ARCHAEOLOGY OF THE LAKE MÄTÄJÄRVI

A. PIHLMAN, M. IKÄHEIMO and T. TUOVINEN

Provincial Museum of Turku, Kalastajankatu 4
SF-20100 Turku

Introduction

The Lake Mätäjärvi in Turku, SW Finland, was originally situated in the town centre a couple of hundred metres southeast of the cathedral and it was gradually buried under the growing settlement. The excavated areas were situated partly on the shores of the ancient lake and partly in the area of the lake itself on the outskirts of the mediaeval town. The oldest settlement grew around the cathedral on the opposite side of the lake in the late 13th century (e.g., Gardberg 1969).

A wide interdisciplinary organization was formed for the Mätäjärvi Project (see Table 1.) in order to study the development of the lake and to analyse the problems from several points of view (see Table 2).

Table 1. Interdisciplinary organization of the Mätäjärvi Project.

Field of research	Person	Institute
Archaeology	A. Pihlman	Provincial Museum of Turku
	M. Ikäheimo	»
	T. Tuovinen	»
History	J. Kostet	»
Palaeolimnology	V.-P. Salonen	University of Turku, Quaternary Geology
	M. Räsänen	»
	A. Terho	»
Palynology	I. Vuorela	University of Helsinki, Palaeology and Geology
^{14}C -datings	H. Jungner	University of Helsinki, Radiocarbon Dating Laboratory
Botany	T. Lempiäinen	University of Turku, Biology
Zoology	R. Niemi	»
Osteology	T. Vuorisalo	»
	T. Virtanen	»

Excavated Areas

The field work of the Mätäjärvi Project was carried out in the summer 1982. The three excavated areas were situated within one plot. They could not be chosen freely but were confined to the site of the building to be constructed on the plot. Provincial Museum of Turku had carried out a small excavation in the same premises already in 1975. Thus there were in all four excavated areas (A, B, C, and -75) in the plot.

Table 2. Problems and analyses of the Project

Problems	Analyses
— Did the lake exist? Where was it situated?	— historical documents — archaeological excavations — quaternary geological borings
— When did the lake exist?	— ^{14}C -datings — archaeological datings — quaternary geological datings
— How did the lake develop and change?	— sedimentology and mineralogical analysis of sediments — microfossil analysis — macrofossil analysis — archaeological reconstruction of lake shore
— How did the natural and cultural environment of the lake change?	— socio-historical analysis — charred-particle analysis — palaeolimnological interpretation — osteological analysis — seed analysis — pollen analysis — oribatid mites analysis — archaeological analysis

The total thickness of the cultural layer was about 3.5 m and it varied very little in separate areas. The uppermost layers were removed mechanically by power shovel and with spade. The archaeological excavation was concentrated on the lowest layers. In the area »-75» this meant the layers accumulated before the turn of the 18th and 19th centuries, and in the areas A, B and C the layers accumulated before the end of the 17th century. The oldest cultural layers in the areas date back to the 15th century.

In addition to the excavations in the plot in question quaternary geological borings were done within four blocks in order to find out the width of the lake sediments. Since the beginning of this century some archaeological observations have been done in connection with several earthmoving works in the Mätäjärvi area. The value and reliability of these observations varies considerably (Pihlman and Tuovinen 1984). In 1983—84 some archaeological observations were also done on the shore next to the cathedral in connection with a sewerage work.

Lake

The Lake Mätäjärvi was isolated from the Baltic Sea c. 500 A.D., and its original size was c. 3 ha. The lake sediments of the years between 600 and 1250 A.D. had been removed in the late 13th century. (See Salonen et al., this volume.) At that time a wooden open channel (krooppi) was built in what probably was the original natural outlet. The first cultural layers accumulated on the southwestern shore in the 15th century. The lake in the excavated areas dried up completely c. 1700 and was built up.

Artefacts

The main groups of archaeological finds in the late mediaeval layers are leather, pottery, wooden artefacts, and pieces of textile.

The leather material contains 5917 pieces; 85 % are waste material and 15 % are parts of leather footwear. Most of this material comes from the mediaeval layer. The maximum amount of leather in the cultural layers is more than 400 pieces/m^3 (c. 400

g/m³). Judging from the uppers of shoes found there were at least 20 laced shoes in the late mediaeval layers; moreover a strap of a wooden overshoe (patinus) was found. The length of the soles varies between 13 cm and 26 cm. The technique of cutting and the seams do not vary. Typologically the shoes can be dated to the 14th and 15th centuries. The morphological analysis of the waste material suggests that the cutting technique did not change essentially from the Middle Ages to the early 17th century, when a shoemakers' guild was already founded in Turku.

The number of pots grows after the late mediaeval layers and most pottery has been found in the 18th century layer. The mean quantity of pots is 0.4/m³ of sieved soil in the late mediaeval layers; 1.9/m³ in the layers dating to c. 1520 — c. 1700; 5.0/m³ in the 18th century layers. Only a few pots were found in the late mediaeval layers which belong to the groups BI:1, BII:3, BII:4, CII:1, and CII:2. (Of the cathegories see Broberg, B. and Hasselmo, M. 1981). The largest group of pottery types is BII:4 (i.e., younger redware) already in the late mediaeval layers. Its number grows in younger layers being almost 75 % in c. 1520 — c. 1700 and more than 85 % in the 18th century.

The most frequently found wooden dish in the late mediaeval layers is a small plate made of staves with two hoops which appears sporadically even in the 16th century layers. The most common mediaeval type of textile is brown woolen cloth in plain weave (tabby). In the younger layers twills and satin were also found. In the post-mediaeval layers flax as well as other fibers begin to appear.

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