

Notes and News

THE HORIZONTAL LOOM AT NOVGOROD

In her fascinating presidential address to this society in 1968 Professor Carus-Wilson, it will be recalled, discussed a cloth, made at Stamford, Lincs., called variously *haubergié*, *halbergetum*, etc., the name of which occurs in documents of a limited period from the mid 12th to the early 13th centuries. She made the very ingenious suggestion that this name had arisen because of the resemblance of the diamond twill weave of the cloth to the ring- or chain-mail in a hauberk (as depicted in contemporary illustrations). She further suggested that this cloth must have been woven on a vertical loom. The name of the cloth would have been coined for the product of this obsolescent loom when it was first challenged by the horizontal loom and, when this finally supplanted its rival in the early 13th century, the cloth and its name disappeared. It so happens that 1968 saw the publication of what is one of the most impressive bodies of archaeological evidence on medieval looms, and it is to this that we now turn.

It will be recalled that the great excavations at Novgorod in 1951-62 produced thousands of wooden objects preserved in the waterlogged conditions, the publication of which has been awaited with keen impatience by medieval archaeologists. The undecorated wooden objects have just been published by that redoubtable master of technology, B. A. Kolchin.¹ His fifth chapter deals with instruments for preparing wool and vegetable fibres, for spinning and weaving, lathes and lifting tackle (pulleys). Looms are dealt with on pages 68-72. No parts of the frame of any loom were recognized, but six working parts of horizontal looms were identified by Kolchin: treadles (58 examples), oval shuttles (24), heddle-rods (over 20) and three parts for which I do not know the English term, *sobachki* (over 40), *yurki* (over 81) and *traversi* (over 160). He has some doubts about the last (p. 79) but with the other five the identification is confident (the objects are amply illustrated in the report). In other words over 200 parts of horizontal looms were found and all occurred in the upper half of the deposit from level 15 upwards (fig. 56). The levels of the Novgorod streets, it will be remembered, are dated exactly by dendrochronology, street level 15 having been laid in 1224 and covered in 1238. The horizontal loom, therefore, came into general use at Novgorod in about 1220. Allowing that the introduction of this device into north Russia was possibly rather retarded, the middle or late 12th century might well be the corresponding date in this country.

Except for the rather curious shuttles (?), fork-shaped at either end (p. 68), which Kolchin thinks may have been used with a vertical loom (but probably had other uses) and which occur between levels 7 and 25, no trace of any kind of vertical loom was found (p. 72), although it must surely have been in use in the early period. Presumably the pieces of disintegrated frames are unrecognizable and the working parts were not so specialized as in the horizontal loom. The familiar loom-weights that are so common on iron-age, Roman and early medieval sites in this country do not occur in the 12th century, and indeed it is their absence which has caused some archaeologists to hold that the late use of a vertical loom, as Professor Carus-Wilson's thesis requires, is untenable. Possibly the 12th-century vertical loom did not have weights but, instead, a horizontal bar at its base, like the 4th-century example depicted in the Virgil manuscript in the Vatican Library.² At all events the absence of any trace of a vertical loom

¹ B. A. Kolchin (in Russian), *Antiquities of Novgorod: Wooden Objects* (Collection of Archaeological Sources, Issue E1-55, Institute of Archaeology, Academy of Sciences of the U.S.S.R., Moscow, 1968). The street levels in the excavation are numbered from 28 at bottom to 1 at the top.

² *A History of Technology*, II (ed. C. Singer, E. J. Holmyard, A. R. Hall and T. I. Williams, Oxford, 1957), 211. Surviving modern vertical looms in Africa, India and the Americas make use of a horizontal warp beam at the base.

at Novgorod, where wood survived, causes the lack of evidence in this country to lose a good deal of its significance. Provided that Professor Carus-Wilson's brilliant suggestion that the name refers to the web and (more doubtfully) that this was produced on a vertical loom, the chronology for the period of change would seem to fit.

Before we take our final leave of the wooden objects from Novgorod it might be helpful to run briefly over the other chapters in the report, since they offer a panorama of a sector of medieval life that we rarely see. The author, B. A. Kolchin, in earlier years dealt with the stratigraphy of the site, the ironwork and the dendrochronology.

In the Introduction to this book the difficulties of preserving the wood are described; no real solution, other than continued soaking, was found. The most difficult problem was identification: unless a close parallel can be recognized in modern folk-culture the purpose of an object is not easy to decide. Fortunately folk-culture has been intensively studied in Finland and Scandinavia and there are large collections in the state museums of Estonia, Lithuania and Latvia, apart from survivals in the district of Novgorod itself.

The main text consists of six chapters. The first deals with timber in the area, how it was selected for different objects (table on p. 12), tools for woodworking and the carpentry joints used. Certain woods were preferred for certain work, e.g. maple and ash for carved and turned vessels. There were two imported woods: larch used for (and probably brought in as) ships' timbers, and box imported from the Caucasus for combs (interrupted in the 12th century, probably by the Polovtsy, fig. 73). The second chapter deals with 'universal tools': shovels (baker's; digging-spade; snow; for dry fluids), rakes, fishing-tackle, etc. The third chapter deals with receptacles: stave-built, lathe-turned, carved, hollowed-out, birch-bark and various kinds of basketry. Something over 1,150 staves were found of vessels ranging from the size of tankards, through tubs, vats, churns to barrels. One realizes why our medieval sites appear so markedly poorer than Roman ones, where, instead of perishable wood, the equivalent storage and table vessels were made of earthenware (e.g. amphorae). Indeed, looking at the serried ranks of silhouettes of tableware (pls. 15-21), it is a shock to realize that they are not Roman earthenware but medieval lathe-turned, wooden vessels!

The fourth chapter deals with transport. Although in 1966 one medieval cart-wheel was found at Novgorod, Kolchin believes that, as up to the present century in the eastern part of the province, land transport of goods was by sledge all the year round and wheeled vehicles were not used. Many fragments of runners came to light, together with parts of the superstructures, which allowed reconstruction of several kinds of sledge of varying capacity and speed (fig. 45). Twelve pairs of wooden hames from horse-collars were found from level 27 (972-989) upwards which will interest those interested in the important question of medieval horse-harness. There were several skis, which apparently were the same shape for each foot, like modern skis, but unlike Scandinavian medieval ones. A great many parts of boats occurred, ranging from dug-out canoes to massive rivercraft, 100 ft. long, although the remains are scanty for reconstruction (fig. 50). The fifth chapter has been discussed. The sixth deals with domestic articles: yokes for carrying buckets, churn-staffs, candlesticks, cradles, an interesting hat and so on, as well as musical instruments. Apart from the metal jew's harp, three types of wooden musical instrument have been found in the city: *gusli* (a wooden multi-stringed instrument that was plucked), *gudok* (a sort of fiddle), and pipes.

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MEDIEVAL CHURCH CRUETS IN POTTERY (PL. XXIII, E; FIG. 38)

Cruets were vessels to hold the wine and water for the Mass, and were used during the service for mixing them in the chalice. As might be expected, the examples mentioned in documents are usually the more sumptuous vessels of gold, silver, crystal or enamel,³

³ Cf. V. Gay, *Glossaire archéologique du moyen âge* (Paris, 1883), s.v. 'burette'; *Antiq. J.*, xviii (1938), 49, notes.