

Jonstorp M2/M3 and Lake Ringsjön Na

Different Assemblages of Archaeological Material and Perceptions of the Pitted Ware Culture in Scania, Southern Sweden

BY JOEN LEFFLER

Abstract

The main aims and goals of this article are to present two assemblages of the Pitted Ware Culture (PWC) in the province of Scania, southern Sweden. One comes from an inland site named Na, located on the northern shore of Lake Ringsjön. Na was excavated in the 1880s. The other site, Jonstorp, is located in north-western Scania and is a coastal site. The sites have historically been connected by a river, Bråån, which makes them good subjects for studying to the use of inland and coastal sites of the PWC. Much of the economy of the sites complement each other, even though there are some differences in hunting, lithic technology and pottery.

The secondary aim of this article is to present how archaeological assemblages can be perceived in different ways due to statistics. During my work with this article I discovered quantities of formerly unknown material from the Na site, changing the statistics. This is also true regarding Jonstorp. The large assemblage excavated in the 1970s is included here, which alters the known statistics. The problem is illustrated using projectile points as an example.

Introduction – the aim and the archaeological sites

The main aim of the article is to take an in-depth look at two different site locations of the Pitted Ware Culture (PWC) in southern Sweden. One is an inland site, located by Lake Ringsjön in central Scania, Southern Sweden, and the other is Jonstorp, located in north-western Scania (Fig. 1). The two locations were historically connected by a river, Bråån, which makes it intriguing to think about possible direct connections between the sites. To go

into this in more depth, I focus on questions of seasonal activities, tool manufacture and use, diet, and more.

When working with this article and examining the assemblages I noticed that much of the statistics in previous publications was incorrect because only parts of the assemblages from the two sites have been considered. For example, in 2012 I discovered several crates of previously unregistered pottery

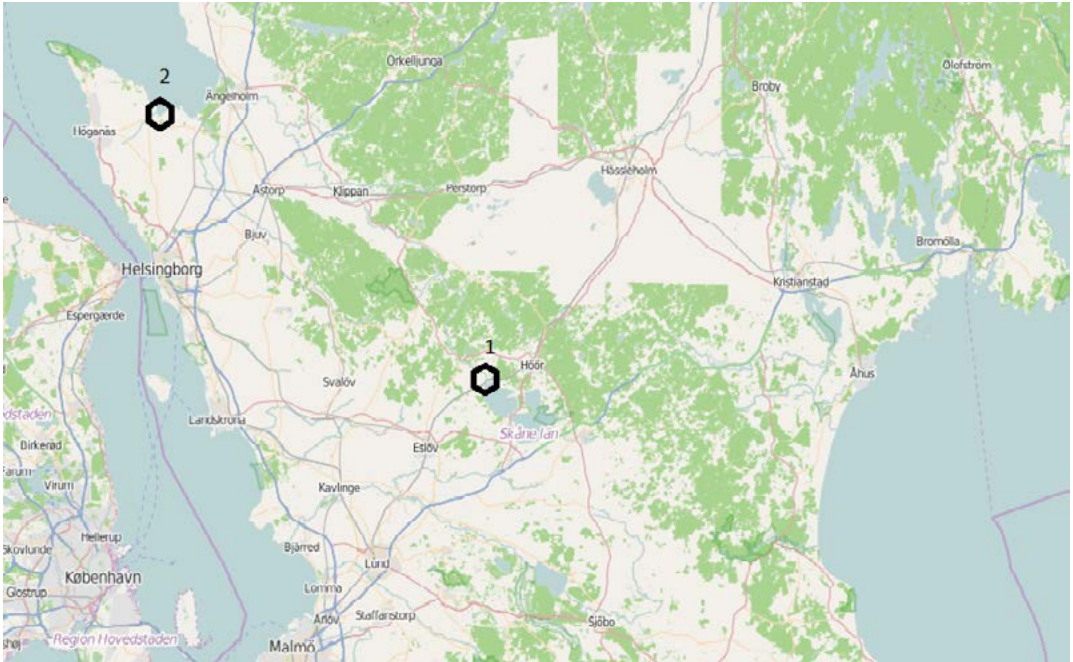


Fig. 1. A map of Scania showing the location of Na at the outlet from Lake Ringsjön (1) and Jonstorp (2).

from Lake Ringsjön at the Historical Museum in Stockholm. Also, the large assemblage of excavated material from Jonstorp from the first part of the 1970s is included in this study, along with the more famous collections by Oskar Lidén (Lidén 1939)

In many respects, the sites have similarities and differences, some of the most important of which may be related to modern cultural history. Therefore it is important first to present the two sites from the perspective of cultural and material history. Then I present what was rediscovered through my work with this article. I do not intend to give a thorough presentation of the material previously presented by Althin (Althin 1954, 8, 95–96).

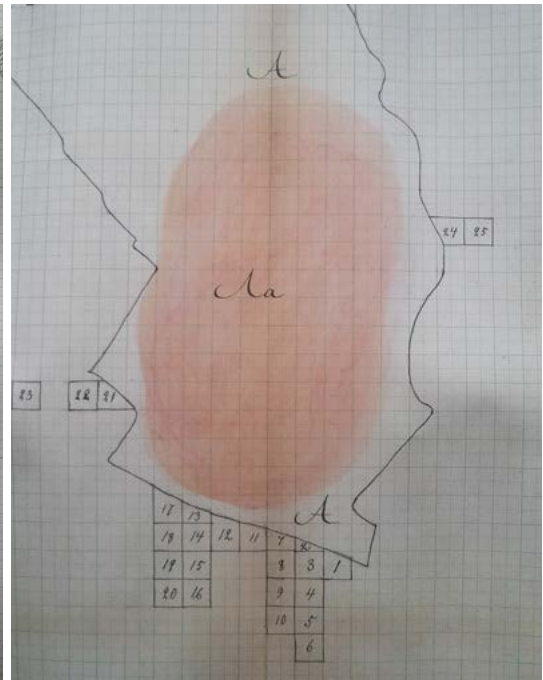
The site at Lake Ringsjön, Na

The site is located at the northern part of the lake, close to the Ageröd and Rönneholm peat bogs, where the third lake in the Ringsjö complex was located (Fig. 1)

The site at the outlet from Lake Ringsjön, named *Na*, was surveyed and excavated in the late 1800s, probably some time between 1884 and 1887, mainly by two brothers of the Reventlow family (Figs. 3 and 4). This was done when the lake was being lowered for farming purposes. Pottery styles and the composition of the lithic material indicate that



Fig. 2. Potshard with human figures. Photo by J. Leffler.



Figs. 3 and 4. Reventlow's archive maps of the excavated area around Na, Lake Ringsjön. Unfortunately it is not possible to pinpoint the exact location.

the site is contemporary with Jonstorp's M2 and early M3 phases, dated to around 2400–2200 BC. (No ¹⁴C dates are available from the site at Ringsjön, however.) The assemblage from Na contains thousands of ceramic and lithic artefacts. About half of the pottery was “rediscovered” through the work with this article. Several wooden crates filled with potshards were found at the storage facility of the Historical Museum in Stockholm. These crates had probably not been opened since the excavation in the 1800s. In total, the crates contained 3,407 potshards, 917 of which had some form of ornamentation, ranging from simple markings to human figures (Fig. 2), but generally simpler ornamentations such as lines and pits.

The lithic material from Na contains the standard type fossils for the PWC, e.g. cylindrical cores, four-sided axes, scrapers, etc. No debitage was collected during the

excavations. There are indicators of reused and curated items, but not to the same extent as in the material from Jonstorp (Leffler 2011).

The osteological material from Na is not a good indicator when it comes to determining what was hunted for food. There are just a few pieces of bone, all of which are waste material from the production of bone tools (e.g. Andersson 2012.)

Little published information about the site at Ringsjön is available. Reventlow published two articles in the late 1800s/early 1900s on the subject, presenting what the brothers found when excavating and surveying the site (Reventlow 1886, 1905). In modern times, only a B.A. thesis from the 1980s covers the material from Ringsjön. Unfortunately, the student did not have access to all the material when he wrote his thesis, making the presentation of the material incomplete (Åkesson 1984).

The descriptions made by Reventlow of the site at Na are interesting. Among other things he discusses the possibilities that the people on the site might have lived on wooden floors right on the shore of the lake (Reventlow 1886). He thinks that this is feasible because of the wooden stakes found in the water when the lake was lowered. This description leads to thoughts of a pile dwelling like that at Alvastra in Östergötland, for example (Browall 2011). Unfortunately, Reventlow's descriptions of this are brief and no other documentation was found in the archives.

Another interesting thing that was found in the archives is maps of the excavated material from the site. Some of the artefacts had numbers and other markings on them, probably relating to a system for determining where the finds were made. However, no list of finds from the excavations or other information that could reveal what these markings are was found.

The sites at Jonstorp, M2, M3 and M4

Jonstorp is located in the southern part of the modern-day Kullen peninsula in north-west Scania. During the period of the PWC, this part of Kullen was an island totally separated from the mainland. The location is far from the contemporary monumental landscape and lacks evidence of permanent habitation (Jennbert 2014).

The site at Jonstorp discussed in this article consists of three stages, named M2, M3 and M4 (Fig. 5). There are also other PWC sites in the general area around the former island that is today's Kullen. One example of this is the site "Rä" a few hundred metres away. This site was excavated by Malmer in the 1950s (Malmer 1969). The material from M2, M3 and M4 consists of three main components, namely, the surface finds collected at M2, M3



Fig. 5. The location of the Jonstorp sites (Lidén 1939).

and M4 by the schoolteacher Oscar Lidén during the first decades of the 1900s (Lidén 1939), material from smaller excavations at M2 and M3 in the 1960s led by P.-U. Hörberg and lastly the large assemblage from the excavations in the 1970s led by Anders Wihlborg (Wihlborg 2005). To date, the material from the excavations in the 1970s is little known and very seldom referred to in the literature, even though it is the largest component in the total material from the sites at Jonstorp.

In 2010–2011, the Department of Archaeology and Ancient History at Lund University managed a project called *Storehouse Archaeology*. A part of the project involved repacking and establishing a finds-list for the excavated material from Jonstorp from the 1970s. The list of finds consists of 7,426 items and represents about 1,500 kilograms of material (Leffer & Tornberg 2011)

The excavated material consists of pottery, lithics and osteological material. What stood out in the assemblage of pottery was the large amount of clay discs and parts of clay discs, and the fact that much of the pottery



Fig. 6. Clay disc from Jonstorp, diam. c. 25 cm.
Photo by J. Leffler.

had been fragmented deliberately. Much of the pottery has decoration such as pits, lines, and other simpler markings (Fig. 6), but also advanced ornamentation such as leaves and other images. Only one unclear, and somewhat speculative, human figure has been noted on a potshard (Wyzormiska 1975, 130)

The lithic material is composed of type fossils of the PWC, although intact axes, especially in Senonian flint, are uncommon mainly because they were reused as cylindrical blade cores. This reveals itself in the fact that many of these cores have clear polished facets. Other artefacts, mainly blade-based, display the same phenomenon (Leffler 2011).

The osteological material from Jonstorp's M2 and M3 phases consists of about two kilograms of mostly fragmented bones. Even though the material is not large, it displays great diversity. Most of the bones are from terrestrial animals, with goats and sheep having some over-representation. Other species present are pigs and various herbivores. Since the area around Jonstorp was, and is, rich in seal, much of the activity on the site has been interpreted as seal hunting but the

osteological material does not display this as a main source of food (Olson, unpublished). A possible explanation for this could be that domesticated or semi-domesticated animals were brought to the island and used as a food source during the sealing season. This could also explain the representation of transverse arrowheads in the assemblage of projectile points from Jonstorp M3, as these are thought to be for hunting and killing smaller terrestrial animals (Larsson 1983, 22 ff.).

Differences and similarities of the sites

Regarding assemblage compositions much is alike but a few major differences are apparent. The main differences lie in what is present and absent on the two sites. In the ceramic material from Jonstorp, many clay discs are present while these are totally absent in the ceramic material at Na. Human figures and other interpretational images, such as animals, leaves, etc. on potshards are present at Na but lacking on the pottery from Jonstorp. More common ornamentation such as pits, lines, zigzag shapes, etc. are similar and present on the pottery from both sites. A very interesting observation, made by Reventlow and interpreted as being part of a technique to repair pottery, is that many shards have holes drilled into them (Reventlow 1889). This occurs on pottery from both sites. The symbolism on the pottery from the sites differs a great deal. The pottery from Jonstorp seems to have a more direct practical and secular use, whereas the pottery from Na displays a much wider variety of interpretations in its decoration.

There are many similarities in the lithic assemblages, such as the toolkit and the general lithic technology used to produce it. Massive reuse occurred at Jonstorp, however. Intact axes, especially those made of Senonian flint,



Fig. 7. Spent blade core with polished facets from Jonstorp. Photo by J. Leffler.



Fig. 8. Blade core from Na. Photo by J. Leffler.

are very rare and the only known intact axe of Senonian flint is burned. Many cylindrical blade cores and blade-based artefacts have polished surfaces on them, showing that most axes in Senonian flint were reused as blade cores (Fig. 7). The reuse, probably reflecting a concern about the availability of raw material, also manifests itself in the many curated items. A large number of axes, projectile-points, scrapers, and other tools, have been retouched, reworked and resharpened.

Cylindrical blade cores are made and used in a slightly different way at Na (Fig. 8). Many of them have a “reverse side” covered with cortex and that side was deliberately not used to produce blades, although it would have been fully possible to do so. Earlier stages of cylindrical cores were also struck at very different and sometimes particular angles, in some cases. By doing so, and keeping the “reverse side”, the raw material is used in a very efficient way, rather than removing big flakes to make the cores symmetrical and cylindrical from the start. The thinner and more traditional cylindrical cores should be interpreted as spent cores; curated tools also

occur at Na, but not nearly to the same extent as at Jonstorp.

The problems of interpretation

When considering the assemblages of artefacts from both sites, one sees notable differences and similarities. For example, pottery, lithics and type fossils of the PWC are present on both sites although they show differences in economic and cultural display. The assemblage from Jonstorp shows a much more technical purpose than the assemblage from Na. This manifests itself, amongst other things, in the many curated tools and the scarcity of interpretational images on pottery decoration. In the assemblage from Na the reverse is true. In addition to the century-long debate about what the PWC really is, in terms of local groups, etc. (e.g. Edenmo *et al.* 1997), I would like to point out the differences between mainly *technical* and mainly *cultural* sites. I believe this is a very important difference when categorizing and interpreting sites of the PWC.

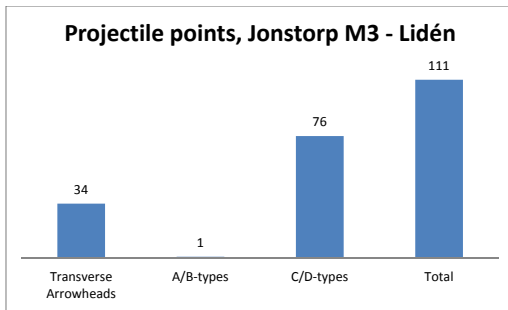


Fig. 9. Distribution of projectile point types at Jonstorp M3 from Oscar Lidén's collection.

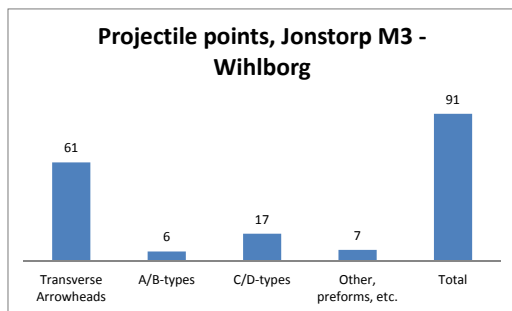


Fig. 10. Distribution of projectile point types at Jonstorp M3 from Anders Wihlborg's excavations 1970–72.

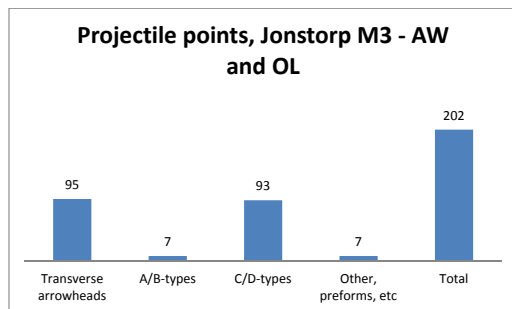


Fig. 11. Total statistics on projectile points from Jonstorp M3. AW = Anders Wihlborg, OL = Oscar Lidén.

Perception of archaeological assemblages – a modern problem

The two presented sites are very good examples of how statistics can be misleading when one does not look at the assemblages as a whole. In research and literature, with few exceptions (e.g. Carlie 1986), only Lidén's collection is presented from the sites at Jonstorp. Often the most abundant types and classes of an object are used in typology and when describing classes and creating type fossils that define a culture. In this case, according to typology, A/B and C types of PWC projectile points should be the most abundant, and these have generally been seen as type fossils for the PWC in the area (e.g. Becker 1954). The typology is correct when one looks at parts of the total assemblage from Jonstorp. The statistics differ when we look at the whole assemblage, however. I am going to illustrate this problem using statistics on projectile points from Jonstorp M3 as an example. The quantities are as follows:

As fig. 9, based on Lidén's collection, shows, A/B and C/D types (77 in total) are most common, which is in line with the typology and definition of type fossils of the PWC in the area (Becker 1954, 208 ff.).

Fig. 10 shows totally different statistics than fig. 9. In the excavated material from the 1970s, the most abundant type is the transverse arrowhead (61 in total).

Fig. 11 shows the statistics for the whole assemblage of arrowheads from M3, combining the material from Lidén's collections and the material excavated by Wihlborg. This changes the statistics even further, showing that C/D types are common, A/B types are not as common as portrayed in the typology, and that transverse arrowheads are the most common type of projectile point in the assemblage from Jonstorp M3. The big question is how this should be interpreted, since transverse arrowheads are seldom even a

topic when talking about the PWC. Certainly, the statistics are not in line with the typology, at least regarding the site at Jonstorp.

On a final note, one could of course argue that smaller implements such as transverse arrowheads are easier to find when excavating than when doing field surveys. Despite this, more arrowheads are presented in Lidén's surface-collected material (111 in total), than in the material from Wihlborg's excavations (91 in total).

Conclusion – relations between the sites

It is, of course, very hard to draw clear parallels between two different sites. What we know are the similarities and differences between the archaeological material from the sites, and the fact that the outlet from Lake Ringsjön was connected with a historical river that had its outlet at the bay of Skälderviken, where Jonstorp is located, which, at least in theory, would make travel easy between the two sites.

We know about the differences and similarities in the archaeological record. Many clay discs are found in the material from Jonstorp but are absent in the material from Na. The opposite is true for human figures and ornamentation on pottery. There are several fragments at Na, but they are basically absent at Jonstorp. What this means is, of course, also hard to determine, other than that different symbolisms were used at different locations in the PWC.

The lithic compositions from the sites show similarities in the toolkits produced, such as polished thick-butted, four-sided axes, blades, projectile points, scrapers, and other type fossils of the PWC. Some differences in technology and technique can be seen. Examples of this are how the cylindrical blade cores are made, and the massive amount of reused and curated items at Jonstorp, absent at Na.

The osteological material from Jonstorp provides evidence that the marine hunting was not mainly for food. This creates a clear gap in the usage of the site at Jonstorp as a year-round settlement. The same applies, for example, to parts of the lithic industries at Na. Even though the differences and similarities of the sites do not connect the two sites per se, they reveal differences in inland and coastal sites, and how they were used seasonally.

Final thoughts

In this article I have deliberately avoided the age-old question of defining what the PWC really is (e.g. Edenmo *et al.* 1997). I am a firm believer that all available archaeological assemblages should be included if the aim is to present statistics. This has not been the case in the past with the two sites presented in this article. Although these collections have been available in the museum storehouses for around 120 and 40 years respectively, still only parts of them are commonly known and referred to in the literature about these sites. As shown in this article, including the whole assemblage of certain tools, in this case the projectile points, considerably altered the statistics.

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References

- Åkesson, Å. 1984. Gropkeramisk kultur i centrala Skåne. B.A-thesis. Lund.
- Andersson, E. 2012. *Specialiserad eller allmänkunnskap? En experimentell studie av benhantverk under mesolitikum*. B.A. thesis, Gotland.
- Browall, H. 2011. *Alvastra påbyggnad. 1909–1930 års utgrävningar*. Stockholm.
- Becker, C. J. 1954. Die mittelnleolitischen Kulturen in Südsandinavien. *Acta Archaeologica* XXV.
- Carlie, A. 1986. Om gropkeramisk kultur i Skåne, speciellt Jonstorp. In Adamsen, C. & Ebbesen, K. (eds.), *Stridsøketid i Sydsandinavien*. Copenhagen.
- Edenmo, E., Larsson, M., Nordqvist, B. & Olsson, E. 1997. Gropkeramikerna – Fanns de? In Larsson, M. & Olsson, E. (eds.), *Regionalt och interregionalt. Stenåldersundersökningar i Syd- och Mellansverige*. Stockholm.
- Jennbert, K. 2014. The seashore – beyond monumentality. The case of Pitted Ware coastal sites in southern Sweden. In Furholt, M., Hinz, M., Mischka, D., Noble, G., Olausson, D. (eds.), *Landscape, Histories and Societies in the Northern European Neolithic*. Frühe Monumentalität und soziale Differenzierung 4. Bonn.
- Larsson, L. 1983. Skateholmsprojektet. Jägare – Fiskare – Bönder. *Limhamn* 1983.
- Leffler, J. 2011. *Om det litiska materialet från Jonstorp M2 och M3*. Available at Academia.edu.
- Leffler, J. & Tornberg, A. 2011. Teknisk rapport – Jonstorp, M2–M3. 1970–72. Jonstorp sn. Höganäs kn. LUHM-30369. Historical Museum, Lund University Archives. Lund.
- Lidén, O. 1939. *Sydsvensk stenålder 2. Belyst av fynden på boplatserna i Jonstorp. Gropkeramiskulturen*. Lund.
- Malmer, M. P. 1969. Gropkeramiksboplatzen Jonstorp Rä. *Antikvariskt arkiv* 36. Stockholm.
- Olson, C. (Unpub.) *Osteologisk Rapport. Benmaterialet från JONSTORP Raä 8, Jonstorps socken, Skåne*. Available at Historical Museum, Lund University Archives. Lund.
- Reventlow, C. D. 1886. Fynden från Ringsjön. *Kungl. Vitterhets-, historie- och antikvitetsakademins månadsblad*. Årg. 18. Stockholm.
- 1905. Ringsjöfynden. *YMER* 25. Stockholm.
- Wihlborg, A. 2005. Teknisk rapport – Jonstorp M2, M3, M4. Historical Museum, Lund University Archives. Lund.
- Wyszomirska, B. 1975. Människofigurer på den skånska gropkeramiken. *Fornvännen* 70.