

WHAT DID THE ORDER'S BROTHERS EAT IN THE KLAIPĖDA CASTLE? (THE HISTORICAL AND ZOOARCHAEOLOGICAL DATA)

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Abstract

Built in 1252 by the Livonian Order and later passed over to the Teutonic Order, the Klaipėda castle (German – Memelburg) was the northernmost castle of the Order in Prussia. For both geographical and political reasons, it was separated from the hinterlands of the Order's state, making its survival strategy here specific. This article analyses the zooarchaeological material found during the 1997-1999 archaeological excavations and dated to the 14th-17th centuries.

The analysis of the historical data and zooarchaeological material showed that in the 14th-17th centuries, the inhabitants of the Klaipėda castle (the Order's brothers, their servants, the outwork's artisans, and the townspeople who hid in the outwork) reared and slaughtered domesticated animals, hunted large game and consumed its meat, processed cheese, ground grain, drank mead and ale. The bulk of the meat consisted of beef, mutton, and pork, as well as goats' meat starting 1434. An examination of the species and number of bones of domestic and wild animals in Klaipėda's castle shows that in all of the Klaipėda castle time periods analysed, differences were found between the historical source information and the zooarchaeological collection. Domestic animal bones dominated in the latter, especially that of ruminants (cattle, sheep, goats); pigs comprised the second group according to quantity. The growing quantity of small ruminants (sheep, goats) starting 1434 also is reflected in the zooarchaeological material; from the 16th to 17th centuries, the number of bones of these animals doubled. The amount of riding horses markedly grows in the inventory books starting the middle of the 15th century, and this also is confirmed by zooarchaeological material. When comparing the results of the zooarchaeological material's analysis with the known 14th-16th century inventories of Klaipėda's castle in which there are data regarding the domestic animals (cattle, sheep/ goats, horses, pigs) reared for the castle's needs and the food eaten by the castle's inhabitants, changes are observed in the faunal species and amounts of the zooarchaeological material that post-date 1521, when 31.25% consists of pig (*Sus suis*) bones, while the number of species and bone counts of large wild animals (aurochs/ European bison, elk, red deer) and fur-bearing animals (beaver, bear) grows significantly (from 5.5% to 22.92%). Various kinds of fish caught in the sea near Klaipėda and in the Curonian Lagoon held an important place in the diet of the castle's garrison. Fowl comprised only a small part of the food.

Key words: Teutonic Order, Klaipėda castle (Memelburg), zooarchaeological data, Lithuania.

Introduction

Archaeological excavations began at the Klaipėda castle site in 1975 and still continue (with breaks). V. Žulkus headed the excavations at the site of the former German Order's castle until 2003. The excavation data were used in a book published in 2002 (Žulkus 2002), however, the Klaipėda castle site's zooarchaeological material was discussed only in fragments in this book. This article analyses the zooarchaeological material found during the 1997-1999 excavations. A large part of the excavated territory in those excavations consisted of the 14th-15th century's outwork.

Built in 1252 by the Livonian Order and later passed over to the Teutonic Order, the Klaipėda castle was the northernmost castle of the Order in Prussia. For both geographical and political reasons, it was separated from the hinterlands of the Order's state, making its survival strategy here specific. There are comparatively many data from historical sources about the diet of Klaipėda castle's inhabitants, however a certain part of the archaeological finds – the actual animal bones –

had not received much of the investigators' attention until now.

We trust that the research data of the archaeozoological material that dates from the last quarter of the 14th century to the beginning of the 17th century will help to more precisely establish the dietary structure of the Order's castle in Klaipėda, to better understand the peculiarities of the economy and diet, and to evaluate the significance of hunting and fishing in the castle's way of life. The research results of the osteological material presented in this article will supplement our knowledge of the lifestyle of Klaipėda castle's inhabitants and townspeople. Moreover, the research constitutes good comparative material of the lifestyle, dietary commonalities and peculiarities of the castles founded by the Order in its conquered territories.

Methods

The territory excavated in 1997-1999 was in the north-western part of the castle site where there had been an

outwork as well as castle's and outwork's fortifications in the 14th-15th centuries. The cultural layer in the excavated area was up to 3.5 meters thick. Many wooden constructions were found in the cultural layers: remains of buildings, wooden pavement, remains of wooden defensive fortifications (Žulkus 1998; 1999; 2000). The cultural layers were well distinguished stratigraphically and it was possible to date the cultural layers dendrochronologically (Brazauskas 2000). In this way, comparatively precise dates were obtained of the layers from which the bone material researched in this article was collected. The fairly well defined chronology of the layers enabled a comparison of the zooarchaeological material's research results with the known 14th-16th century inventories of the Klaipėda castle which contain information regarding the domesticated animals reared for the castle's needs as well as the food consumed by the castle's inhabitants.

The bones excavated from the Klaipėda castle are dated by layer and divided into periods. The very earliest bones belong to the last quarter of the 14th century (post-1365-1377). The bones dated to the 15th century are divided into two groups: the bones of the first half and middle of the 15th century, and the bones of the second half of the 15th century (post-1443). The remaining animal bones excavated from the Klaipėda castle are dated to the first half of the 16th century and the 16th-17th centuries.

The osteological material's analyses were conducted at Klaipėda University's Institute of Baltic Sea Region History and Archaeology. The comparative animal, bird, and fish bone collection housed at the Lithuanian Veterinary Academy's Osteological Laboratory was used for bone identification. In the determination of the faunal composition and number of individuals, we employed the MNI (minimum number of individuals) method (White 1953).

The provision of food

The Klaipėda castle built by the Livonian Order in 1252 was like a small island, surrounded by the suspicious Curonians – suspicious from the Order's point of view. Soon thereafter, when the peaceful period of the Order's and Curonians' coexistence ended after 1260 and the wars not only with the local Curonians, but also with the Samogitians and Lithuania started, the Order's Klaipėda castle and forming town were definitively cut off from the country's economic development. Moreover, the country was ravaged by mutual marches and in the 13th-14th centuries, the number of inhabitants in Northern Curonia dramatically lessened and their economic power similarly weakened. The Order and the

townspeople who lived in the castle were barely able to supply themselves with food from local sources. Just like when the castle was being founded, food and weapons had to be provided by way of the sea. Apparently, food often would be scarce in the land governed by the Teutonic Knights in the 13th-14th centuries and thus not only in Klaipėda, but also in other castles of the Order, the people had to supply themselves with food largely from what they could bring over the sea or rivers from the southern Baltic shores.

On the border of the Samogitians and the Lithuanians, the Teutonic Knights were unable to organize normal economic activities and so their economics took on predatory features here. The Order's warriors would attack the Lithuanian castles and rob various crops, grains, and animals for themselves. Some marches to Lithuania appear to have been intentionally organized in autumn with the aim of robbing the harvest of crops already stocked in the granaries. The Order's soldiers attacked the Pūtvė castle near the Jūra River “when the lower ward was restored <...>, and all the grains and crops were piled there” (PD, p.254). A similar march to the Junigėda and Pieštėvė castles was organized in the fall of 1318. The lower wards, in which “much of the new harvest's grains were stored,” were burnt down during the march (PD, p. 271). The Samogitians and Lithuanians also would destroy the Order's harvests during their attacks. On August 15, 1315, when retreating near Ragainė (German – Ragnit), the Samogitians trampled and destroyed all the crops in the fields (PD, p.66).

Aside from captives, horses and cattle seem to have been the most desirable war-time plunder of the Order's soldiers. The Order stole many horses and cattle from a Sudovian village in 1278 (PD, p.202). In the winter or spring of 1294, the Order's warriors from Ragainė attacked the Pieštėvė castle that was in the Seredžius district near the Nemunas River and stole an entire herd of cattle (PD, pp.232, 417). In 1323, the Teutonic Knights stole 34 horses near the Paštuva castle, and the following year they drove 100 horses and many other animals out from the Gardinas district (PD, p.235). The Lithuanians did the same thing; when they could, they drove out horses and cattle. It is written (PD, p.235) that in the summer of 1295, for example, they stole “all of the brothers' horses and cattle” from the island near the Ragainė castle.

A part of the food for Klaipėda was brought over by sea till the very middle of the 15th century, especially after the Samogitians' and Lithuanians' attacks, or after lean years, or during wars. It was so cold in the winter of 1323 that “almost all the fruit trees in Livonia and Prussia either dried up or became so sickly that

for a long time they could not yield any fruit” (PD, p.274). Apparently, 1402 also was a lean year because help with food was rendered not only to Klaipėda, but also to the surrounding inhabitants. In July and in the fall, Klaipėda’s commander helped the locals by giving the Curonians flour, peas, groats, and oats (Sembritzki 1926, p.45). An entry in the Marienburg account books notes that Klaipėda’s commander once again received food aid by being sent flour as well as money to buy rye, wheat, and oats (Willoweit 1969, p.70). Soon thereafter, in a letter dated February 2, 1418, the Grand Master of the Teutonic Order appealed to the Livonian Order’s Master with a request to send 40 lasts¹ of grain via boats to Klaipėda. Part of the grain was supposed to be floated to the Order’s castle in Ragainė. Information also is known about the transport of grain from Livonia in 1439 (Acten Bd. 1. Nr. 170, pp.209, 211; Acten Bd. 2. Nr. 71, pp.110-111).

The food requirements of the Klaipėda castle’s inhabitants was very diverse. It was an important, but small castle that consistently housed a small garrison. Even in 1507 under the direction of the Grand Master, the Klaipėda castle held a garrison of only 60 people. The garrison of Ragainė at the time was comprised of 200 people, that of Königsberg – 400 (Baczko 1793, pp.179-181). When the need arose, the garrison was supplemented; in the first quarter of the 16th century, Klaipėda’s castle had weapons designated for 150-180 people (Willoweit 1969, pp.75, 76). During times of war, food would be brought over to Klaipėda together with the warriors. It is known that during the Thirteen Year War in 1457, military and food were sent to Klaipėda from Lübeck and Hamburg (Sembritzki 1926, p.47). When the castle was being reconstructed, much more food would be needed than usual. Hundreds of people worked here in 1399-1409 when the castle was being rebuilt and fortified. In 1402, about 500 people from Warmia were restoring the Klaipėda castle (Baczko 1793, p.259).

In 1365, Winrich von Kniprode granted the town a new privilege. The agricultural possibilities of the Klaipėda townspeople also were described, granting a few of the inhabitants the right to use only those pastures and meadows closest to the town. Much of the land and many of the pastures were not needed anyway, since the main occupations of the Klaipėda townspeople at the time were fishing and commerce (Sembritzki 1926, pp.38-39).

In the second half of the 15th century, when peaceful relations settled between the Order and Lithuania and the economy recovered in Curonia, sometimes a sur-

plus of grain formed which could be sold. Rye, wheat, and oats, as well as malt and mead were brought over to Gdańsk from Livonia and Curonia in 1468 (Stark 1973, p.82). Klaipėda’s part in such an export of grain could not have been big.

Mills were very important in the provision of food. In 1256, soon after the foundation of the town and with the approval of Bishop Heinrich, Master Anno von Sangershausen of the Livonian Order conceived the idea to build a mill for the needs of the people of the castle and its surroundings (LEK I, p.290). Two mills already existed in Klaipėda in 1290 (MT, p.22). The construction of a horse mill in the Klaipėda castle in 1399 also is mentioned (Semrau 1929, p.95). When the castle was demolished in 1402, this mill also was demolished (Willoweit 1969 1969, p.117), however, it already was rebuilt the following year (MT, p.276). A (water?) mill was built in approximately 1430 during the fortification of Klaipėda’s castle and town (Regesta, Nr. 27653). The horse mill, in which there were two millstones, was mentioned again in the castle’s inventory in 1447 (Willoweit 1969, p.117). For a long time, the peasants and poorer inhabitants of the town and outwork would grind their grain themselves for their provisions, despite the prohibition of hand mills in town in the second half of the 16th century. “Prussian” hand mills called *quirlen*, that ground very coarsely, were used (Quellenbeitrag, p.64).

Aside from the main food products that were imported during famine or war-time, the Klaipėda townspeople consistently needed imported products that were not available from the surrounding lands and forests. Ale, wine, mead, and salt were brought in from various lands by boat in the 14th-15th centuries. Salt was brought to Klaipėda by boat either directly from various ports, for example from Baye in France and from Flanders (The Flemish Region), or by intermediate harbours. Written sources mention that in 1462, the people of Danzig (Gdańsk) took the salt intended for Klaipėda from a boat from Lübeck (Willoweit 1969, p.76, 146). The brothers of the Order kept honey in the castle (Willoweit 1969, p.79) and would drink local mead – “honey wine” (PD, p.273). In the beginning they would import ale from elsewhere, but later they made it themselves. In 1404-1447, aside from the various types of ale and other food reserves stored in the castle, Klaipėda castle’s inventories mention rye, barley, oats, malt, hops, flour, peas, salt. There also were rarer and more exotic food products: onions, figs, raisins, almonds, mustard, vinegar (Willoweit 1969, pp.79, 80).

An abundance of woods and lakes was characteristic of East Prussia. Large forests, flooded in places, extended throughout the lowlands of the Vistula, Nemunas,

¹ 1 last is approximately 2000 kg (Transpress 1988, p.340) or a little more – 2160 kg (Zemzaris 1981, p.111).

and other smaller rivers and deltas. Peter Suchenwirt described Duke of Austria Albert III's 1377 march from Königsberg to Samogitia through the Įrutis and Nemunas: "Over 1000 people walked, clearing their way with axes through the forests, through ditch and field, across deep waters, swamps, and streams, through marshes. The soldiers and horses got caught in tree branches, the winds knocked down huge trees, and they had to force their way through dumps of trees" (SRP II, p.164). The natural landscape transformed into a cultural landscape comparatively late in Prussia, however, in the 16th century, compared with the 13th-14th centuries, only 60% of the forests remained. The forests quickly thinned out due to slash and burn agriculture, but after wars and plagues, the number of settlements would decrease and forest plots would increase once again. The number of villages decreased seven times after the Thirteen Year War (1454-1466). In 1582, Dionysius Runau wrote: "... Barrel-wide oaks, beech, birch, and spruce stand where there used to be cultivated land, and rye and wheat used to grow." Mixed forests grew in Prussia, dominated by deciduous trees (Mager 1960, pp.20-22, 25, 44, 63-65, 150).

Forests dominated all of Curonia in the Middle Ages; there was a shortage of tillable plots of land, especially in the morainal coastal plains. The blowing of sand along the coast from Klaipėda and to the north interfered with agriculture. In 1576, the former meadows already were straw-coloured along the coast, and an historical source writes in 1623 that the Nemirseta village had not given its tributary of seven barrels of oats already for a number of years because their pastures were covered up with sand and the people were impoverished (Mager 1960, pp.255-260).

Samogitia was less forested with more available land to cultivate (Žulkus 2004, pp.66, 149), but during times of war Samogitia's ability to provide food to Klaipėda was limited. The rations of the people of Klaipėda would be supplemented by meat of wild game from Lithuania's and Prussia's forests. According to the information collected from Herberstein's 1526 journey, Lithuania's noblemen hunted aurochs, bison, elk. Guagnini wrote in 1578 that Samogitia's forests have bears, bison, elk, lynx, foxes, particularly many wolves and hares, wolverines (Jurginis 1983, pp.58-59, 63, 68). Up until the 18th century, elk, hares, foxes, beavers, partridges, snipes, and ducks were hunted on the Curonian Spit (Willoweit 1969, p.197). The forests gave the inhabitants of Klaipėda many of the things they needed to survive: meat, furs and hides, honey, beeswax. There were places for the cattle to graze in the forest, grass and hay, food for the pigs. Starting with the 15th century, the forests' wealth became an important part of Klaipėda's exports.

More information also is available about the export of food products from Klaipėda starting with the 17th century. Boats would carry out traditional food products reared or grown or made by the local inhabitants: live goats and calves, cows and horses, meat, bacon, beef fat, lard, butter, hops, linseed, honey, onions. They would import salt, sometimes fish and grain, ale, wine (Groth 1996, p.48; Groth 2009, p.19- 23).

The Klaipėda castle's outwork as the place of economics of Klaipėda's inhabitants

The Livonian Order put many political and economic hopes into the establishment of the town of Klaipėda. The castle, built on Curonian land in 1252, was supposed to be only the beginning. An outwork that was supposed to be a rudiment of the town was immediately established near the castle. It was believed that an ecclesiastical and secular center of Curonia with a bishop's residence, Capitula's curia, and several churches would be founded (Jähnig 1994, pp.20-21). Because of this, the Lübeck law was hurriedly offered to Klaipėda in 1254. The two hundred year long wars between Livonia (later the Teutonic Order) and Lithuania ruined those plans and Klaipėda did not grow into a town until the turn of the 15th to 16th century. Until the very beginning of the 17th century, the town did not have better fortifications, so often it was demolished and burnt. The townspeople suffered the most from the frequent attacks. Afterward, the town and economy would need to be brought to life again. The castle would be attacked almost every ten years (1255, 1256, approximately 1279, 1323, 1353, 1367, 1379, 1380, 1393, 1402, 1409, 1414, 1454, 1457, 1459, 1464, 1472) and the town always suffered (Žulkus 2002, p.7). For example, the Lithuanians burnt the town of Klaipėda and its castle in the spring of 1393 (Posilge, pp.110-111). The Samogitians burnt the town of Klaipėda in 1393 (Posilge, pp.189-190, 192). They attacked again in 1402 and 1409 and burnt the town, whose fortification still was not finished (Zurkalowski 1909, p. 94; Semrau 1929, pp.90, 95). Vytautas's army burnt the town in the spring of 1414 (Klimas 1933, p.111). In 1454, the Samogitians again burnt the town and a part of the castle (Sembritzki 1926, pp.47-48). The Lithuanians seized Klaipėda's castle in 1472 (Acten Königl., 277, Nr. 105) and undoubtedly burnt the town as well. The town also would be ravaged in the 16th century. Soldiers from three Gdansk battle ships burnt half the town in May of 1520 (Regesta 23751, 23758, 23764; Baczeko 1793, p.85; Sembritzki 1926, p.58) and Samogitians devastated Klaipėda in the winter of the same year (Roerdanz 1792, p.17).

After sack attacks, Klaipėda would be provided with food by boats from other towns. Bad harvests and epidemics would provoke the same consequences. That is how the plague that began in 1406 in the Order's lands beat down all of the Klaipėda's castle's defenders in 1409 (Posilge, pp.283, 303).

Until the wrecked little town near the castle was rebuilt, Klaipėda's inhabitants would take up residence in the fortified outwork together with the artisans and workers who served the castle. The Order in Constance blamed Vytautas for burning the town, breaking into the castle, and making more than 3000 people leave in the spring of 1414 (Klimas 1933, p.111; LIŠ, 86, Nr. 120). This count of the castle's and outwork's inhabitants clearly was exaggerated.

The economic growth of the castles and outworks was very important, especially in those lands without a stable and sufficiently developed economic structure. Among the Klaipėda Order's first wooden castle constructed in 1252, agricultural buildings are mentioned, which included a pigsty (LEK, Abt.1, Bd 1, Nr. CCXXXVI, CCXXXVII, CCXLI, CCXLV). The agricultural buildings constantly were rebuilt after fires and attacks; newly constructed cattle sheds are mentioned in 1402 (Sembritzki 1926, p.45), and other animal sheds or barns belonging to the castle are mentioned in 1376 (Willoweit 1969, pp.118-119). In the beginning of the 16th century, the Order's barns already were further from the castle, on the outskirts of Klaipėda. A new sheep pen was established near the town in Althof in 1558. The old sheep pen held the milch cows and sheep, the new one – the dry cows and sheep (Sembritzki 1926, p.79).

Until the appearance of independent artisans in the town, trade crafts also developed in Klaipėda's outwork. The everyday life and daily dietary habits of the outwork's inhabitants also were largely characteristic of Klaipėda's townspeople.

The excavated cultural layers and masonry remains show that the outwork of the 14th century was reinforced with brick defensive walls and towers with gates. The length of the northern defensive wall was approximately 70 m. The roads near the towers were paved with stone (Žulkus 2002, p.35).

During the archaeological excavation of a former outwork, approximately 3.5-4 m above water on a hill, fragments of wooden pavement as well as remains of brick and wooden buildings were uncovered in the cultural layers dated to the second half of the 14th century. The layers were dated by coins and dendrochronology. While excavating the outwork's western part, at a depth of about 2 m, a narrow wooden street with its

adjacent former little buildings was found. The surface of an even older street was found underneath this roadway. The older street also was made of variously sized poles. Inbetween the two wooden pavements was a layer of mud in which many animal bones were found. The dendrochronological date of the bottom street's pavement is approximately 1374 (Brazauskas 2000). The uncovered pavements of the little streets and the remains of buildings near them occurred after the 1360 reconstruction of the outwork. A portion of the buildings apparently were burnt in the fire of 1379. Alongside the narrow road's wooden pavement, at a depth of 2.5-2.7 m, the fragments of a totally burnt 3 x 3 m large building were found. The walls of the building of unclear construction were daubed with clay. Many bone and horn cuttings, half-finished products were found beside the walls; apparently, bone and horn processing workshops were located here. Many traces of smith's work were found while excavating (Žulkus 2002, p.37). Smithies, workshops, stables, servants' residences, breweries, and other agricultural buildings constituted a typical attribute of the outwork of the Order's castle, encircled by a stone and brick wall (Schmidt 1938, pp.8-9).

The dietary habits of the castle's inhabitants (Order's brothers and their servants) and outwork's inhabitants (artisans and lower class servants) are difficult to distinguish from each other by the current archaeological excavation material. Thus, in discussing the diet of the Klaipėda castle's inhabitants, we lean more heavily on the outwork's finds.

Fish

The fish of the Curonian Lagoon, Nemunas River, and the sea comprised an important part of the Klaipėda castle's and townspeople's food rations, especially when there was a shortage of meat or bad harvests. A rather large amount of fish would be caught, although the Order's knights tried to monopolize the right to fish and limit their subjects' rights to fish even for their own needs (Boockmann 2003, p.170). In 1328, Klaipėda's fishermen were allowed to sell the fish they caught (mostly in the Curonian Lagoon) freely and in unlimited quantities to the brothers of the Order in the Goldingen castle, but only after the needs of the Klaipėda castle's brothers were fully met. Instructions to sell fish to Goldingen also were given in 1331 and 1341. Klaipėda's commandry had the conscription to supply fish to Marienburg and other castles of the Order (Königsberg, Elbing). As a special delivery in 1407, Klaipėda's commandry presented 39 barrels of cod to Marienburg. Klaipėda's commandry had fishing boats for fishing – ten in 1376, six in 1377, and five in

1389. In addition to the boats, the inventories mention a large amount of various types of fishing nets (Willoweit 1969, pp.121-123).

Just as in the other commandries of the Order, the earnings received from fishing in Klaipėda's commandry were administered by the *Fischmeister* – a lower officer of the Order (Boockmann 2003, p.160). Klaipėda's *Fischmeister* is mentioned in Marienburg's account books in 1400, 1402, and 1403, and in 1434 it is written that he had a separate boat (Willoweit 1969, p.120).

In the second half of the 15th century, as the number of Klaipėda's inhabitants grew, the townspeople were granted the right to fish in the sea (1462) and in the bay (1486), however, just as earlier, before they could freely sell the fish, they had to first satisfy the castle's needs (Willoweit 1969, p.124). Klaipėda's commander himself traded in fish; his load – fish and timber – was held back and sold in Lübeck after 1468 (Willoweit 1969, p.147). Among the fish imported into Lübeck from Prussia in 1492-1493, cod, sturgeon, and herring are mentioned (Stark 1973, pp.142-144).

The inventories describe what kind of fish the locals would deliver to the Klaipėda castle and in what quantities. Data are available from 1376, 1377, 1379, 1389, and 1398. From these data we know that the castle's inhabitants would eat mostly bream (*Abramis brama*) and twait shad (*Alosa fallax*), next came cod (*Gadus morhua*), pikeperch (*Lucioperca lucioperca*), and pike (*Esox lucius*). Herring (*Clupea*) are mentioned in barrels in 1376 and 1379 (Willoweit 1969, pp.122-123).

The fish menu of the castle's inhabitants changed somewhat in the 15th century; the 1402-1447 inventories barely mention bream and there are no more twait shad, but sturgeon (*Acipenser sturio*), salmon (*Salmo salar*), sea trout (*Salmo trutta trutta*), cod, European eel (*Angilla angilla*), vimba (*Vimba vimba*), and artificially grown common carp (*Cyprinus karpio*) appear. In 1402, as many as 28,800 carp were consumed (Willoweit 1969, pp.126-127). In a privilege granted to the townspeople in 1475 (as well as later), the tools and right to catch salmon, vimba, eel, and sturgeon are mentioned (Sembritzki 1926, pp.49-52). The most highly valued and most caught were salmon and pikeperch. Baltic sturgeon constantly are mentioned in the 15th century. The same fish also were caught later: pike, salmon, pikeperch, bream, eel, perch (*Perca fluviatilis*), carp, burbot (*Lota lota*), rudd (*Scardinius erythrophthalmus*), cod, herring, flounder and halibut (*Pleuronectidae*), European smelt (*Osmerus eperlanus eperlanus*), European sprat (*Sprattus sprattus*). Baltic sturgeon still were caught along the shores in the Curonian Lagoon and sea in the 17th century (the right to fish for them was granted to the English trader Jo-

hann Scarlet in 1685). Lamprey (*Lampetra planeri*) are mentioned among the fish exported from Klaipėda's ports in 1680 and 1681 (Willoweit 1969, pp.230-237). Eel mostly was caught in the Curonian Lagoon. Even in the 19th century, Juodkrantė was the most important place to catch eel for all of Germany (Eschment, Heyden, Schulze 1994, pp.341-349).

Herring to the inhabitants of Prussia, just as in other Catholic countries, was an important food in times of fasting. Herring was caught by local fishermen, but there was not always enough of it; for example, herring dramatically decreased in Prussian waters in 1313 (PD, p.319). It is mentioned that the fish died out in 1524; there was so little of it, that there was barely enough for the fishers' families to subsist on (Dovydenko 2004). In the years when fish was in abundance, the herring caught in Prussia was exported elsewhere as well. In the 15th century, it would reach Lübeck, and from there it sometimes also would be exported to more distant towns in Germany (Stark 1973, pp.142-144). Usually Prussian towns and the inhabitants of the Order's castles ate herring caught along Scandinavia's shores. At the end of the 15th century, herring took third place among the goods imported from Lübeck to Gdańsk by boat – after drinks, hides and furs. The cost of herring depended on where it was caught, at what time it was caught, and how it was preserved, as well as, undoubtedly, in what abundance it was caught. A portion of the herring would arrive in Gdańsk from Swedish towns, a portion – from Bergen in Norway (Stark 1973, pp.65-66, 140). A portion of the Norwegian herring from Gdańsk undoubtedly also came to Klaipėda.

The single fish (large sturgeon, pikeperch, pike) bones and scales from the analysed zooarchaeological bone collections of the Klaipėda castle site do not allow for a broader interpretation nor add to the known historical source information of the assortment of fish eaten in Klaipėda in the 14th-17th centuries.

The consumption of meat. Data from historical sources and the zooarchaeological material's research results

The Order's state was about 58,000 km² large (38,500 km² between the Vistula and Nemunas Rivers). Many people lived in such a large state. Both for their own subsistence and in order to provide food support to the established castles in the newly conquered lands, well developed farming was a necessity. The basis of economy in the state of the Order was comprised of service estates as well as the farms of the local Prussian and Curonian inhabitants. The number of the Order's unas-

Table 1. The animals kept in Klaipėda castle's animal pens, mentioned in the inventories of the 14th – beginning of the 16th century (Willoweit 1969, pp.118-119).

Year	Horses	Fillies	Oxen	Cattle	Cows	Pigs	Sheep	Goats	Geese	Total
1376	7	-	7	-	22	-	34	-	-	70
1377	3	13	-	-	17	-	-	-	-	33
1379	15	-	-	-	7	-	-	-	-	22
1389	17	2	-	9	-	15	6	-	-	49
1398	29	-	-	9	-	13	-	-	-	52
1402	24	-	-	-	-	10	-	-	-	34
1404	19	-	29	-	6	48	-	-	-	102
1414	-	-	-	-	-	-	-	-	-	-
1415	4	-	-	8	-	14	-	-	-	26
1416	10	-	-	22	17	30	-	-	-	79
1420	8	-	15	-	9	30	-	-	-	62
1434	19	1	10	-	72	28	115	39	-	284
1437	30	6	18	72	-	175	150	50	15	516
1447	30	6	4	95	-	71	144	60	18	428
First 1/4 of 16th cen.	60	13	48	21	61	60	100	32	-	419

simulated Prussians in 1300 was approximately 90,000, and approximately 140,000 in 1400 (Boockmann 2003, p.91). We have no available data about the number of Curonian inhabitants. According to inventory data, the Order's estates in Prussia in 1370 held 10,482 cattle, 18,992 pigs, 61,252 sheep, and approximately 13,887 horses² (Jähnig 1989, p.125). Thirty years later (c. 1400), the inventory data cite that the people of the Order had 9,000 cattle, 71,000 sheep, 21,000 pigs, and 10,000 to 12,000 horses on their farms (Samsonowicz 1989, pp.107, 108). The animal species did not change during this period – only their quantities changed (cattle decreased from 10.02% to 7.96%; the number of pigs did not change, but rather wavered from 18.15% to 18.58%; the quantity of sheep rose from 58.55% to 62.83%; no comparative data for horses are available).

The inventories of the 14th to beginning of the 16th century describe the kinds of animals held in the barns that belonged to the Klaipėda castle (Willoweit 1969, pp.118-119). These data are presented in **Table 1**. The 14th and 15th century inventories of Klaipėda's commandry testify that horses, cattle, cows, pigs, sheep, and later – goats were tended and fed at that time (Willoweit 1969, pp.118-119, 216).

The 1404-1447, Klaipėda castle inventories mention that in addition to the various kinds of ale, other food supplies kept in stock at the castle were rye, barley, oats, malt, hops, flour, peas, salt, butter, cheese, meat (hams and chucks), and various kinds of freshwater and sea

fish. Birds are not mentioned in the inventories (Willoweit 1969, pp.79, 80, 82). Wild game carcass meat (barrels with boar meat, elk meat, and deer meat) is mentioned in the inventories of 1415, 1437, and the first quarter of the 16th century (Willoweit 1969, pp.79, 80).

The main food products mentioned in the written sources are the various kinds of fish, meat (mainly beef and mutton), and cheeses that were made from the milk of cows and sheep or goats. A couple hundred to a thousand pieces or units of cheese reserves were stored in the Klaipėda castle, except for 1402, when 2300 units intended for the "gentlemen" and 3800 units intended for the "servants" are mentioned (Willoweit 1969, p.82). Such a large stock of cheeses was necessary to feed hundreds of people engaged in the work of rebuilding the castle. The meat was salted and jerked. Pork is directly mentioned only in 1416, later using the terms "fatty meat (1434)," and bacon (1437). Nonetheless, pigs are regularly mentioned in Klaipėda's animal pen starting 1389, and from 1434 – sheep and goats. The quantity of sheep was the highest from 1434 until the first quarter of the 16th century (Willoweit 1969, pp.79, 80).

According to the data of the available sources regarding Klaipėda castle's farming, the principal domestic animals were ruminants (sheep and cows / cattle in 1376). The counts of animals actually change significantly. For example, in 1402 there are very few animals in the inventory books compared to 1379, while in the inventories of 1414, domestic animals are not

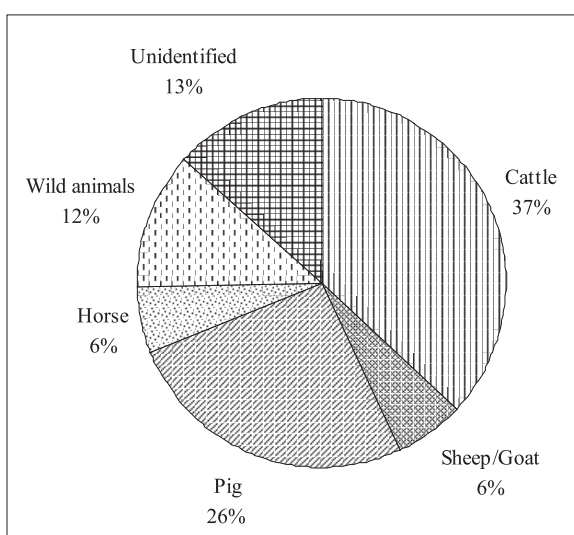
² The horse count is indicated for c. 1400.

mentioned at all (Table 1). This could be explained in two ways: either the data did not survive, or there really were no animals, since precisely in the spring of 1414, Klaipėda was occupied by Lithuanians (Klimas 1933, p.111; LIŠ, p.86, Nr. 120).

The inventories mention (Table 1) that there were 22 cows and seven cattle (a 3:1 ratio) in the Klaipėda castle in 1376, whereas after the castle burned in the spring of 1402 (Semrau 1929, p.95) and during its reconstruction in 1404, the ratio is in reverse; the number of cattle dominates in relation to cows (at a ratio of 4.8:1, i.e., 29 cattle and 6 cows). Almost all of the food reserves apparently were destroyed in the spring of 1402. Twenty-four war horses and only ten pigs are mentioned in Klaipėda castle's animal pen that year (Willoweit 1969, pp.118 -119). 1402 might have been a bad harvest year since in July as well as in that autumn, Klaipėda's commander gave the local Curonians flour, peas, grain, and oats as aide (Sembritzki 1926, p.45).

One hundred thirty-five bones or bone fragments were identified in the analysis of the osteological material excavated from the Klaipėda castle and dated to the last quarter of the 14th century (Graph 1). From the established count, we attributed 50 bones or bone fragments to cattle (*Bos taurus*), with an MNI (minimum number of individuals) of four. The age of one of the cattle was 36-42 months, and another one was young because several of the cattle vertebrae's discs were loose. Having completed the analysis of 35 pig (*Sus suis*) bones, we established the minimum number of individuals (MNI – 6) and their age (a maximum of 24 months and 42 months). Eight bones (MNI of 2) of sheep / goat (*Ovis aries/Capra hircus*) also were found in this material as well as a fragment of horse (*Equus caballus*) vertebra, two metacarpi and phalanxes, as well as a metatarsus bone (MNI – 2). A dog's (*Canis familiaris*) antibrachium bone was identified. A single fish bone also was found. Bone fragments of four species of wild game were excavated from this period: aurochs / bison (*Bos primigenius/Bison bonasus* L.), elk (*Alces alces*), red deer (*Cervus elaphus*), and bear (*Ursus arctos*). We believe that a few of the bones could have belonged to boar (3 skull fragments, a canine tooth, and a tibia). The inflammation (*arthritis*) of a cattle's pelvic bone's acetabulum also was established in this period's collection.

No bird bones were found in the 14th century bone collection from Klaipėda's castle. They are found, however, in Lithuanian archaeological sites of that period. In the 13th-14th century layers of Kernavė in the Pajauta valley, 28 domestic bones were found. In the same area at the Altar (Aukuras) hill, not only domestic bird species, but also wild ones were found among the



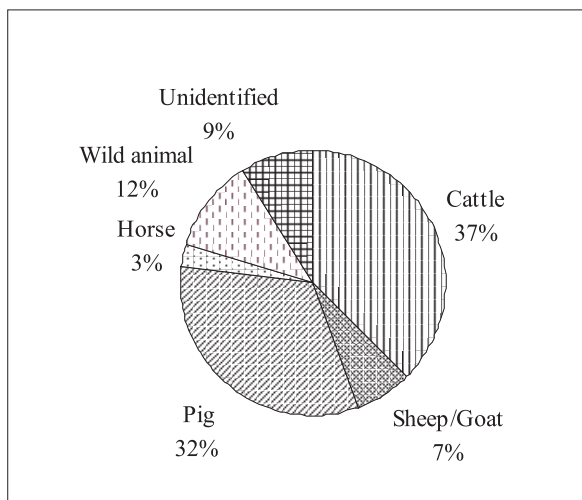
Graph 1. Klaipėda castle after 1365-1377 (4th 1/4 of 14th cen.).

131 bird bones – wood grouse (*Tetrao urogallus*) and raven (*Corvus corax*). Single bones of domestic chicken and domestic duck also were excavated from the 1385-1390 layer of the Kaunas castle yard (Bilskienė, Daugnora 2001 p.255).

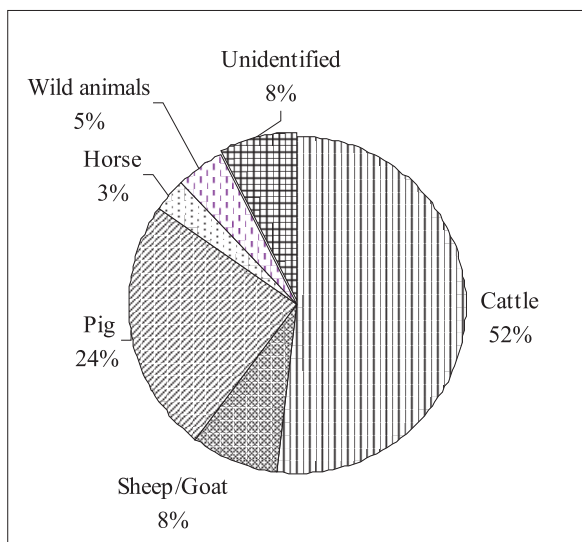
Aurochs / bison (6 bone fragments), red deer (1 bone), cattle (1 bone), and pig (4 bone fragments; MNI of 2, with one individual over 28 months old and the other individual at 1-1.5 months old) were identified in the zooarchaeological collection from the Kaunas castle dated to the 14th century. The analysis of 282 bones from the second half of the 15th century revealed a domination of domesticated animals at the Kaunas castle (cattle comprised 32.98%, goats / sheep – 14.18%, pigs – 9.57%, horses – 6.38%). Elk (5.67%) and bird (hen – 2.48%) bones also were identified.

In the 15th century, the same animals as before (horses, cattle, pigs) were fed and held in Klaipėda castle's animal pen, but there were significantly more. The 1434 list (Table 1) mentions 72 cows, 10 oxen, and 60 goats (the ratio of cows to cattle is 7:1). The large number of cows and sheep / goats suggests that their milk was used in the production of "local" cheeses. From 1434 on, the number of animals grows significantly and surpasses five hundred heads (the list is supplemented by goats and fillies; birds also appear).

The analysis of the 255 bones excavated from Klaipėda castle site's layers (dated after 1443; the mid-15th – second half of the 15th century) (Graph 2) indicated that cattle bones dominated during this period (68 bone fragments; MNI – 4). The age of one of the individuals was 42- 48 months. Of the 13 identified sheep / goat bones, two belong to goats; the age of one of the individuals was 10-17 months, the other was 18-23 months. Fifty-nine pig bones belonged to



Graph 2. Klaipėda castle after 1443 (mid-15th - 2nd 1/2 15th cen.).



Graph 3. Klaipėda castle 1st 1/2 of 16th cen.

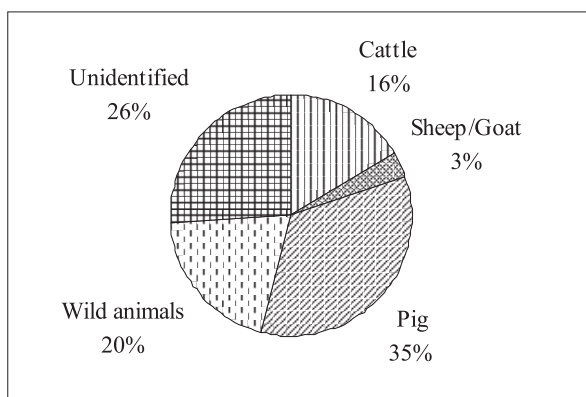
six individuals (their ages were from 17-22 months, 24 months, 24-30 months, and 42 months). Five bones belonged to the horse (MNI – 2; one of them was a stallion). The proximal part of a dog's (*Canis familiaris*) left leg's humerus was found. Single bones of wild game also were found in this layer: two vertebrae and a metacarpus bone of an aurochs / bison, an antler fragment, part of a vertebra, and pelvic bone of an elk. A beaver's femur, fragment of a fox's femur, and a red deer's calcaneus and phalanx were identified. We believe that two large mandibles and canine tooth fragments might have belonged to a boar / pig (*Sus scrofa*/*Sus suis*) and this individual was slaughtered / hunted when it was more than 36 months old. Birds (geese) are mentioned for the first time in the inventory books in 1437 (Willoweit 1969, pp.118-119). The following bird bones were identified from the mid-15th and sec-

ond half of the 15th century's layers of the Klaipėda castle site: a chicken's (*Galus domesticus*) humerus and tibiotarsus, a rooster's left foot's tarsometatarsus, and a grey goose's (*Anser anser*) right side's coracoidium (Bilskienė, Daugnora 2001, pp.255-256). Single bones of pike (*Esox lucius*; dentale) and pikeperch (*Lucioperca lucioperca*; operculum) also were found in the Klaipėda castle.

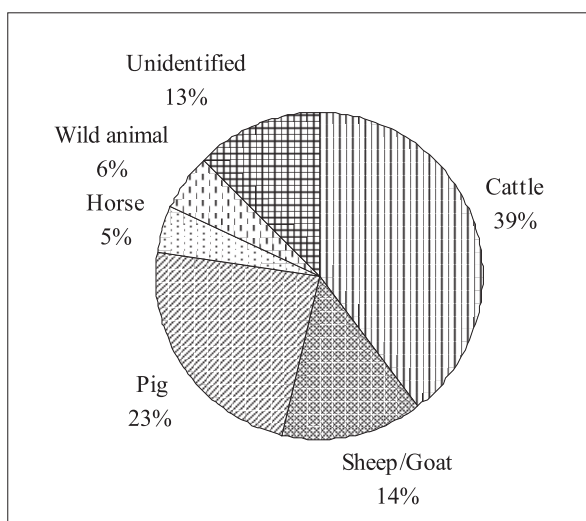
In the first quarter of the 16th century, a rather large quantity of animals already was held in Klaipėda castle's animal sheds (419): horses, fillies, cattle (including oxen and cows), and sheep / goats (Table 1). The increased amount of animals could signify the castle's and town's recovered economy. In the first half of the 16th century, Klaipėda castle's inhabitants might have eaten cattle that were reared in Samogitia. In 1512, Klaipėda's commander had to purchase 50 cattle for the Grand Master's kitchen needs, by the latter's order. There also is news from 1522 about the shipment of Samogitian cattle (*Rindvieh* in German) from Klaipėda to the Grand Master (Willoweit 1969, pp.148-149).

After analysing 152 bones from the layers of the first half of the 16th century (Graph 3), it became clear that their majority was constituted by cattle (MNI – 4). Their age could have been between 42 and 48 months and younger. One of the ox's neck vertebra was chopped into, which would suggest that the slaughter method characteristic of the Middle Ages was employed here. The analysis of 11 goat / sheep bones revealed the absence (*oligodontia*) of a mandible's third molar. The analysis of 32 pig bones revealed a group of younger individuals and an older individual over 36 months old. The skull fragment of a dog (*Canis lupus*) as well as the humerus, antibrachium, pelvic, and femur bones of a cat (we think a domestic cat (*Felis silvestris*; MNI – 1) were found. Part of a mandible and canine tooth fragment were ascribed to a boar / pig. An antler fragment and chest vertebra of an elk were identified, as were part of a red deer's (*Cervus elaphus*) antler and a femur fragment of a bear (*Ursus arctos*).

The bone material collected from the layers dated to "after 1521 – the second half of the 16th century" (61 bones) is presented in Graph 4. A large amount of split tubular bones and small fragments prevented the identification of the anatomical part and species affiliation of a third of the animal bones. The examination of ten cattle bones revealed a pathology of the mandible bone. The absence of molars (*oligodontia*) in the mandible bone of a shee / goat was established. We distinguished several age groups from the analysis of the (21 fragments of) pig bones (18-24 months, 24-30 months, 24 months). A relatively large amount of wild animal bones was established (elk, aurochs



Graph 4. Klaipėda castle after 1521 (16th cen. - 2nd 1/2 16th cen.).



Graph 5. Klaipėda castle 1st 1/2 16th -17th cens.

/ bison). The waist vertebra of a harbour porpoise (*Phocaena Phocaena*) also was attributed to this period. Also found were an unidentified species of bird's humerus and a rodent's vertebra fragments.

Analysis of the 142 bones found in the layers date to the end of the 16th – beginning of the 17th century showed the same animal species (Graph 5). In the analysis of 57 cattle bones, the age of two individuals (28-34 months and 36-42 months; MNI – 3) was established. Analysis of the goat / sheep bones showed a large amount of corneous tines (20 total; 12 cornutus). Three of the corneous tines belonged to adult goats. The analysis of 34 pig bones (MNI – 2) revealed groups of both young and adult animals (8-24 months, 17-22 months, 24-30 months). Single humerus and metacarpus bones as well as a tooth of pig / boar (MNI – 2) were found. Among the carnivorous animal remains were a dog's skull and mandible bone as well as a domestic cat's femur. Bones of wild game also were established: a

beaver's (*Castor fiber*) calcaneus and a bear's (*Ursus arctos*) mandible fragment.

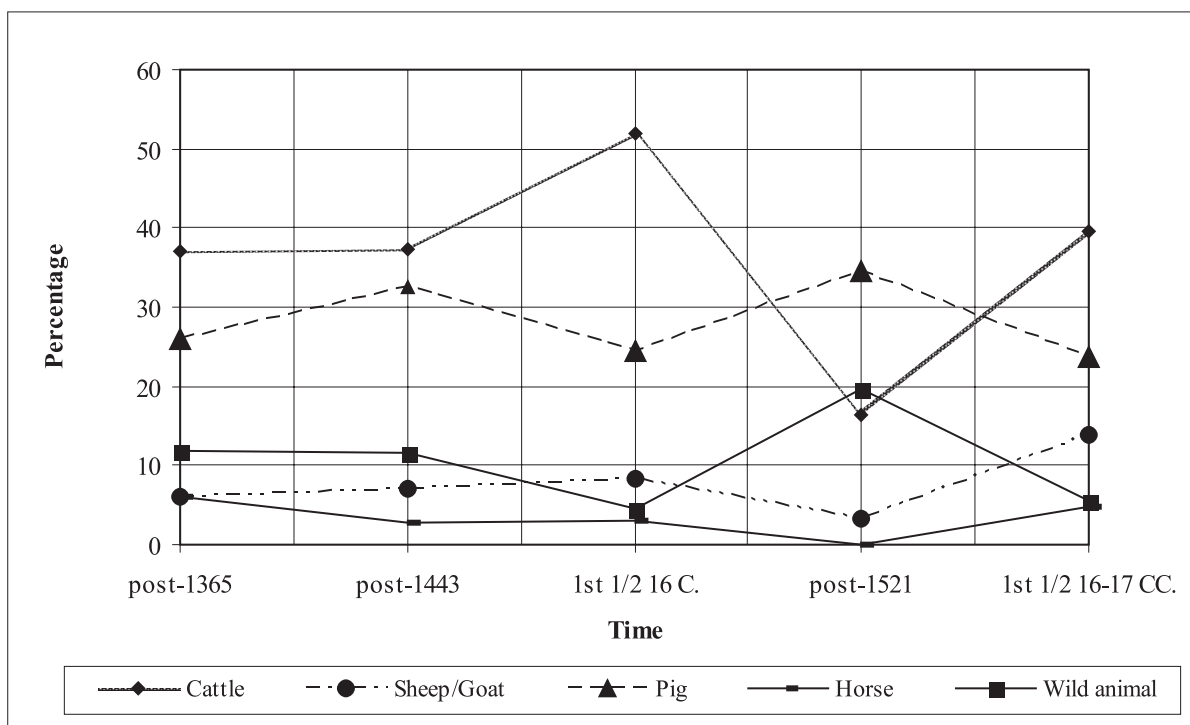
We found no specific pathological changes that appear in the spine and terminal phalanxes with the pulling of a plough or wagon for a longer period of time in the excavated cattle bones' collection of Klaipėda's castle (Groot 2005; Telldahl 2005; Fabiš 2005). The cattle undoubtedly were used for ploughing; ploughs and ploughshares are mentioned in the Order's inventories. In c. 1400, the Herrengrebin castle had 14 ploughs, the Lesewitz castle – ten ploughs (Jähniņ 1989, p.125). There were few draught animals in Klaipėda's commandry; only three to seven ploughs, two furrowers, and 14-18 scythes were held in 1414 (Willoweit 1969, p.119).

In summarizing the excavated zooarchaeological material from Klaipėda's castle, we distinguish two animal groups: domesticated animals and wild animals (Graph 6). Bones of ruminants dominate among the domestic animals (cattle / sheep / goats), while pigs comprise the second group of most abundant animals.

The small quantity of horse bones prevents a wider interpretation of the available material. It is expedient to propose that horses would be eaten only to avert starvation in besieged castles or during marches if no other food was available. Marshal Henrik marched to the Krivichians land (an eastern Slavic tribe) in September of 1314, but after the battles, upon returning to Novgorod after the march, they lost the food provisions left at the rests and had to retreat to the wastelands. They remained there for many days without bread and several of them ate their horses from hunger, while others subsisted on grasses and their roots (PD, p.265).

From the entire researched period's wild animal group, we distinguished the large wild animals (aurochs / bison, elk, red deer) and the fur-bearing animals used for fur or medicine (bear, fox, beaver). Reserves of wild game meat are mentioned in the written sources. One boar was hunted in 1415, one barrel of game meat was inventoried in 1437, and one barrel of boar meat, one barrel of elk meat, and two barrels of deer meat – in the first quarter of the 16th century (Willoweit 1969, pp.79, 80). True, a portion of the bones might have been crushed or eaten by dogs. Single dog bones are found from the last quarter of the 14th century or other periods.

We find no significant differences when comparing the excavated bone material of the Order's Klaipėda castle with that from Latvia's territory (the Selpils castle's outwork). Bones of cattle (36.0%) and sheep / goats (36.6%) as well as pigs (21.4%) dominated in the



Graph 6. Klaipėda castle animal bone by species through time.

Selpils outwork. Single bones of horse, dog, elk, and hare were identified in this site (Šnore, Zariņa, 1980).

The preliminary analysis of the Vilnius lower castle's animal bones (871 animal bones dated to the 14th-15th centuries) showed that 672 or 77.1% belonged to domesticated animals and 188 or 21.6% belonged to wild animals. Of the 684 bones dated from the end of the 16th century – first half of the 17th century, 633 (92.5%) belonged to domestic animals and 26 (3.8%) – to wild animals. Cattle (*Bos bovis*) bones dominated in both groups – 42% and 66.3% (Daugnora, Piličiauskienė, 2005, p.207). Later analyses of the bone material from Vilnius's lower castle confirmed the proposition that domesticated animals dominated in this castle's territory. In the 14th-15th centuries, cattle constituted 52.9% of osteological material by number of bones and 28.5% by MNI; pigs – 16.2% / MNI 25.0%; sheep or goats – 8.8% / MNI 15.0%. Wild game, on the other hand, constituted 15.3% / MNI 46.23%. In the 16th – first half of the 17th century, the amount of domesticated animals comprised 67.63% by number of bones and 82.94% by MNI, while the wild animal count was 8.7% by number of bones and 17.06% by MNI. (Piličiauskienė 2008, p.31).

No significant differences were found between the zooarchaeological material of Klaipėda's castle and the settlement of Birutė's hill in Palanga dated to the 13th-14th centuries (Žulkus, 2007).

The “miserly” information mentioned in the inventories regarding animals' age and sex (young fillies, cattle, cows) prevent a broader interpretation of the source material, thus the few osteometric data can supplement the historical source information. The young age of the identified cattle (26-48 months) suggests that two age groups of cattle were held in that period's castles (1.5-2 years and 3-5 years). Similar groups of two different ages also were found in the sheep flocks / goat herds (10-17 months, 18-23 months). It is interesting that the Klaipėda castle's inventories mention young fillies. In 1377, there were 13 such fillies (1-3 years of age) in Klaipėda's castle. Compared to three horses, that is a large number. We do not know if the fillies were stolen or reared locally. We believe that the horses mentioned in the 1379-1404 inventories could have been stallions and horses intended for use in battle. Such a ratio of riding horses to mares also was characteristic of other castles in the Order. For example, in 1419 the stables of Marienburg castle held 77 mares and 1-3 year old fillies (5, 12, and 19 in different stables); 1-2 year old war horses also were reared (17 and 14, respectively 17 one year olds and 14 two year olds) (Jähnig 1989, p.126). That the rearing of horses was an important branch part of the castle's economy is shown by how many were kept in Klaipėda castle's stables in the first quarter of the 16th century (60 horses and 13 fillies) (Willoweit 1996, pp.118-119).

The metacarpus measurements of various cattle excavated from separate archaeological sites dated to the

Grand Duchy of Lithuania in the 13th-17th centuries enabled the identification of their sex. Of 95 measured metacarpi, 55 (57.89%) belonged to cows, 18 (29.47%) – to oxen, and 12 (12.63%) – to bulls (Daugnora 2002, pp. 25-26). From this, the ratio of cows to oxen would be 3.05:1. However, the analysis of the available data by separate periods and archaeological sites also showed certain differences. For example, only cow and oxen bones were identified at Kernavė (in the Pajauta valley, dated from the end of the 13th-beginning of the 14th century), with a ratio of 3.6:1, but in Rotušės Square Nr. 14 in Kaunas, dated to the 15th century, 54.54% of the analysed metacarpi belonged to bulls. The measurements of the right legs' metacarpi of cattle bones excavated from the Kaunas castle showed that of 28 metacarpi, 16 belonged to cows, four – to bulls, and eight – to oxen. Cows' metacarpus bones dominated in other sites (Vilnius's presidential mansion in the 17th century and Vilnius's lower castle in the 17th century) (Daugnora 2002, pp. 25-26).

We divided the pig bones excavated from the Klaipėda castle into three groups: Group I – up to 12 months old (8-12 months), Group II – 17-24 months old, and Group III – 2-3.5 year old pigs. After completing the analysis of bones of slaughtered pigs in the Ostrow Lednicki castle dated to the 10th-15th centuries, D. Makowiecki distinguished four groups (Group I – 6-10 months, Group II – 12-16 months, Group III – 16-24 months, and an adult pig group comprised of 2-3.5 year old pigs (Makowiecki 2001).

Compared to the Lithuanian Grand Duchy and the zooarchaeological material excavated from her towns, comparatively few bones of wild animals were found in the Klaipėda castle. We can explain this fact with the fact that the Order's brothers, monks, and warriors who lived in the castle were forbidden to hunt (Mugurėvičs 2002).

Conclusions

The analysis of the historical data and zooarchaeological material showed that in the 14th-17th centuries, the inhabitants of the Klaipėda castle (the Order's brothers, their servants, the outwork's artisans, and the townspeople who hid in the outwork) reared and slaughtered domesticated animals, hunted large game and consumed its meat, processed cheese, ground grain, drank mead and ale. The bulk of the meat consisted of beef, mutton, and pork, as well as goats' meat starting 1434. When comparing the domestic animal bones excavated from Klaipėda's castle, it is noticeable that the bones of ruminants (cattle, sheep, goats) dominated during all of the Klaipėda castle's periods, while pigs consti-

tuted the second most abundant group. The increasing quantity of small ruminants (sheep and goats) starting 1434 is reflected in the zooarchaeological material; by the 16th century – beginning of the 17th century, the amount of these animals' bones doubles.

The amount of horses significantly increases in the inventory books starting from the middle of the 15th century, something confirmed by the zooarchaeological material. The research results of the zooarchaeological material are compared with the known inventories of Klaipėda castle in the 14th-16th centuries, which contain data about the domestic animals reared for the castle's needs and the food consumed by the castle's inhabitants. In the zooarchaeological material dated to the "after 1521" period, changes in faunal species and amounts are noted. According to this material, pigs (*Sus suis*) comprise 31.25% of the bones, while the number of species and bones of large wild game (aurochs / bison, elk, red deer) and fur-bearing animals (beaver, bear) significantly increases (from 5.5 to 22.92%). Various kinds of fish caught in the sea near Klaipėda and in the Curonian Lagoon held an important place in the diet of the castle's garrison. Fowl constituted an insignificant part of the food.

Bearing in mind that in the 13th-15th centuries, Klaipėda was only a small town, continuously destroyed and burnt, while its small number of inhabitants would seek refuge in the castle rather often, the zooarchaeological material collected in the Klaipėda castle also reflects the dietary habits of Klaipėda's townspeople at that time.

Translated by Indrė Antanaitis-Jacobs

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Abbreviations

- Acten – Acten der Ständetage Preussens unter Herrschaft des Deutschen Ordens. Hrsg. M. Toeppen. Ed. I – III, Leipzig. 1878 – 1882
- Acten Königl. – Acten der Ständetage Preussens, Königlichen Anteils. Hrsg. F. Thunert. Bd I. Aalen (Neudruck). 1979
- Annal. Thorun. – Scriptorum rerum Prussicarum. Bd. III. Leipzig, 1866
- Das Große Zinsbuch – Das Große Zinsbuch des Deutschen Ritterordens (1414 – 1438). Hrsg. von P. G. Thielen. Marburg, 1958
- LEK – Liv-, Est-und Kurländisches Urkundenbuch, Bd. 1. Aalen (Nachdruck). 1967. Lietuvos istorijos šaltiniai. T. 1. Vilnius, 1958

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KLAIPĖDOS PILIES GYVENTOJŲ MAISTAS XIV–XVII AMŽIAIS ISTORIJS IR ZOOARCHEOLOGIJOS DUOMENIMIS

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Santrauka

Straipsnyje analizuojama zooarcheologinė medžiaga, kuri buvo rasta 1997–1999 m. kasinėjimų piliavietėje metu. Didesnė dalis tyrimų vyko buvusiam XIV–XV a. priešpilyje. XIV a. paskutiniu ketvirčiu – XVII a. pradžia datuojamos archeozoologinės medžiagos tyrimo duomenys padės geriau suprasti Ordino pilies Klaipėdoje ekonomikos ir jos gyventojų mitybos ypatumus bei įvertinti medžioklės ir žvejybos reikšmę.

Istorinių duomenų ir zooarcheologinės medžiagos analizė parodė, kad Klaipėdos pilies gyventojai (Ordino broliai, jų tarnai, priešpilio amatininkai ir miestiečiai, kurie slėpėsi priešpilyje), XIV–XVII a. pr. augino ir skerdė naminius gyvulius, medžiojo stambius laukinius gyvūnus ir vartojo jų mėsą, gamino sūrį, malė grūdus, gėrė midų ir alų. Mėsos pagrindą sudarė jautiena, aviiena ir kiauliena, nuo 1434 m. pradėta vartoti ožkiena. Lyginant Klaipėdos pilyje iškastų naminių gyvulių kaulus pastebėta, kad visais Klaipėdos pilies laikotarpiais dominavo atrajotojų kaulai (galvijai / avys / ožkos), antrą pagal gausumą gyvulių grupę sudarė kiaulės. Smulkių atrajotojų (avių / ožkų) skaičiaus didėjimas nuo 1434 m. atsispindi ir zooarcheologinėje medžiagoje – nuo XVI–XVII a. pr. dvigubai padidėja šių gyvūnų kaulų kiekis. Žirgų kiekis inventorinėse knygosė ženkliai kinta nuo XV a. vidurio, tą patvirtina ir zooarcheologinė medžiaga. Atlikus atskirais laikotarpiais suskirstytos kaulinės medžiagos analizę, ypač išsiskyrė zooarcheologinė medžiaga, datuota po 1521 m., kai 31,25 proc. sudarė kiaulių (*Sus suis*) kaulai, o stambių laukinių gyvūnų (tauras / stumbras, briedis, taurasis elnias) ir kailinių žvėrių (bebras, lokys) rūšių kiekis ir kaulų skaičius ženkliai didėjo (nuo 5,5 iki 22,92 proc.). Svarbią vietą pilies įgulos mityboje užėmė įvairios žuvų rūšys, gaudomos jūroje prie Klaipėdos ir Kuršių mariose. Nedidelę maisto dalį sudarė paukštiena.

Turint omenyje, jog XIII–XV a. Klaipėda buvo tik nedidelis miestelis, tolydžio griauamas ir deginamas, o jo negausūs gyventojai gana dažnai ieškodavo prieglobsčio pilyje, Klaipėdos pilyje surinkta zooarcheologinė medžiaga atspindi ir to meto Klaipėdos miestiečių mitybos įpročius.