T0808 ⑥:11 is of a disc-shaped tool too, 6.5cm in length and made on a pebble-core. One side of the tools retain cortex, and the other side is modified by uni-direction percussion (Figure 7).

Pebble-core tools such as H443:1 is created by unidirectional ventral indirect percussion. One side of the tool is retouched using indirect percussion whereas on the other side of the tool the cortex is still intact. This tool is overall pointed in shape and is 11.3cm long

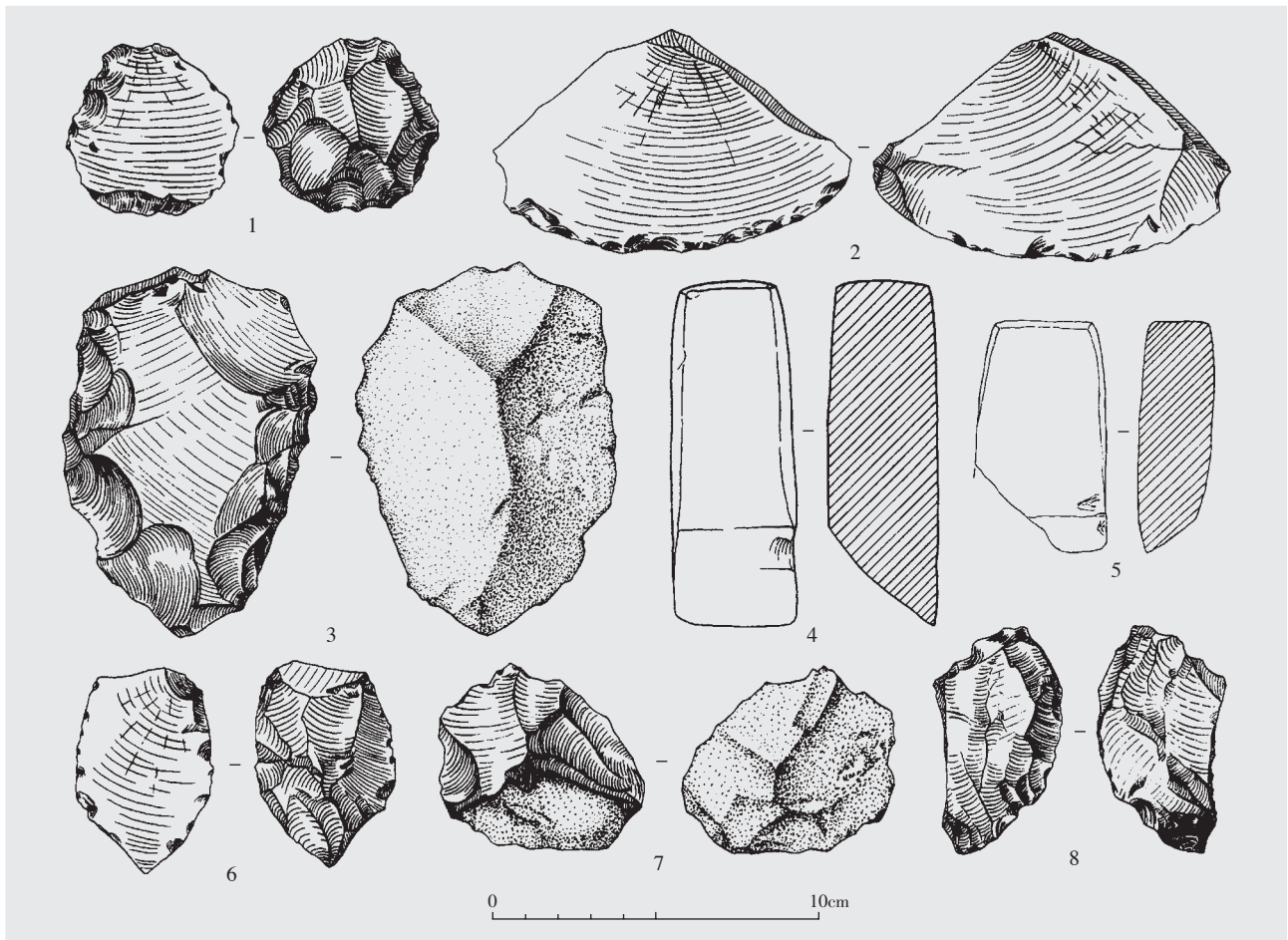


Figure 5. Stone tools

1, 2, 6, 8. flakes (T T0912 ⑤:6, H129:5, H178:13, T1708 ⑧:4) 3. cobble (H443:1) 4. chisel (H196:5) 5. adze (T3 ⑤:2) 7. core (T0808 ⑥:11)

(Figure 8).

Whetstone T3⑦:1 is manufactured out of tuff and is flat and rectangular in shape. There are signs of retouching around the circumference of the tool which is polished and straightened however it has visible use wear. This tool is 11.4cm long.

Stone ball T3⑥:3 is also executed in tuff and is worked using indirect percussion. It is difficult to distinguish between traces of manufacturing and use wear. This tool is 8.9cm in diameter.

Millstone T3⑤:5 is a flat piece of tuff into which a large concave depression is ground on one side. This depression is also polished and the irregular pitting on the milling surface is created by the milling activity and this surface also contains evidence of use wear. This tool is 38cm long and 32cm wide.

Perforated tools include T2⑤:10 which is created out of a naturally flat round stone into which an extremely

smooth walled hole is drilled in the middle. The diameter of this piece is 11cm.

Sickle-shaped knife T3⑥:6 is a fine stone flake of which the two ends are broken, the two sides of the blade are retouched by alternation, one side of the blade is slightly concave whereas the other side is slightly convex, the remaining length of this tool is 17.8cm (Figure 9).

The number of ground stone tools is relatively small and included adzes and chisels. H196:5 is of rectangular shape and of square cross section and the sides are tapered. The whole body of the piece is highly polished and measures 10.5cm long. T3⑤:2 is of trapezoidal shape and is a flattened rectangle in cross section. The whole body is polished, however part of the blade is missing. It measures 7.1cm long.

2. Pottery: was mostly composed of pieces with plant inclusions however in the later periods of the site the



Figure 6. flake (H129:5)



Figure 7. core (T0808 ⑥:11)



Figure 8. cobble (H443:1)



Figure 9. sickle-shaped knife (T3 ⑥:6)

numbers of pottery with sandy inclusions increased. Rice husks and leaves were a common find within the bodies of the pottery with plant inclusions. The paste of the pottery at this site was not solid and was often thick walled and the walls of some pieces were thicker than 2cm. The surface of the pottery was covered in a red slip. 85% of the assemblage consisted of flat bottomed vessels and frequent finds were basins with flared mouth and a small flat bottom. Vessels were decorated with cord marking as well as stamping. The corded designs were most frequently found on the lugs, and the handles, whereas stamped designs were generally found along the rim of pots.

Basins are vessels with everted rims and slanted bellies and some vessels had horizontal lugs in the shape of a bridge or a tongue. They were divided into four different types.

Type A: Flat bottomed vessels. They are further divided into flat edged or several corner edged pieces. H302:1 was a red slipped piece of pottery with plant inclusions and the diameter of the mouth was 58cm (Figure 10:9). H225:1 was also a red slipped piece but with sand inclusions and on one side of the belly had a tongue shaped lug. This piece had a diameter of 39.2cm (Figure 10:7). H301:1 was also a sand inclusion type pottery with a red slip and on one side of the belly had a

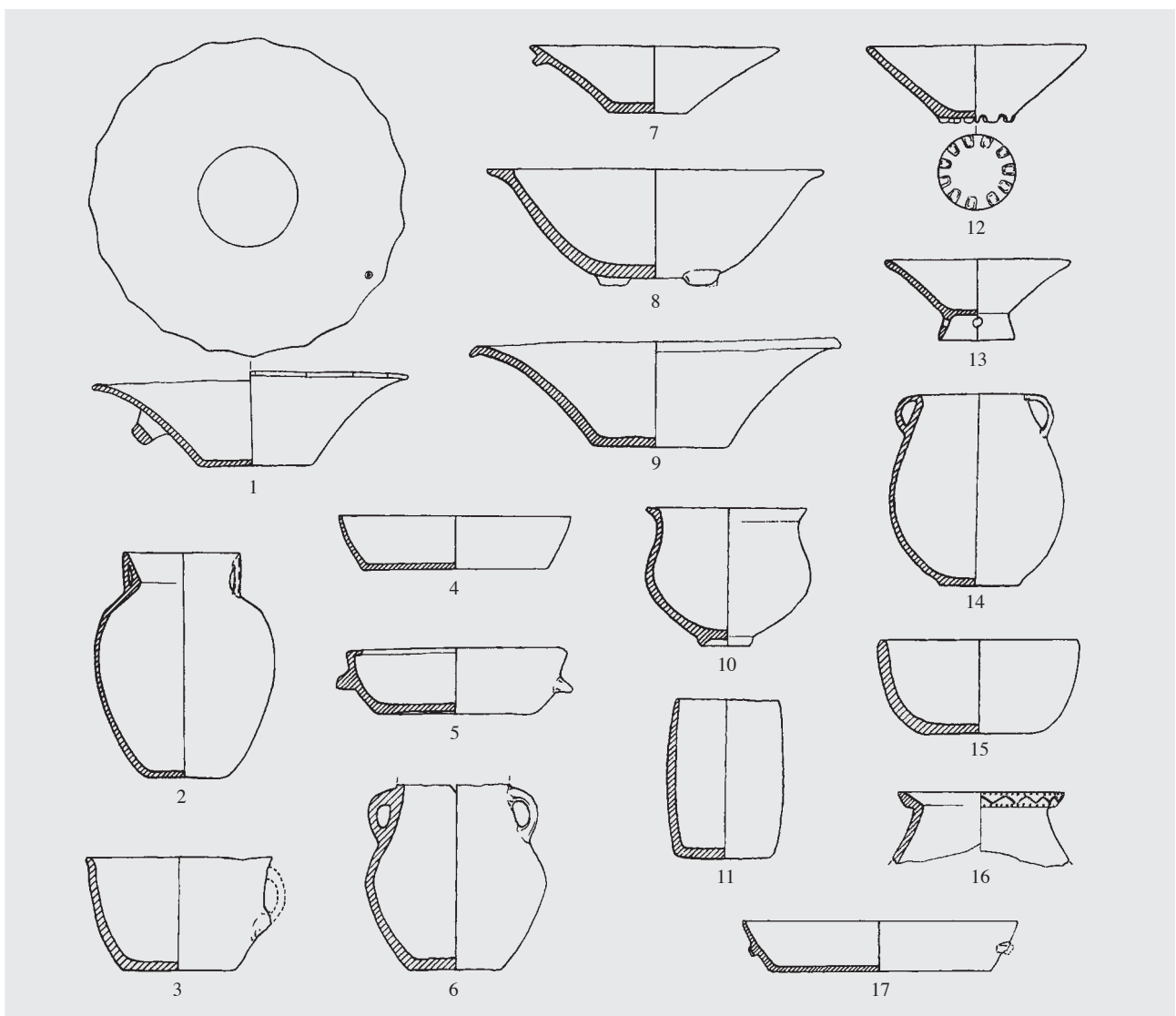


Figure 10. Pottery wares

1. Style Ab basin (H301:1) 2. Style AIII Pot (H226:5) 3. Type B bowl (H428:1) 4. Type A plate (H226:6) 5. Type A bowl (H278:1) 6. Style AII pot (H318:3) 7. Style AaIII basin (H225:1) 8. Type D basin (H391:1) 9. Style AaI basin (H302:1) 10. Type C pot (H174:1) 11. mug (H226:2) 12. Type C basin (T0912⑤:1) 13. Style BII basin (H196:1) 14. Style AI pot (H184:2) 15. Type C bowl (H168:2) 16. Style Bb pot (H221:4) 17. Type B plate (H226:5) (Scales: 3, 5, 6, 8, 10, 11, 15, 16, 1/5; others 1/10)

bridge shaped lug. The rim of the mouth of this piece had 19 curves and underneath the mouth a small hole had been drilled. This piece had a diameter of 44.6cm (Figure 10:1).

Type B: Disc footed vessels. Some were low circular footed vessels. H25:4 was of the plant inclusion type, although it also contained a small amount of sand and was covered in red slip. The diameter of the foot on this piece was 8cm. Some of the disc feet were rather high or had holes carved into them. H196:1 was also of the plant variety with a red slip and its disc foot and was decorated with holes. Its mouth had a diameter of 28.8cm (Figure 10:13).

Type C: saw toothed footed vessels. T0912⑤:1 was pottery with plant inclusions and red slip, the foot of which was sculpted into the shape of 11 teeth. The diameter of the mouth on this piece was 34cm (Figure 10:12).

Type D: small rounded feet. Four small rounded feet were placed on the bottom of the vessel. H391:1 was of the plant inclusion type and its mouth had a diameter of 26.4cm (Figure 10:8).

Pots which had a small mouth, deep belly and flat base could further be divided into three different types.

Type A: Double handed vessels. H184:2 was a piece of the plant inclusion type with a red slip, with an inverted rim both the handles at the level of the mouth and the piece was roughly 28cm high (Figure 10:14). H318:3 also had plant inclusions and a red slip, the mouth of the vessel was damaged, however it had a straight neck and two handles at the level of the shoulder. The diameter of the belly was 13cm (Figure 10:6). H226:5 had a paste with very fine sand inclusions and red slip and was characterized by a wide open mouth, narrow neck; two handles were attached in a level manner to the neck. This piece was 33cm high (Figure 10:2).

Type B: is characterized by rolled or horizontal rim. All of the examples of type B were highly fragmentary. H221:4 had a plant inclusion paste with red slip, a wide open mouth and narrow neck. A design of straight lines and punctured holes was executed on the outside of the rim. The diameter of the mouth was 12cm (Figure 10:16).

Type C: round footed jars. H174:1 was of the plant inclusion type with a red slip and was characterized by a luxuriant mouth, drum shaped belly, and the diameter of its mouth was 11.5cm (Figure 10:10).

Bowl with plant inclusions and red slip. H278:1 has an inverted rim, shallow belly and a slightly concave

base with two lugs and a mouth which is 13.2cm in diameter (Figure 10:5). H168:2 is vessel with an everted rim and a shallow curved belly and flat base which has a mouth diameter of 13.2cm (Figure 10:15).

Plates are characterized by a fine sandy paste with red slip, everted rims and shallow vertical walls and a large flat base. The mouth diameter of H226:6 was 33.2cm (Figure 10:4). H226:5 had long strips of horizontal clay attached to the side of the vessel for form horizontal lug and had a mouth diameter of 39.4cm (Figure 10:17).

Mugs are characterized by a fine sandy paste with a red slip with straight rims, barrel shaped bodies and flat bases. H226:2 was 11cm high (Figure 10:11).

Periodization and Dates

1. The periodization of the lower levels at the site of Shangshan was carried out by examining changes in pottery typology. According to these typological changes we have been able to divide the site of Shangshan into two different periods: early and late. Typical stratigraphic layers of the Early Period can be found in the southern area in levels 8–6 as well as layer 5 in the northern area of the site. The pottery from this period is of the plant inclusion variety and typical forms include the following Type A vessels: the flat bottomed basins H302:1, H301:1, Type B disc footed basins H25:4 and H196:1, Type A double handled pots H84:2 and H318:3, Type B rolled rim pot H221:4 and bowls. Vessels where the base of the pot and the rim area are decorated with saw teeth type incisions, round openwork decorations also already started to appear.

Stratigraphic layers typical of the Late Phase of the site are found in layer 5 of the southern area of the site. Typical pottery includes basins/tray, Type A double handled pots such as H226:5, mugs and Type A flat bottomed basins.

2. Six samples of pottery shards and carbon were collected for C¹⁴ analysis, and the six uncalibrated dates ranged from 9600–8100 BP or 11400–8600 BP after calibration making it the earliest Neolithic site in the Lower Yangtze region.

Conclusion

The form of the pottery at Shangshan is primitive and the types are simple. Type A basins form the majority of the assemblage and none of the cooking cauldrons which are typical of the site of Kuahuqiao (8000 BP) are present. Some scholars believe that the Type A basins may be an earlier variant on the cauldrons which

used heated stones to cook food. A wide variety of chipped stone tools have been found at the site of Shangshan. Millstones and rollers as well as stone balls are in greater numbers than those of later sites and it is likely that this is related to their relatively primitive mode of subsistence.

In the ash contained pottery of the site rice husks, leaves and fragmentary rice husks were found which were intentionally mixed into the pottery fabric. This provides us with evidence of early dehusking of rice and it is possible that the millstone and stone rollers found at the site may have been used for this purpose. The leaves and shafts of the plants were also used as temper and it is possible that these elements of the plants were collected along with the seeds during reaping. Ancient rice farming agriculture appears to have already begun at the site of Shangshan. The large amounts of millstones and rollers as well as stone balls and scrapers and knives make up the majority of stone tools indicating that along with early rice agriculture, hunting and gathering still had an important place in the economic subsistence basis. The site of Shangshan represents a newly

discovered more primitive type in the region, which is nonetheless characterized by the beginnings of early agriculture. Archaeologists have already begun to refer to the remains of this culture as that of the “Shangshan culture.”

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