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POULTRY IN MEDIEVAL AND POST-MEDIEVAL LITHUANIA

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While most people consumed red protein from cattle, sheep, and pigs, the remaining protein came from game birds and poultry. It is well documented in historical data that poultry was a part of the elite's staple diet in medieval and post-medieval Lithuania. However, it is difficult to speak about the largest part of the medieval city—not the rulers, but the ruled ones, i.e., the peasants and their meat consumption and poultry supply chains. The focus of this article is solely on domesticated and wild birds used for food along with their subproducts. The term "poultry" covers such birds as ducks, turkeys, guineafowl, geese, peafowl, pigeons and scarlet macaws (Serjeantson 2009). Medieval cities kept chickens, ducks and geese for their eggs as well as their meat.

Poultry was usually considered a food of higher status on the old continent. In this article, I will explore the scale of poultry consumption, the relationships between producers and consumers, and other aspects of poultry in medieval and postmedieval Lithuania, using both zooarchaeological and historical data. All the material is sourced from nine cities: Vilnius, Kaunas, Kernavė Town, Alytus, Palanga, Klaipėda, Jurbarkas, Trakai and Molėtai and was dated from the 13th to the 20th centuries.

Keywords: poultry, medieval and postmedieval Lithuania, chicken

Yra žinoma, kad dauguma žmonių vartojo galvijų, avių ir kiaulių raudonuosius baltymus, o likusią dalį jų mitybos sudarė medžiojamų ir naminių paukščių mėsa. Istoriniai šaltiniai rodo, kad viduramžių ir naujųjų laikų Lietuvoje paukštiena buvo pagrindinis elito mitybos elementas. Vis dėlto sudėtinga kalbėti apie gausiausią viduramžių miesto gyventojų dalį – ne valdančiuosius, o valdomuosius, t. y. valstiečius – jų mėsos vartojimą ir paukštienos tiekimo grandines. Šiame straipsnyje dėmesys sutelktas tik į maistui vartojamus naminius ir laukinius paukščius bei jų subproduktus. Terminas „naminiai paukščiai" apima tokius paukščius kaip antys, kalakutai, patarškos, žąsys, povai, balandžiai ir raudonosios aros. (Serjeantson 2009). Viduramžių miestuose vištos, antys ir žąsys buvo laikomos ne tik dėl mėsos, bet ir dėl kiaušinių.

Senajame žemyne paukštiena paprastai buvo laikoma aukštesnio statuso maistu. Šiame straipsnyje, remiantis zooarcheologiniais ir istoriniais duomenimis, nagrinėjamas paukštienos vartojimo mastas, gamintojų ir vartotojų santykiai bei kiti su paukštiena susiję aspektai viduramžių ir naujųjų laikų Lietuvoje. Apžvelgiama XIII–XX a. medžiaga iš devynių miestų: Vilniaus, Kauno, Kernavės, Alytaus, Palangos, Klaipėdos, Jurbarko, Trakų ir Molėtų.

Reikšminiai žodžiai: naminiai paukščiai, viduramžių-naujųjų laikų Lietuva, vištiena.

INTRODUCTION

The chicken (*Gallus gallus*) is kept in every continent and eaten by a wide range of people and societies. Chickens provide protein for the poor, who otherwise rarely eat meat, as well providing a reliable source of meat for the rich (Serjeantson 2009). Poultry was a small part of protein consumed in the medieval and modern times in Lithuania and Poland (Rumbutis, Blaževičius, Piličiauskienė 2018; Ragauskienė 2021; O'Connor 2000; Makowiecki, Gotfredsen 2002; Dembińska 1999), and it was mostly the food of the

elite (Rumbutis, Blaževičius, Piličiauskienė 2018). Historical data is scarce in relation to the residents and their meat consumption in the larger part of the city (Bertašius 2013; Ragauskienė 2021). Few historical sources mention domestic fowl in Lithuania's cities; therefore, zooarchaeological material must be taken into consideration. Zooarchaeological material can greatly contribute to the reconstruction of that part of the population. This article presents new zooarchaeological material dated from 13th to 20th centuries from nine cities in Lithuania: Vilnius (14 objects), Kaunas (five objects), Klaipėda (three objects), Trakai (one object), Palanga (one object), Alytus (one object), Kernavė (one object), Jurbarkas (one object), and Molėtai (one object). The collection of this material continued until 2021. Articles have already been published about the bird bones of the Vilnius and Klaipeda castles, and therefore this material is not discussed in this article (Blaževičius et al. 2012; Blaževičius et al. 2018; Ehrlich et al. 2020). The main questions of this article are the distribution of bird bones, what can be said from them, what type of bird is the most common, how much can we judge about certain traditions of nutrition, if they were used for the meat or other subproducts, and social differences. This study investigates birds from the 13th to 20th centuries. Initially, my focus will be on the number of species discovered in urban areas. Second, I intend to distinguish the species chronologically. Third, identify what they were used for. Finally, determine whether they were directly served on the table or stored for future use in additional products.

METHODS

Taxonomical identification was achieved by morphological comparison with large collections of modern bird skeletons at Kaunas Tadas Ivanauskas Museum of Zoology (Lithuania). Manuals by von den Driesch (1978), Serjeantson (2009), and a case study by Bochenski (2018) were also used. The recording followed bone element, side, zones present, fusion, sex when identification is possible, and bone surface modifications. All of the material was collected by hand, with the exception of Kernavė's town collection, and stored in the Archaeozoological Laboratory of Vilnius University. After the bird bones were separated from mammals, they were analysed skeletally and taxonomically. In cases of non-determination of exact species, the bones were assigned to a higher taxonomic group or defined as "unidentified". The number of bones were calculated and listed in the tables. To portray the frequency of each specific part of the bird, bones were grouped as wing bones (humerus, ulna, radius and carpometacarpus) and leg bones (femur, tibiotarsus and tarsometatarsus).

MATERIAL

Bird bones were collected and analysed from 28 sites in Lithuania (Table 1; Figure 1). Some of these sites consisted of only few bird bones, however they had never been analysed in detail before.

Vilnius

Fifteen different objects in the capital of Lithuania are represented within the Old Town, in close proximity to it, and on its periphery (table 2, figure 1). 17 Pylimo Street (n = 14; No. 1) is located in the western part of the old town of Vilnius, behind the western part of the defensive wall of the city of Vilnius. At the beginning of the 16th century, by the decision of the ruler Alexander, the springs of Vingria were handed over to the Dominican monks (Butrimaitė 2007), who installed a water supply system that supplied the city with drinking water. The Dominican monks maintained and gradually expanded this plumbing system, providing them with a stable source of income for several centuries. It is believed that in the 16th and 17th centuries, the research area was built with wooden buildings (Katalynas 2006), and

	Site	Years of excavation	Excavation area	Number of specimens	Period	References
1	17 Pylimo St., Vilnius	2017	1195 m^2	n=13	15^{th}-18^{th}	Remenčiūtė, Girlevičius 2017
2	7 Pylimo St., Vilnius	2020-2021	25 m^2	n=125	17^{th}-18^{th}	Tarasova, Remenčiūtė 2021
3	9 Klaipėdos St., Vilnius	2019	1281,5 m^2	n=16	14^{th} -20^{th}	Jonutis, Girlevičius 2019
4	Pilaitė Castle, Vilnius	2021	140 m^2	n=68	16^{th}-17^{th}	Kiniulis 2021
5	6 Sodų St., Vilnius	2019	163,5 m^2	n=100	16^{th}-19^{th}	Vasiliauskas, Kliaugaitė, Širvydaitė-Šliupienė 2019
6	Courtyard of the Castellan's House, 1 Arsenalo St.,Vilnius	2021-2022	352,55 m^2 63 m^2	n=178	16^{th}-18^{th}	Račas 2022
7	Remains of the Great Synagogue of Vilnius	2018	187,75 m^2	n=143	17^{th}-19^{th}	Širvydaitė-Šliupienė, Seligman, Baubonis, Račas, 2018
8	7A Klaipėdos St., Vilnius	2007; 2011	20 m^2	n=14	15^{th}-20^{th}	Kliaugaitė, Pranckėnaitė 2011
9	Reformatai Square, Vilnius	2018	184 m^2	n=19	15^{th}-20^{th}	Songaila, Račas, 2018
10	8 Liejyklos St., Vilnius	2019	681 m^2	n=8	17^{th}-19^{th}	Butrimaitė 2019
11	2 Aukštaičių St., Vilnius	2021	561 m^2	n=14	mid-17^{th}-early 18^{th}	Poška 2021
12	3 Žygimantų St., Vilnius	2021	90,6 m^2	n=12	17^{th}-20^{th}	Šmigelskas, Sadauskas 2019
13	Radvilų Street, Vilnius	2017	105 m^2	n=12	First half of the 17^{th}- second half of the 20^{th}	Sadauskas 2017
14	The surroundings of the Radvila Castle, Vilnius	2005	54 m^2	n=23	15^{th}-17^{th}	Kuncevičius, Laužikas, Striška 2005
15	13 Nemuno St., Kaunas	2021	523.08 m^2	n=13	16^{th}–18^{th}	Kalinauskas, Fediajevas 2021
16	1 Daugirdo St., Kaunas	2019	966 m^2	n=85	15^{th}–17^{th}	Poška 2019
17	2 Muitinės St., Kaunas	2019–2020	33 m^2	n=6	15^{th}-20^{th}	Poška 2019
18	Kaunas City Garden, Kaunas	2020	442 m^2	n=5	late 18^{th} – first half of the 19^{th}	Tetereva, Fediajevas 2020.
19	13 Rotušė Square, Kaunas	2010	158 m^2	n=3	16^{th}	Balčiūnas 2010
20	35 Karaimų St., Trakai	2018	38.8 m^2	n=7	15^{th}–17^{th}	Banyte-Rovell, Lisauskaitė 2018
21	19 Danės St., Klaipėda	2018	1310 m^2	n=11	end of the 17^{th}-20^{th}	Brazdeikis 2018
22	11B Daržų St., Klaipėda	2020	34.5 m^2	n=43	17^{th}–20^{th}	Songailaitė, Šiaulinskas 2020
23	18A Mokyklos St., Klaipėda	2021	34 m^2	n=3	17^{th}–20^{th}	Petkus, Balsas, Kraniauskas 2021
24	Tiškevičiai Alley, Palanga	2016	3097 m^2	n=22	16^{th}–20^{th}	Jazbutytė 2016
25	13 and 17 Juozapavičiaus St., Alytus	2021	49.5 m^2	n=20	16^{th}–20^{th}	Vutkin, Rimkienė 2021

Table 1. sites in the cities, analysed.
1 lent. Analizuotos archeologinės vietovės miestuose.

	Site	Years of excavation	Excavation area	Number of specimens	Period	References
26	The surroundings of Raudonė Castle, Jurbarkas	2021	3267 m^2	n=35	14^{th}–20^{th}	Sadauskas, Važnevičius 2021
27	Radvila family palace at the Dubingiai Castle site, Molėtai	2014	20 m^2	n=28	half of the 15^{th}– 1^{st} half of the 17^{th}	Kuncevičius, Augustinavičius, Laužikas, Šmigelskas 2014
28	Kernavė town	1987-2001	~18,000 m^2	n=193	13^{th}- 14^{th}	Vaičiūnienė 2000; Vaičiūnienė 2001; Vaičiūnienė 2002; Vaičiūnienė 2003; Vėlius 2005; Vėlius 2019; Vėlius, Vengalis, Pilkauskas 2021; Vėlius 2022

during the abovementioned period, manufacturing activities were carried out here (Vaitkevičius et al. 2006). Like most of Vilnius, the studied territory suffered during the mid-17^{th}-century war with the Moscow state (Remenčiūtė 2017).

7 Pylimo Street (n = 125, No 2) represents the historical location of the evangelically reformed community living outside the city wall. This territory had a reformed evangelical cemetery where they were buried in the early 17^{th} or late 16^{th} century. The area expanded during the 17^{th} century. Even before 1655, the area was already fully built up with buildings—there were both wooden and brick buildings, church and cemetery chapels, cellars and living quarters, a hospital, and a brick fence. The buildings in the area were demolished during wars or other attacks but were soon rebuilt (Dambrauskaitė 1992).

9 Klaipėdos Street (n = 16, No 3) is located in the old town of Vilnius and in the building complex of the Oskierki Palace. Architects date the earliest excavated masonry in this area to the 15^{th} century. Architects dated the earliest discoveries in the earliest horizon of the cultural layer to the 15^{th} and 16^{th} centuries. The cultural layer and the remains of the Oskierki Palace date to the 14^{th}-20^{th} centuries (Jonutis, Girlevičius 2019).

Pilaitė Castle (n = 61, No 4) stood on the Pilaitė hillfort, which was first mentioned in 1846 by the historian Mykolas Balinskis, who speculates that „there used to be the castle of Visvaldės, which was often mentioned by the crusaders. The once rich Viršilai family, now extinct, had a brick castle here, called Viršilai Suderve" (Kirkoras 1991). In 1499, Grigalius Astikas, a representative of the famous noble family of the Grand Duchy of Lithuania, bought the surrounding lands from a Vilnius citizen. To protect the capital's western approaches, he began to build a brick castle on the hill. The war with Russia likely destroyed the castle in 1655. At the beginning of the 19^{th} century, only the ruins were recorded, although in 1828, the plan of the manor still shows the plan of the palace with two towers (Kiniulis 2021).

6 Sodų Street (n = 100, No 5) is located on a slope in the suburb of Saint Steponas, formed along the road to Rūdininkai. In the 17^{th} century, behind the former city wall and Rūdininkai gate was the widely known Horse Market, next to which Sodų Street was formed. The suburb was distinguished by a rare construction of the area. In the second half of the 18^{th} century, the eastern part of Sodų Street was occupied by arable land, gardens, orchards, pastures, small wooden houses, homesteads or even shacks. 6 Sodų Street belonged to 1251 Possession. Between the mid-19^{th} century and the mid-20^{th} century, the possession underwent brick construction (Vasiliauskas 2019).

The 1610 Vilnius fire led to the construction of the courtyard of the Castellan's House, located on 1 Arsenalo Street (n = 178, No 6). The excavations revealed no layers from the 15th or 16th centuries. The time of construction of Pilininkas House can be considered to be the end of the 16th century—the beginning of the 17th century. The destruction of the cellar entrances in the middle of the 19th century left three shortened, steep descents to the three cellars of Pilininkas House. As early as the 17th century, the fourth basement underwent complete filling. The building installed gunpowder warehouses, workshops, living quarters, a canteen and a bakery in the 19th century. In 1879, Pilininkas House came to an end (Kalinauskas 2019).

Remains of the Great Synagogue of Vilnius (n = 143, No 7) is a little further away from Žydų Street; it was accessible through the gate in Žydų Street and the narrow courtyard, the so-called synagogues. This newly built synagogue was the largest in the Polish-Lithuanian Commonwealth at that time. Vladislavas IV Vaza, the Grand Duke of Lithuania, granted permission to build the Great Synagogue. In 1748, a fire broke out in Vilnius, destroying a large part of the city. The Great Synagogue of Vilnius and its surrounding buildings were also burned and later rebuilt. In 1896, instead of the small shops, a two-storey library was designed between the Vilnius Great Synagogue and Žydų Street. The Great Synagogue of Vilnius and the buildings next to it were destroyed during the World War II. Based on the building project of Muziejaus (now Vokiečių) Street prepared in 1954, Vilnius Great Synagogue and the remains of the surrounding buildings were finally razed to the ground (Jankevičienė 2008).

7A Klaipėdos Street (n = 14, No 8), is located in the 28th block of Vilnius, next to the former defensive wall of the city. The construction of different sections of the wall occurred at different times, but this area, situated near one of the most significant city gates—the Trakai Gate—should rank among the earliest. The block's wooden houses date back to the 16th century. The 18th century saw the formation of a continuous building along the streets, complemented by a number of free areas where the townspeople planted gardens. In 1748, during a fire, most of the buildings of the block burned down. At the end of the 18th and 19th centuries, after the demolition of the city wall, the block expanded to the west, new buildings were built, and old buildings were reconstructed (Kliaugaitė 2015).

Reformatai Square (n = 19, No 9) is the historical area of the Vilnius evangelically reformed Synod Building and other facilities. Here, we found masonry fragments (cellars, arched foundations) dating to the 17th century. The excavations unearthed a 3 m thick cultural layer dating to the 16th–17th century, along with Iinhumation burial and brick building foundations. The remains of the Vinholdi Chapel, the wooden foundations of the reformed church, and the site of the consistory building were also discovered (Songaila, Račas 2018).

The site known as 8 Liejyklos Street (n = 8, No 10) is located in Liejyklos Street, Vilnius. The completion of the current street occurred only in the mid-19th century. The name of the street originates from the 17th century, the former cannon casting workshop in Radvilės Jurisdiction. In the 19th century, the street was called Puškarska, later Semionovska and Preobraženskaja. The 1737 K. Fuurstenhof's plan depicts a wooden building located behind the city defensive wall, the stream, and the streets of Totorių and Odminų streets. In 1808, based on K. Grunert's plan, wooden houses still stood on the roadway of Liejyklos Street, along the Vingrė (Kačerga) stream. In the Vilnius city plan of 1837, the red lines of the newly formed Liejyklos, L. Stuokos-Gucevičiaus, and Totorių streets were drawn; the new borders of the Governor General's garden were drawn; wooden houses (former possession 671) and old brick houses were demolished, and new streets were formed between the current block of 8 Liejyklos Street and L. Stuokas-Gucevičiaus Street (Butrimaitė 2019).

2 Aukštaičių Street (n = 14, No 11) is in the historical suburb of Paplavai (now Paupys), which was formed near Užupis on the other side of Vilnelė. It is believed that the nature of the construction here did not change from the 16th to the 19th century (Drėma 1991). The exact boundaries and the start of the suburb's development remain unknown. Since the 16th century, the damming of the Vilnia stream through the Paplavas has enabled the milling of grain and the production of paper and gunpowder. The suburb remained sparsely populated; most of the territory was occupied by gardens or was unused—this can be seen in the city plan of the first half of the 18th century (Poška 2022).

3 Žygimantų Street (n = 12, No 12) is on the territory of the historical Radvilos residence in Puškarnia. Since the 15th century, it belonged to Radvilos and was a part of the Lukiškės suburb (Vitkauskienė 2010). Radvilos added the Kiškų site with a garden to the manor in 1623 (Vitkauskienė 2006). The territory also contained stables, a barn, other farm buildings, a garden and four ponds surrounded by flower beds (Drėma 1991). The 1655–1661 war with Moscow severely damaged the palace and other manor buildings. The Northern War in 1705 caused damage, burning and eventual abandonment of the manor buildings. During the 18th century, townspeople rented out the territory of the manor in individual possessions. In 1828-1829, the ruins of the palace were sold and dismantled as construction material (Vitkauskienė 2010).

The excavated area of Radvilų Street (n = 12, No 13) is in the former historical territory of the Radvilai residence in Puškarnia and the territory of Jonas Juozapas Tiškevičius Palace. The quarter belonged to the Lukiškės suburb in the Middle Ages. At the end of the 15th century, Jurgis Radvila, the field hetman of the Grand Duchy of Lithuania, owned estates here. The palace of Vilnius Castellan was near the Neris River in the middle of the 16th century (Sadauskas 2017).

A total of 745 bone specimens were collected in the territory of Vilnius town (Table 2). At least 14 species of birds were identified. The largest part of identified birds were land fowl with chickens (NISP=296) making up the highest amount of specimens. Among the waterfowl, the largest number of the bones were of geese (NISP=259).

Kaunas

Five different objects (Figure 2) from the second largest city in Lithuania are represented from the old town, near Nemunas and Neris rivers, Rotušė Town Square, and Kaunas city garden. 13 and 15 Nemuno Street (n = 13; No 15) is situated in the 28th block of the Kaunas Old Town. The block began to form in the 16th century and was inhabited in the second half of the 17th century. The war with Moscow and epidemics destroyed the entire city in the middle of the 17th century and the second half of the 18th century. The only signs of recovery began at the end of the 18th century (Kalinauskas, Fediajevas 2021).

1 Daugirdo Street (n = 85, No 16) is located in the sixth block of the old town of Kaunas. The development of constructions began to take shape in the 15th century, growing most intensively during the 16th and 17th centuries, until the middle of the 17th century, when the natural development of the block was interrupted during the war with Moscow (1655-1660), and the cultural layer preserved four possessions (Poška 2019).

2 Muitinės Street (n = 6, No 17) is the site of the former Kaunas Franciscan monastery and church, which were built at the beginning of the 15th century. The monastery building and other farm buildings were built near the church, between Muitinės and V. Kuzmos streets and the Nemunas River. Together with the church, they formed a unified fenced complex. In 1669, the buildings were rebuilt after their destruction, but they were again destroyed by the French soldiers in the year 1812 (Poška 2019).

Kaunas City Garden (n = 5, No 18) is the historical part of the Kaunas New Town. The Kaunas defensive wall and Miller's tower, which border the Kaunas Old Town, are located in the western part of the site. At the end of the 16th century, the Tatars settled near the city garden. The Tatars inspired the construction and naming of the gates of the defensive walls between 1610 and 1625. Planning for a Catholic cemetery next to it began in 1795. The year 1847 saw the formation of block 177 as part of the Kaunas city expansion project. The cemetery persisted until the 19th century, but it was probably abandoned in the 18th century due to the establishment of a new cemetery in 1848 (Tetereva, Fediajevas 2020).

13 Rotušės square (n = 3, No 19) is located in the 3rd block of Kaunas Old Town, making it one of the largest in the old town. Kaunas Castle moat forms its northern boundary. Bernardinai Street divided the quarter into two parts until the 18th century, with the Bernardinai monastery and its properties on the western side, and the city properties on the eastern side. Historical records name the building on the block in question as Sirutis Palace. In addition to the main palace, the estate also had a stable, a carriage house, and a barn (Balčiūnas 2011).

A total of 112 bone specimens were collected in the territory of Kaunas town (Table 3). At least four species of birds were identified (NISP=78). The largest part were land fowl: chickens (47,3%; NISP=53), hazel grouse (1,8%; NISP=2) and turkey (0,9%; NISP=1). The rest were geese (19,6%; NISP=22).

Trakai

35 Karaimų Street is on the territory of Trakai Old Town. The site is located in the territory of the Trakai historical national urban reserve. The building in the territory was built in the 16th century, and it burned down in the second half of the 17th century. The building underwent another reconstruction at the end of the 17th and the beginning of the 18th centuries. Stone pavement once surrounded the building. We assume that the building served agricultural purposes. The territory was densely populated in the 16th-17th and 18th-19th centuries (Banytė-Rovell 2018).

One object – 35 Karaimų Street (n = 7; No 20; Figure 2) from Trakai Old Town – represents Trakai town in the 15th–17th centuries (Table 3). At least two species of birds were identified (85,7%; NISP=6). One waterfowl species: goose (42,9%, NISP=3) and one land fowl species: chicken (57,1%; N=4).

Klaipėda

Three objects from Klaipėda Old Town (Figure 2) represent Klaipėda city in the 17th–20th centuries. Two objects are located in the Old Town of Klaipėda and one in the periphery. 19 Danės Street (n = 11, No 21) is situated in Klaipėda New Town, near the Danė River and Klaipėda Castle. Danės Street can be seen in the city's plans as early as the second half of the 17th century. There were homesteads on the right side of Danė River bank in the 16th century. In some city plans dating to the middle of the 17th century—the second half of the 17th century—the current Liepų Street is also marked, and later turned into a bird market (Tatoris 1994). The site likely hosted leather processing and animal slaughtering activities, or it served as a disposal site for such waste. The research report on the zooarchaeological material confirms this. The investigated collection contains a variety of animal bones. Some of them contain the typical food and kitchen waste of the townspeople (Petkus, Balsas, Kraniauskas 2021).

11b Daržų Street (n = 43, No 22) is situated in Klaipėda Old Town in the historical part of Odų suburb. Historical sources mention the suburb in the second half of the 16th century, but the exact boundaries are not known. In 1692, the suburb of Odų Street received the rights of a partially independent urban planning unit. The old town's territory merged with this suburb in 1722–1723

(Sembrzycki 2002). Frederick's city plan began to take shape more clearly in the middle of the 17th century. Around the end of the 17th century and beginning of the 18th century, a marketplace began to function there (Tatoris 1994). Daržų Street can be seen in the city plans from the second half of the 17th century (Songailaitė 2020).

18A Mokyklos Street, Klaipėda (n = 3, No 23) is located in the territory of Joniškės Manor. The history of Joniškės Manor dates back to the 17th century. The Russians destroyed the manor during the Seven Years' War. In the middle of the 19th century, Joniškės Manor was divided into small plots and rented out. This was the beginning of Joniškės village. The manor buildings were destroyed during World War II. Today, only one farm building remains in Joniškės Manor (Demereckas, Elertas, Genienė, Valančiūtė 2015).

A total of 57 of bone specimens were collected in the territory of Klaipėda town (Table 3). At least five species of birds were identified (NISP=49). Only two species of *Phasianidae* family were identified: chicken (24,6%; N=14) and turkey (8,8%; N=5). Interestingly, the largest part were waterfowl (N=32). Three species were identified: geese (50,9%; NISP=29), ducks (1,8%; NISP=1) and mute swans (1,8%; NISP=1).

Palanga

Palanga's historical written sources from the 16th and 17th centuries are extremely fragmentary. The earliest Palanga city plan dates back to 1779–1791. The plan marks a cemetery in the vicinity of the current Palanga Kurhaus; however, it relocated from this location in 1824. During the 16th and 18th centuries, Palanga's vital centre was north of the Rąžė River, near the church and manor homestead (Miškinis 2007). In the northern part of the square, four stages were distinguished: middle of the 16th century wooden constructions; end of the 16th century—1639 Palanga manor—a brick building; 18th century—1824 Palanga cemetery; and 19th-20th century excavations and structures (Jazbutytė 2016).

One object, Tiškevičiai Alley (n = 22; No 24; Figure 2), from Palanga Old Town in Lithuania, represents the 16th–20th centuries. A total of 22 of bone specimens were collected in the territory of Palanga town (Table 3). At least three species of birds were identified (68,2%; NISP=15). The largest type was goose bones (45,5%; NISP=10). The remaining were landfowl: chicken (36,4%; N=8) and pigeon (4,5%; N=1).

Alytus

13 and 17 Juozapavičiaus Street (n = 20; No 25; Figure 2) are the sites that fall into the protected area of the old town of Alytus. The city inventories from the second half of the 16th century describe Alytus as a small town with approximately 1,000 inhabitants. The majority of them were involved in crafts and trade. Alytus received the Magdeburg rights in 1581, which improved the city's economic development. In the 17th and 18th centuries, the city often suffered from various disasters: war, plague and fires. All this impacted the development of the city; the population and territory decreased. The Grand Duchy of Lithuania's Seimas adopted the constitution in 1776, depriving Alytus of its rights to self-government. Two states, Russia and Prussia, divided Alytus after the third partition in 1795. For more than a hundred years, both parts of the city developed differently (Vutkin 2021).

A total of 20 of bone specimens were collected in the territory of Alytus town (Table 3). At least four species of birds were identified. One species was identified as goose (53,3%; NISP=8) and three were landfowl (*Phasianidae* family). All of them were domestic species: chicken (20%; NISP=3), turkey (20%; NISP=3) and pheasant (6,7%; NISP=1) of Phasianidae family (46,7%).

Jurbarkas

Until the 16th century, Raudonė was a royal estate, which the Polish king and Grand Duke of Lithuania Žygimantas Augustus, gave to the Prussian merchant Krišpinas Kiršensteinas, who built Raudonė Castle at the end of the 16th century. The castle underwent another reconstruction in the 17th century. In the 18th century, the castle was abandoned. The castle underwent repairs in the second half of the 18th century. In the 19th century, the castle stood abandoned; the bricks of its walls were disassembled and sold in Jurbarkas city (Sadauskas 2021).

One object, Raudonė Castle's surroundings (n = 35; No 26; Figure 2), represents Jurbarkas city (Table 3). Three species of birds were identified. Two species belonged to land fowl (34,3%; NISP=12): chickens (22,9%; NISP=8) and turkeys (11,4%; NISP=4). The remaining were goose (31,4%; NISP=11).

Dubingiai, Molėtai

Dubingiai Castle site is located in Molėtai district, Dubingiai township, on the former island of Lake Asveja. Currently, the site is a vast peninsula, measuring approximately 500 meters in length and up to 200 meters in width, shaped like a hill. Remains of Radvilų Palace and the evangelical-reformed church dated to the 15th and 17th centuries are still preserved in this site (Kuncevičius, Laužikas 2004; Šmigelskas 2015).

The Radvila family palace (n = 28; No 27; Figure 2), located at the Dubingiai Castle site in Molėtai, represents the surroundings of the Dubingiai Castle. A total of 28 bone specimens were collected in the territory of Radvila family palace at the Dubingiai Castle site (Table 3). At least three species of birds were identified (NISP=19). Two species belonged to waterfowl (28,5%, NISP=8): goose (25%, NISP=7) and mute swan (3,5%, NISP=1). The rest were chickens (39,2%, NISP=11) of Phasianidae family.

Kernavė

Kernavė Upper Town (n = 193; No 28; Figure 2) is in the eastern part of modern Lithuania. In the second half of the 13th century, there was a castle on Aukuras hillfort and a town surrounding it with characteristic defensive installations and street layout. Zooarchaeological and other findings dating from the end of the 13th century and the first half of the 14th century reflect the prosperity of Kernavė Lower Town (Vėlius 2005, 10). However, the Teutonic Order and its allies attacked the city in 1390 AD. City defenders set fire to the castle, and even though the city itself did not burn, it was abandoned by the residents in the 14th century (Vėlius 2005; Kuncevičius and others 2019; Vitkūnas 2006). Sediments and soil layers covered the area over time. High groundwater levels under the moss preserved organic material very well. The entire complex of archaeological monuments in Kernavė was almost undamaged in later times (Vaičiūnienė 2000; Vaičiūnienė 2001; Vaičiūnienė 2002).

A total of 193 bone specimens were collected in the territory of Kernavė town (Table 3). At least 16 species of birds were identified (NISP=143). Four species belonged to waterfowl: goose (1,4%, NISP=2), ducks (1,4%, NISP=2), mute swan (0,7%, NISP=1) and ruddy turnstone (0,7%, NISP=1). However, as expected, the largest part, at least eleven species, were land fowl. Most of them were domestic (NISP=103) and wild (NISP=24) species of Phasianidae family (88,8%).

RESULTS

A total of 28 sites (Table 2; Table 3) were analysed, 998 (81,6%) bird bones were identified to species and 224 (18,4%) unidentified. At least 26 species were identified in all 28 objects belonging to seven families. The majority of them belong to *Galliformes* (n=589) order with *Gallus gallus* var. domesticus

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	17 Pylimo St., Vilnius	**7 Pylimo St., Vilnius**	**9 Klaipėdos St., Vilnius**	**Pilaitė Castle, Vilnius**	**6 Sodų St., Vilnius**	**Courtyard of the Castellan's House, Vilnius, 1 Arsenalo St.,Vilnius**	**Remains of the Great Synagogue of Vilnius**	**7A Klaipėdos St., Vilnius**	**Reformatai Square, Vilnius**	**8 Liejyklos St., Vilnius**	**2 Aukštaičių St., Vilnius**	**3 Žygimantų St., Vilnius**	**Radvilų St., Vilnius**	**The surroundings of Radvila Castle, Vilnius**
Taxa														
Galliformes														
Galliformes sp.	-	7	-	7	4	4	-	-	-	-	-	-	-	-
Gallus gallus	6	49	8	18	26	71	75	5	6	3	5	5	5	14
Tetrao urogallus	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Meleagris gallopavo	1	1	-	2	4	5	3	2	4	-	1	-	-	-
Tetrastes bonasia	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrao tetrix	-	1	-	1	-	-	-	-	-	-	-	-	-	-
Turdidae	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perdix perdix	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Anseriformes														
Cygnus sp	-	-	-	-	-	2	-	-	-	-	-	-	-	-
Cygnus olor/ cygnus	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Anas platyrhynchos	-	1	-	-	-	4	-	-	-	-	-	-	-	-
Tadorna tadorna	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Anser anser	5	20	5	12	52	80	45	5	5	3	8	5	5	9
cf Anser anser	-	-	-	-	-	6	9	-	-	1	-	-	-	-
Accipitriformes														
Accipiter gentilis	-	2	-	-	-	-	-	-	-	-	-	-	-	-
Strigiformes														
Strix aluco	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Passeriformes														
Corvus cornix	-	4	-	2	-	-	-	-	-	-	-	-	-	-
Corvus corax	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Corvus sp	-	-	-	1	-	-	-	-	-	-	-	-	-	-
Unidentified	1	39	2	25	14	3	10	2	4	1	-	2	2	-
Total identified	**12**	**86**	**14**	**43**	**86**	**175**	**133**	**12**	**15**	**7**	**14**	**10**	**10**	**23**
Total	**13**	**125**	**16**	**68**	**100**	**178**	**143**	**14**	**19**	**8**	**14**	**12**	**12**	**23**

Table 2. The amount of specimens in each site in Vilnius, Lithuania.
2 lent. Pavyzdžių kiekis iš kiekvienos aptariamos archeologinės vietovės Vilniuje.

	15	16	17	18	19	20	21	22	23	24	25	26	27	28
	13 and 15 Nemuno St., Kaunas	1 Daugirdo St., Kaunas	2 Muitinės St., Kaunas	Kaunas City Garden, Kaunas Garden	13 Rotušės Square, Kaunas	35 Karaimų St., Trakai	19 Danės St., Klaipėda	11B Daržų St., Klaipėda	18A Mokyklos St., Klaipėda	Tiškevičiai Alley, Palanga	13 and 17 Juozapavičiaus St., Alytus	The surroundings of Raudonė Castle, Jurbarkas	Radvila family palace at the Dubingiai Castle site, Molėtai	Kernavė town
Taxa														
Galliformes														
Galliformes sp.	-	3	-	-	-	4	-	-	-	-	-	-	-	-
Gallus gallus	3	45	1	-	1	-	2	10	2	8	3	8	11	103
Phasianidae family	-	-	-	-	-	-	-	-	-	-	-	-	-	15
Tetraonidae	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Tetrao tetrix	-	-	-	-	-	-	-	-	-	-	-	-	-	4
Tetrao urogallus	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Tetrastes bonasia	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Meleagris gallopavo	-	-	1	-	-	-	1	4	-	-	3	4	-	-
Phasianus colchicus	-	-	-	-	-	-		-	-	-	1	-	-	
Anseriformes														
Anser anser/fabalis	5	10	2	2	1	2	7	21	1	6	8	11	7	2
cf Anser anser	-	2	-	-	-	1	-	1	-	4	-	-	-	-
Cygnus olor/ cygnus	-	-	-	-	-	-	-	1	-	-	-	-	1	1
Anatidae sp	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Anas platyrhynchos	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Aythya sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	1

Table 3. The amount of specimens in each site in the cities of Lithuania Orders and species representation.
3 lent. Pavyzdžių kiekis iš kiekvienos aptariamos archeologinės vietovės Lietuvoje. Būriai ir rūšys.

	15	16	17	18	19	20	21	22	23	24	25	26	27	28
	13 and 15 Nemuno St., Kaunas	**1 Daugirdo St., Kaunas**	**2 Muitinės St., Kaunas**	**Kaunas City Garden, Kaunas Garden**	**13 Rotušės Square, Kaunas**	**35 Karaimų St., Trakai**	**19 Danės St., Klaipėda**	**11B Daržų St., Klaipėda**	**18A Mokyklos St., Klaipėda**	**Tiškevičiai Alley, Palanga**	**13 and 17 Juozapavičiaus St., Alytus**	**The surroundings of Raudonė Castle, Jurbarkas**	**Radvila family palace at the Dubingiai Castle site, Molėtai**	**Kernavė town**
Accipitriformes														
Aquila chrysaetos/ Haliaetus albicilla	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Accipiter gentilis	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Haliaetus albicilla	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Strigiformes														
Strix aluco	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Charadriiformes														
Arenaria interpres	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Passeriformes														
Coloeus monedula	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Corvus corax	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Pica pica	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Columba palumbus	-	-	-	-	-	-	-	-	-	1	-	-	-	-
Nucifraga caryocatactes	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Rallidae														
Rallus aquaticus/ crex crex	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Unidentified	3	25	2	3	1	-		6		3	5	12	9	50
Total identified	10	60	4	2	2	7	11	37	3	19	15	23	19	143
Total	13	85	6	5	3	7	11	43	3	22	20	35	28	193

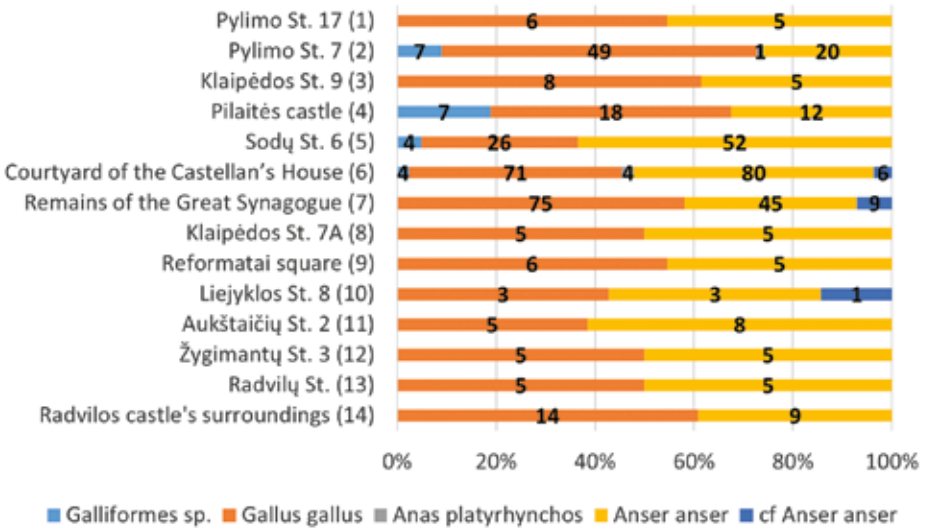

Fig. 1. Distribution of poultry in Vilnius sites.
1 pav. Naminių paukščių pasiskirstymas archeologinėse vietovėse Vilniuje.

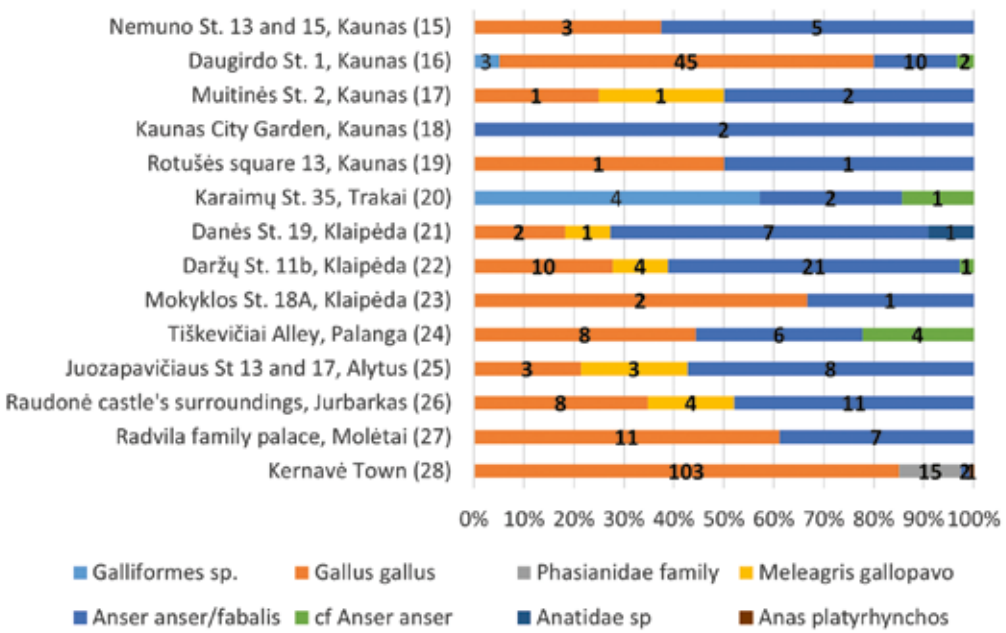

Fig. 2. Distribution of poultry in Kernavė Town, Molėtai, Jurbarkas, Alytus, Palanga, Klaipėda and Kaunas sites.
2 pav. Naminių paukščių pasiskirstymas archeologinėse vietovėse Kernavėje, Molėtuose, Jurbarke, Alytuje, Palangoje, Klaipėdoje ir Kaune.

(n=493) being the most representative. Second largest group is *Anseriformes* (n=383) order with *Anser anser/fabalis* (n=368) being the most representative. Other identified orders includes *Passeriformes* (n=13), *Accipitriformes* (n=5), *Strigiformes* (n=2), *Charadriiformes* (n=1) and *Rallidae* (n=1).

Galliformes

Gallus gallus var. domesticus (n=590) is the most common bird species and were present in almost all sites (n=26) while *Galliformes* were identified in all sites. Other species, *Meleagris gallopavo* (n=23) were present at fourteen sites. These bones were from the wings and legs. Other species included *Tetrao tetrix* (n=6) present in three sites and were of wing and leg bones. *Tetrao urogallus* (n=4), which was present in three sites and consisted of wing and leg bones. *Tetrastes bonasia* (n=3) was present at 13 and 15 Nemuno Street and were of left and right side of the femur and of the right side of tarsometatarsus. One bone of *Phasianus colchicus* (n=1) was found at 13 and 17 Juozapavičiaus Street and was coracoid of the right side. One tibiotarsus of *Perdix perdix* (n=1) was found in Klaipėdos Street 9. Other bones were identified to families *Phasianidae* (n=15) and *Tetraonidae* (n=2). 19 bones were assigned to *Galliformes* species.

The description of grouse given by Husovianus in the 16th century testifies that grouse were the favourite birds of that time: "they are big, sometimes heavier than a fat goose and their delicious meat entices us with its smell" (Husovianas 2007). However, it is likely that he is referring to higher-status settlements such as castles. For this reason, bones of grouse are scarce in the material of townspeople.

Juvenile (unfused) bones of chickens recovered in nine sites: Kernavė Town (n=13; 12,6%), 7 Pylimo Street, Vilnius (n=6; 12,2%), 1 Daugirdo Street, Kaunas (n=2; 4,4%), 6 Sodų Street, Vilnius (n=2; 7,7%), Courtyard of the Castellan's House, 1 Arsenalo Street, Vilnius (n=1; 1,4%), 11b Daržų Street, Klaipėda (n=1; 10%), Tiškevičiai Alley (n=1; 12,5%), remains of the Great Synagogue of Vilnius (n=1; 1,3%) and 9 Klaipėdos Street, Vilnius (n=1; 12,5%). Butchery marks were visible in two sites: Kernavė town (n=6; 5,8%) and Radvila family palace at the Dubingiai Castle site (n=5; 45,5%).

Chickens

Chickens go through three stages of domestication: taming, breeding in human presence, and full human control of breeding. Once humans reach the final stage, they undergo morphological changes and diversify into various varieties through artificial selection (Darwin 1868; Peterson, Brisbin 1999). The full domestic status of chickens becomes evident as they spread beyond their natural distribution area (Serjeantson 2009).

Roosters are particularly abundant among poultry based on historical data. However, only four cases of male tarsometatarsus recovered from four different sites: 6 Sodų Street, Vilnius, 17 Pylimo Street, Vilnius, 7 Pylimo Street, Vilnius, and 9 Klaipėdos Street, Vilnius. They supplied capons—neutered roosters that grew big and fat—in smaller quantities. Their breeding was widespread in Western Europe as early as the Middle Ages (Woolgar 2007). Hens outnumbered roosters in all four cases, with mature chickens predominating over immatures at all sites. Chicken sizes from all sites were consistent; however, roosters tended to be larger. Most likely, townspeople kept chickens for eggs and consumed the older meat because they couldn't afford to kill them before they stopped laying eggs (Corbino et al., 2017).

Turkeys

Turkeys were unknown to the nobles of the Grand Duchy of Lithuania until the second half of the 16th century. They are mentioned for the first time in the third Statute of Lithuania, and their price reached as much as 20 groshy ('Trečiasis Lietuvos Statutas

1588 m.). Such a high price shows not only the rarity and luxury of these birds but also the large amount of extracted meat. The bones of these birds were recovered in the 14 objects from Vilnius (n = 9), Klaipėda (n = 2), Kaunas (n = 1), Jurbarkas (n = 1), and Alytus (n = 1) (tables 2 and 3).

Anseriformes

Anser anser/fabalis (n = 368) is the most common species in Anseriformes order and were present in all sites (n = 28). Other species, *Anas platyrhynchos* (n = 4), were present in three sites. One sternum were found in Kernavė Old Town, two humerus of the left and right wing were found in Courtyard of the Castellan's House, Vilnius, 1 Arsenalo Street,Vilnius. One humerus of the left side were found in 7 Pylimo Street. *Cygnus olor/cygnus* (n = 4) were present at four sites. One ulna of the left wing were found in Kernavė Old Town, one radius was found in Courtyard of the Castellan's House, Vilnius, 1 Arsenalo Street, one humerus of the left side was found in 11b Daržų Street and one mandible was found in 14 Jasinskio Street. One coracoid of *Tadorna tadorna* (n = 1) was found in the remains of the Great Synagogue of Vilnius. One carpometacarpus of the left wing belonged to *Anatidae* sp (n=1) and was found in Kernavė Old Town. One coracoid of the left wing was assigned to *Aythya* sp. (n=1) and was found in Kernavė Old Town. Other bones from the wings and legs were assigned to cf *Anser anser* (n = 23).

Juvenile (unfused) bones of geese recovered in one site: 3 Žygimantų Street, Vilnius (n=1; 12,5%). Butchery marks were visible in two sites: Radvila family palace at the Dubingiai Castle site (n=3; 27,3%), 8 Liejyklos Street, Vilnius (n=2; 40%), Courtyard of the Castellan's House, 1 Arsenalo Street, Vilnius (n=2; 2,5%), Pilaitė Castle (n=2; 16,7%), Kernavė town (n=1; 50%) and 1 Daugirdo Street, Kaunas (n=1; 10%).

Geese

People often kept geese, albeit in smaller numbers than roosters (Husovianas 2007). If people caught wild geese alive, they clipped their wings so that they stayed close to home, and these geese in turn attracted more geese (MacPherson 1897). Domestic geese are descended from greylags (Serjeantson 2009). A key factor in their domestication is that greylag geese are more sedentary than other geese, though they retain the instinct to huddle before the migration season. Some modern domestic breeds can lay up to 60 eggs per year. Given that a goose can raise approximately five goslings in a year, a surplus of eggs would remain for sale, albeit not to the same extent as domestic chickens. Geese mature rapidly and can be very long-lived (Ritchie 1920; Serjeantson 2023). It's likely that people hunted wild grey geese (*Anser anser*) alongside other prey birds. Additionally, there is a high probability that during the summer months, people may have simply caught feeding and flightless geese. When the large flapping feathers fall out during feeding, the geese do not fly, so until new feathers grow, they hide in reeds, sedges, and other aquatic plants growing in lakes and marshes (Blaževičius, Rumbutis, Zarankaitė 2012). Some of them were captured with nets, their wings were clipped, and they were fed inhouse until they became tame. Thereafter they fly out, but afterwards return home again to the food to which they are accustomed (Pennant 1776). A possible assumption is that in the spring, children or teenagers collected the eggs of wild grey geese from the nests. Hens hatched the eggs, and either used the grown geese for food or kept them in captivity for further breeding. It is believed that domestic geese in Lithuania began to be bred only in the 16th century, but it seems that wild geese were bred in the manner described before (Blaževičius et al. 2012). Once in the farmyard, one must prevent the geese from succumbing to their weak migratory instinct (Serjeantson 2023).

Ducks

The mallard is the most common duck today and probably was in the past. Mallard, teal and wigeon are generalists, feeding on land as well as in the water. Mallard and teal are primarily sedentary residents (Serjeantson 2023). The mallard may have been commensal for a long time before becoming fully domestic. Similar to geese, ducks require pinioning to remain in the farmyard, and they also lose their flight ability once they grow too heavy to fly (Serjeantson 2009). Ducks under the domestication become much larger, and the number of eggs laid per year increases heavily (Serjeantson 2009).

Catching seabirds required more skill than hunting game and wildfowl (Serjeantson 2023). It can be seen in the estate account books (Antanavičius, Petrauskas 2007; Antanavičius 2012) that not a single water bird is mentioned. The price, taste and difficulty of catching them may influence their selection. However, ducks and other waterfowl occur in the sites in question (table 2; table 3).

Doves

In *The Variation of Animals and Plants Under Domestication*, Darwin showed how the ancestor of the domestic pigeon was the rock dove, Columbalivia; the 'aboriginal parent must have been a species which roosted and built its nest on rocks; and I may add that it must have been a social bird' (Darwin 1868: 180). The original distribution of the wild rock dove is uncertain because feral populations have now colonized almost every country and city in the world (Simms 1979; Snow, Perrins 1998). It is likely that once communities became sedentary, cultivating and processing grain, and storing it within settlements, the rock dove became commensal and later fully domesticated (Serjeantson 2009). It forages on the ground for seeds, shoots, buds and invertebrates (Snow, Perrins 1998), though feral birds eat almost any food scraps they can scrounge around human settlements (Serjeantson 2009). We can discuss further archaeological and historical information on the supply chains of birds and their products (eggs, feathers and fat) in Lithuania since the 16th century. The first written sources appear when birds and their products were supplied to the mansions and castles (Antanavičius, Petrauskas 2007; Antanavičius 2012). Research held in the accounts of the estate of the King of Poland and Grand Duke of Lithuania, Žigimantas Augustus, covers aspects of daily life, the economy, and public life. Social aspects and kitchen services were studied by the Polish historian Marek Ferenc (Ferenc 2014); information about the food products consumed was provided by Adrzej Wyczański (Wyczański 1969), Józef Maroszek (Maroszek 2001), and Jan Leończuk (Maroszek J. and Leończuk 2011). Historian Liudas Glemža examined the cuisine in his article „Maistas" (Glemža 2010). Medieval menus often lack clarity about the species they refer to (Serjeantson 2023:8-10).

Alytus

Probably the most detailed description of birds and their products in the account books of the estates of Aleksandars Jogailaitis (1494–1504) and Žygimantas Augustus (1543–1548) was provided by Darius Antanavičius (Antanavičius, Petrauskas 2007; Antanavičius 2012). Account books are important sources that provide data on food supply chains, their assortment, quantities, and prices on different days of the year and from different markets during the king's residence in Alytus.

Most likely, the monarch and his court stayed in the secluded town to protect themselves from an outbreak of plague. During the stay of Žygimantas Augustus in his estate in Alytus, the ruler went hunting several times (Antanavičius 2012). As we can see from Table 4, large quantities of birds and their products were bought for the ruler's estate in Alytus. Unfortunately, we do not have zooarchaeological material from the Alytus estate to compare with the

English name	Latin name	Original name in the text	Mentioning count	Amount
Rooster	Gallus gallus	(Pro gallis)	48	23,138 1/2
Capon	Gallus gallus	(capones)	13	797
Geese	Anser anser	(pro ancis)	46	3,720
Capon/Chickens	Gallus gallus	(Ultra pullos et capones)	1	100
Pigeons	Columbidae	(columbis)	2	13
Quail	Coturnix coturnix	(Pro coturnicibus)	2	16
Night-heron	Nycticorax nycticorax	(Pro butoriis)	8	309
Capercaillie	Tetrao urogallus	(Glusczow)	1	-
Grey partridge	Perdix perdix	(Pro perddicibus)	13	1232
Thrush	Turdidae	(Pro quiczoli)	9	1,580 ½
Waxwing	Bombycilla	(Jemyolkow)	8	5,875
Black grouse	Lyrurus tetrix	(Czieczierycze)	3	1,149
Chicken	Gallus gallus	(Pro gallis)	1	81
Chickens	Gallus gallus	(Pro pullis)	1	36
Common pheasant	Phasianus colchicus	(Fasianos)	14	1,357
Hazel grouse	Tetrastes bonasia	(Jarzabki)	1	9
Small birds	Aviculas	(Aviculos)	2	210
Small birds	Parvae aves	(Aviculorum parvulorum)	4	3*
Fresh eggs	Ova nova	(Pro ovis recentibus)	2	-
Eggs	Ova	(Ovorum dacialium)	26	1,531 ½
Eggs for treating horses	Ova tractandi equorum	(Oworum pro medicina equestri)	1	4
Eggs from stations	Ova ex stationibus	(Oworum stacionalium)	2	30
Purchased eggs	Ova emptum	(Oworum emptorum)	1	36
Peas for roosters	Pisa pro gallis	(Ciceris pro gallis)	4	30 ½**
Oats for geese	Avene anseres	(Pro avena ancis tunis)	1	13**

*skewers
*barrels

Table 4. In Alytus and its surroundings in 1543-1548, bought birds, their products and other food products related to birds.
4 lent. Alytuje ir jo apylinkėse 1543-1548 m. pirkdavo paukščius, jų produktus ir kitus su paukščiais susijusius maisto produktus.

historical data. In the account books of the estate of the Grand Dukes of Lithuania, Žygimantas Augustus (Antanavičius 2012) and Aleksanders Jogailaitis (Antanavičius, Petrauskas 2007), names such as 'little birds' are found.

Dubingiai

The duchy of Dubingiai emerged as a significant supplier of food products to the Radvila Vilnius estate. In the winter of 1628, when Zigmantas Vaza was preparing to come to the capital, the peasants of Dubingiai carried out game birds, poultry, fish, and cut firewood in the Radvilos Palace next to Alanta,

Jašiūnai, and Vyžuonai (Ragauskienė, Karvelis 2009: 108). Dubingiai, together with the Žiupronia estate, was the main source of supplies for the Vilnius manor (Ragauskienė, Karvelis 2009: 141-142).

In the year 1680, the elder of the Dubingiai Manor informed the elder of the Dubingiai Duchy and P. Rora, the philanthropist of the Duchy of Dubingiai, that R. Danilevičius, the clerk of the chamber of Ashmena settlement, Vaita Baikovskis of the Svirainiai village of the Inturke estate, with a considerable entourage of nobles and peasants, used firearms to attack the village of Maldžiūnai in the Duchy of Dubingiai and took away from the Slička brothers animals, poultry (geese), grains, and various other assets from the family farm (Ragauskienė, Karvelis 2009: 151).

With the historical data, we can compare zooarchaeological findings and the mentions of the birds. Zooarchaeological data reveals the presence of three bird species at the Radvila Vilnius estate: chickens, geese, and a single swan bone. The swans may have been kept for beauty but also as a part of the menu (Ervynck 2004; Adamson 2004).

Kaunas

Kaunas' market place, reflecting the essence of the medieval city, was the main element of the city in the 16th century; trade-related crafts and valuable goods revealed the city's importance in the region. Townspeople often traded directly on their possessions, and in many cases the farming and commercial zone was not separated from the residential one. Buildings such as barns, storerooms and gardens are often found among the possessions of the Old Town of Kaunas (Bertašius 2013).

The 16th-century court books of Kaunas record the townspeople's fondness for keeping pigeons in their backyards, but they do not specify whether they kept them for food or for other purposes. The same court books recorded an intriguing complaint about other small birds, known as thrushes. On 22 January 1561, two townspeople engaged in a dispute over two and a half kapa (equal to 60 units) of smoked thrushes, which one had exchanged for a horse with a cart and a bag of hops. Unfortunately, it is almost impossible to find such small and fragile bones without sieving the material. On 28 January 1569, Mayor Jonas Zadora solved a conflict over 200 partridges that one city dweller sold to another (Antanavičius, Baliulis 2023:188).

Vilnius

In the 16th century, merchants in Vilnius engaged in both internal and external trade. Not only did merchants engage in city trade, or internal trade, but many small traders also engaged in retail trade. Most likely, merchants intended to transport the goods and raw materials to other markets. However, merchants sold some of them locally. They were sold in Vilnius stores, markets and fairs (Ragauskienė 2021). Trade took place not only within cities but also between cities. Kaunas was among the important Lithuanian cities for the merchants of Vilnius. In 1562, two merchants from Vilnius returning from Kaunas were attacked at an inn, losing their money and 10 partridges, for which they had paid 18 pieniążki (Ragauskienė 2021). Both young and elderly Vilnius women stood behind stalls in the market or simply traded on the streets. They dominated small trade, selling primarily food products: eggs, vegetables, cereals and other products (Karpavičienė 2005). Residents of Vilnius also engaged in litigation over trade relations. A 16th-century record from the local court documented a lawsuit involving geese (Ragauskienė, 2021).

Local markets and prices

Wild birds and poultry were traded in large (local) markets in Kaunas, Vilnius, and other cities (Tatoris 1994; Balčiūnas 2013; Ragauskienė 2021; Brazdeikis 2021). Today in Lithuania we eat a great deal of

chicken, but very few other birds. The consumption of birds at any given time seems to have little to do with their taste. Peasants were poultry keepers in post-medieval Lithuania. Households kept chickens, geese, and ducks for their own usage and for sale in local markets. The manor houses also relied on poultry supply chains to meet their needs. Eggs and fat also contributed to the diet of the peasants (Antanavičius 2012).

On 19 July 1647, the merchants and craftsmen in the city of Vilnius recorded the following taxes: 20 stalls selling chickens (pay) two kapas each; four stalls selling eggs (pay) for one grave (Baliulis, Meilius 2001: 561–563). The city of Vilnius recorded income from poultry stalls selling chickens, geese and other various birds in its books of income and expenses for the years 1657-1663 (Baliulis, Meilius 2001: 565-571). The price list of the market toll drawn up by the Joniškis magistrate on 12 January 1735, mentions a bundle of feathers for which the toll was two groshy (Baliulis, Meilius 2001: 575-577). On 1 July 1780, in the instructions on what tolls to collect according to the contract with His Royal Grace's chief landlord of the city of Žagarė, a toll of three groats is mentioned for grave-poached eggs and one groat each for a goose, turkey, or five hens (Baliulis, Meilius 2001: 579–584). On 12 January 1735, the market toll price list drawn up by the Joniškis magistrate mentions that he was charged a toll of two groshy for a bundle of feathers (Baliulis, Meilius 2001: 575). In the year 1685, Dubingiai Manor received about 90 gold coins for chickens and geese (Ragauskienė, Karvelis 2009: 155).

The first Lithuanian statute mentions 10 species of birds and their price. The source reveals that at the beginning of the 16th century, a goose cost three groshy; a capon and a hen—six groshy each; a grouse and a hen —one groshy each; a wild duck—two groshy; a peacock and domestic crane—three groshy each; a domestic swan—even 10 groshy (Lazutka 2007).

DISCUSSION

We now find domestic fowl (*Gallus gallus* var. domesticus) on every continent in the world, with the exception of Antarctica, and they have significantly contributed to our diets (Walker, Meijer 2020; Robinson et al. 2015). Based on the current archaeological evidence, domestic fowl were relatively late introductions to the territory of modern Lithuania, with the exception of Vilnius Lower Castle (Rumbutis, Blaževičius, Piličiauskienė 2018) and Kernavė Town (table 3). Chicken bones were also recovered in Klaipėda castle (Ehrlich et al. 2020). However, when it comes to the zooarchaeological material of the cities, the townspeople and domestic fowl come quite late.

Chicken was the most common bird in the diet of townspeople and noblemen (Table 2; Table 3). Regardless of their social status, chickens are dominated over other domestic and wild birds at all sites. Analysis of skeletal remains shows that a higher incidence of leg over wing bones remained in almost all sites (Figure 3; Figure 4). Since legs have more meat than the wings, this preference may indicate a higher status of these sites (Serjeantson 2009). Interestingly, the predominance of hens over cockerels suggests that the primary use of chickens was for egg production rather than meat. Unfused bones of immature chickens were also present. The presence of unfused bones may suggest the practice of chicken husbandry. Young chickens have tastier meat, which can also reflect a higher social status. Most of the sites showed minimal signs of butchery, suggesting that the birds were likely prepared and consumed whole.

Most likely, the ducks and geese were wild and hunted, not raised. The quantity of immature goose bones also refutes the possibility of actual husbandry. The presence of pheasants in a few sites also suggests that game hunting was probably a leisure activity. Turkeys were introduced to Europe in the early 16th century (Makowiecki, Gotfredsen 2002; Tyrberg

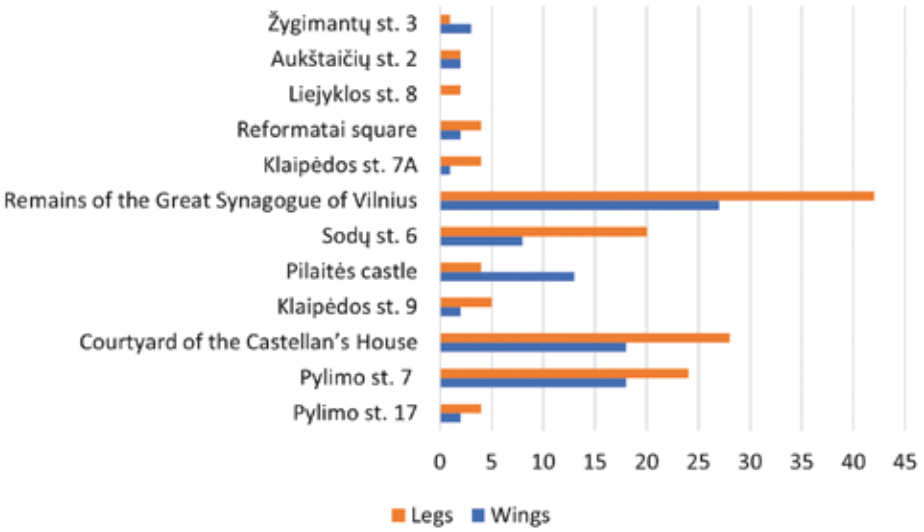

Fig. 3. The distribution of chicken (Gallus gallus) leg over wing bones recovered in Vilnius city sites.
3 pav. Vištų (Gallus gallus) kojų ir sparnų kaulų pasiskirstymas Vilniaus miesto radimvietėse.

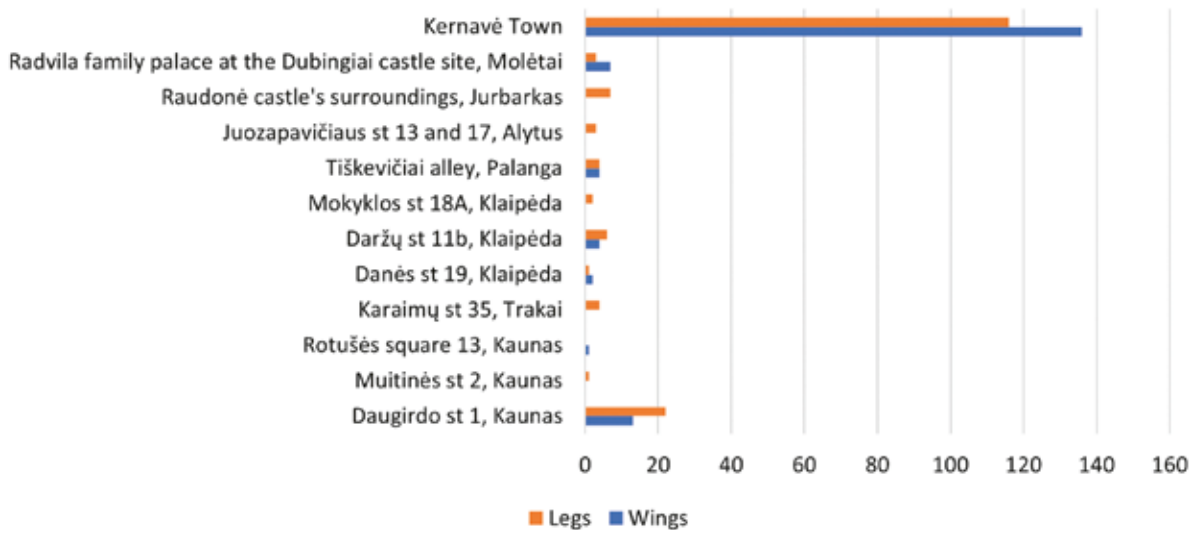

Fig. 4. The distribution of chicken (Gallus gallus) leg over wing bones recovered in Kaunas, Klaipėda, Trakai, Palanga, Alytus, Molėtai and Kernavė Town.
4 pav. Kauno, Klaipėdos, Trakų, Palangos, Alytaus, Molėtų ir Kernavės teritorijose rastų vištų (Gallus gallus) kojų ant sparnų kaulų pasiskirstymas.

2002; Kyselý, Meduna 2019). Many of the sites in question also contained turkey bones. Birds of the Columbidae family are commensal and are found in areas of human activity (Ehrlich, Rannamäe, Valk 2022). They fed on waste and coexisted with humans rather than being a part of a human diet.

CONCLUSION

It was commonly believed that poultry and turkeys, in particular, were either extremely rare or completely absent from the lifestyle of town people until very late times. It turns out that although the

number of bird bones is still relatively small compared to mammals, they are not completely absent (table 2; table 3).

It is worth mentioning that seaside sites do not look very different from the inland (table 2; table 3). Historical sources tell us that nobles started to buy poultry and other meat straight from the city markets. I wanted to compare the materials in different parts of Lithuania at the same time to see if there were any differences. The results would also be reflected in the status.

Due to their structure, the bones of birds are difficult material to research. Bird bones are typically smaller than those of mammals, particularly those of small species. As a result of this, archaeological excavations often overlook bird bones, particularly if they don't sieve the material. Chicken was the most important bird at all sites, for both eggs and meat. It is important to note that hand-collected material likely influenced the distribution of bird species at the sites. Sieving the material could have led to the discovery of smaller bird species.

LIST OF SOURCES AND REFERENCES

Adamson, M., W., 2004. *Food in Medieval Times*. Westport, CT, USA: Greenwood Press

Andriulis, V., 2003. *Trečiasis Lietuvos Statutas (1588 m.)*, Vilnius: Teisinės informacijos centras, p. 470.

Antanavičius, D., Petrauskas, R., 2007. *Lietuvos didžiojo kunigaikščio Aleksandro Jogailaičio dvaro sąskaitų knygos (1494–1504),* Vilnius: Pilių tyrimo centras "Lietuvos pilys".

Antanavičius, D., 2012. *Lietuvos didžiojo kunigaikščio Žygimanto Augusto dvaro sąskaitos (1543–1548),* Vilnius: Lietuvos istorijos institutas.

Antanavičius, D., Baliulis, A., 2023. *Kauno miesto aktų knygos XVI–XVIII a. Vaito knyga 1580–1583*, Vilnius: Lietuvos istorijos institutas.

Balčiūnas, D., 2010. Rotušės aikštė 13, *Archeologiniai tyrinėjimai Lietuvoje 2010 metais*. Vilnius: Lietuvos istorijos institutas, p. 332–335.

Balčiūnas, D., 2011. Rotušės a. 13, Kauno senamiesčio 3 kv. Maironio Lietuvių literatūros muziejus. 2010 m. archeologinių žvalgymų ataskaita. Kaunas, 2011.

Baliulis, A., Meilius, E., 2001. *Lietuvos Didžiosios Kunigaikštystės kasdienis gyvenimas,* Vilnius: Vilniaus dailės akademijos leidykla.

Baliulis, A., 2007. *Lietuvos Metrika. Knyga 6, (1494–1506); Užrašymų knyga 6*. Vilnius: Lietuvos istorijos instituto leidykla, p. 218–219.

Banytė-Rowell, R., 2018. Trakų senojo miesto vietos (u. k. 27125) teritorija, Karaimų g. 35, Trakų m., Trakų r. sav., detaliųjų archeologinių tyrimų 2018 m. ataskaita.

Banyte-Rovell, R., Lisauskaitė, B., 2018. Karaimų gatvė 35, *Archeologiniai tyrinėjimai Lietuvoje 2018 metais*. Vilnius: Lietuvos istorijos institutas, p. 346–348.

Bertašius, M., 2013. *Dingęs miestas. Viduramžių Kaunas archeologinių tyrimų duomenimis*. Kaunas: Technologija.

Blaževičius, P., Rumbutis, S., Zarankaitė T., 2012. Medžiokliniai, medžiojamieji ir naminiai paukščiai Vilniaus Žemutinėje pilyje XIV–XVI a. naujausių tyrimų duomenimis, *Chronicon Palatii Magnorum Ducum Lithuaniae 2*, Vilnius: Lituanistica, p. 299–319.

Blaževičius, P., Dambrauskaitė, N., Luik, H., Piličiauskienė, G., Rumbutis, S., Zarankaitė-Margienė, T., 2018. *Vilniaus pilių fauna nuo kepsnio iki draugo.* Vilnius: Vilniaus universiteto leidykla.

Bochenski, Z., Tomek, T., Wertz, K., Wojenka, M., 2018. Falconry in Poland from a zooarchaeological perspective, *Raptor and human – falconry and bird symbolism throughout the millennia on a global scale,* Hamburg: Murmann publishers.

Brazdeikis, N., 2018. Klaipėdos senojo miesto vietos su priemiesčiais (27077), miesto istorinės dalies, vad. Naujamiesčiu (22012) teritorijų, Klaipėdos m.

sav., Klaipėdos m., Danės g. 19, 2018 m. detaliųjų archeologinių tyrimų ir žvalgymų attaskaita (2 tomai).

Brazdeikis, N., 2018. Danės gatvė 19, *Archeologiniai tyrinėjimai Lietuvoje 2018 metais*. Vilnius: Lietuvos istorijos institutas, p. 324–326.

Butrimaitė, R., 2007. Vilniaus miesto vandentiekis. Archeologinių ir istorinių duomenų sintezė, *Lietuvos didysis kunigaikštis Aleksandras ir jo epocha* / redaktorius Rimvydas Petrauskas. Vilnius: Vilniaus pilių valstybinio kultūrinio rezervato direkcija, p. 190–198.

Butrimaitė, R., 2019. Liejyklos gatvė 8, *Archeologiniai tyrinėjimai Lietuvoje 2019 metais*. Vilnius: Lietuvos istorijos institutas, p. 308–312.

Corbino, M., De Grossi, M., Albarella, U., 2017. The role of chicken in the medieval food system: evidence from Central Italy, Groningen: *Tijdschrift voor Mediterrane Archeologie*

Dambrauskaitė, T., 1992. Lietuvos Evangelikų reformatų kolegija. Vilnius, Pylimo 7, Istoriniai tyrimai, Brėžinių kopijos, *Paminklų restauravimo ir projektavimo institutas*, Vilnius: Lietuvos istorijos institutas, p. 1–36.

Darwin, C. R., 1868. *The variation of animals and plants under domestication* (vol. 1). London: John Murray.

Dembińska, M., 1999. *Food and Drink in Medieval Poland: Rediscovering a Cuisine of the Past*. Philadelphia: University of Pennsylvania Press.

Demereckas, K., Elertas, D., Genienė, Z., Valančiūtė, J., 2015. *Klaipėdos dvarai*. Klaipėda: Libra Memelensis, p. 19–25.

Drėma, V., 1991. *Dingęs Vilnius*. Vilnius: Versus Aureus, p. 154–155.

Driesch, von den A., 1978. *A Guide to the Measurement of Animal Bones from Archaeological Sites,* Cambridge: Harvard University Press.

Ehrlich, F., Piličiauskienė, G., Urbonaitė-Ubė, M., Rannamäe E., 2020. 'The Meaning of Eagles in the Baltic Region. A Case Study from the Castle of the Teutonic Order in Klaipėda, Lithuania (13th–14th Century)', *Archaeologia Lituana,* vol. 21, p. 59–78. Vilnius: Vilnius university press.

Ehrlich, F., Piličiauskienė, G., Blaževičius, P., 2022. Bird remains from Vilnius Lower Castle, Lithuania (13th–19th centuries) reveal changes in social status and unusual bird pathologies, *International Journal of Osteoarchaeology.* Hoboken: WILEY.

Ehrlich, F., Rannamäe, E., Valk, H., 2022. Bird exploitation in Viljandi (Estonia) from the Late Iron Age to the early modern period (c. 950–1700). *Quaternary International 626*, Amsterdam: Elsevier p. 95–105.

Ervynck, A. O., 2004. The diet of the three orders in the feudal society of medieval north-western Europe. In Behaviour Behind Bones: The Zooarchaeology of Ritual, Religion, Status and Identity, Proceedings of the 9th Meeting of the ICAZ, Durham, UK, 23–28 August 2002; O'Day, S.J., Van Neer, W., Ervynck, A., Eds.; Oxford, UK: Oxbow Books, 2004; p. 215–223.

Glemža, L., 2010. Maistas, *Lietuvos didžiųjų kunigaikščių rezidencija Vilniuje. ed. Urbanavičius, Vytautas.* Vilnius: Versus Aureus, p. 319–327.

Husovianas, M., 2007. *Mikalojus Husovianas. Raštai*, Vilnius: Lietuvių literatūros ir tautosakos institutas.

Jankevičienė, A., 2008. *Vilniaus Didžioji sinagoga*, Vilnius: Savastis p. 16–22.

Jazbutytė, D., 2016. Palangos dvarvietė Grafų tiškevičių alėjoje, *Archeologiniai tyrinėjimai Lietuvoje 2016 metais*. Vilnius: Lietuvos istorijos institutas, p. 206–209.

Jonutis, G., Girlevičius, L., 2019. Klaipėdos g. 9, *Archeologiniai tyrinėjimai Lietuvoje 2019 metais*. Vilnius: Lietuvos istorijos institutas, p. 324–325.

Kalinauskas, A., 2019. Vilniaus pilių teritorijos su įtvirtinimais, pastatais ir jų liekanomis (791), kiemo priešais pilininko namą (24707) (Arsenalo g. 1, Vilnius) 2019 m. detaliųjų archeologinių tyrimų ataskaita (4 tomai).

Kalinauskas, A., Račas, J., 2019. Tyrimai Pilininko namo kieme Vilniuje, *Archeologiniai tyrinėjimai*

Lietuvoje 2019 metais. Vilnius: Lietuvos istorijos institutas, p. 148–157.

Kalinauskas, A., Fediajevas, O., 2021. Nemuno gatvė 13 ir 15, *Archeologiniai tyrinėjimai Lietuvoje 2021 metais.* Vilnius: Lietuvos istorijos institutas, p. 288–290.

Karpavičienė, J., 2006. *Moteris Vilniuje ir Kaune XVI a. pirmojoje pusėje. Gyvenimo sumiestinimo Lietuvoje atodangos,* Vilnius: Versus aureus.

Kiniulis, D., 2021. Pilaitės piliavietė, *Archeologiniai tyrinėjimai Lietuvoje 2021 metais*. Vilnius: Lietuvos istorijos institutas, p. 171–176.

Kirkoras, A. H., 1991. *Pasivaikščiojimai po Vilnių ir jo apylinkes*. Vilnius: Mintis, p. 158.

Kyselý, R., Meduna, P., 2019. The early history of the turkey (Meleagris gallopavo) in the Czech Republic. *Archaeological and Anthropological Sciences* 11, Berlin: Springerlink. 6431–6449.

Kliaugaitė, V., Pranckėnaitė, E., 2011. Tyrinėjimai Vilniuje, Klaipėdos gatvėje 7A *Archeologiniai tyrinėjimai Lietuvoje 2011 metais*. Vilnius: Lietuvos istorijos institutas, p. 557–567.

Kliaugaitė, V., 2015. Vilniaus senojo miesto vietos (2951), sklypo Klaipėdos g. 7A, 2011 m. detaliųjų archeologinių tyrimų ataskaita.

Kuncevičius, A., Laužikas, R., 2004. Dubingių piliavietės (Molėtų raj.) 2003 m. archeologinių tyrinėjimų ataskaita. Vilnius-Kulionys, F1-b.4214.

Kuncevičius, A., Laužikas, R., Striška, G., 2005. Radvilų rūmų tyrinėjimai Dubingių piliavietėje, *Archeologiniai tyrinėjimai Lietuvoje 2005 metais.* Vilnius: Lietuvos istorijos institutas, p. 146–150.

Lazutka, S., 2007. *Pirmasis Lietuvos Statutas (1529 m.)*, Vilnius: Margi raštai.

MacPherson, H. A., 1987. *A History of Fowling.* Edinburg: Douglas.

Makowiecki, D., Gotfredsen, A. B., 2002. Bird remains of medieval and post-medieval coastal sites at the Southern Baltic Sea, Poland. *Acta Zoologica 45*. Wiley: Krakow, p. 65–84.

Markevičienė, J., 2002. Pamiršta hipotezė arba Vilniaus miesto sandara XIV–XV amžiuje, *Menotyra Nr. 3 (28),* p. 30–45, Vilnius: LMA leidykla.

Maroszek, J., 2001. Ogrody królewskie w Wilnie i innych rezydencjach Wielkiego Księstwa Litewskiego w XVI wieku, Szafrańskiej, M., sud. Królewskie ogrody w Polsce. Conference materials. Warszawa, p. 109–127.

Maroszek, J., Leończuk, J., 2011. Wielka Księga Tradycji Kulinarnych Puszczy Knyszyńskiej. *Supraśl: Lokalna Grupa Działania Puszcza Knyszyńska*.

O'Connor, T., 2000. The archaeology of animal bones, *American Anthropologist,* Stroud: Sutton Publishing.

Pennant, T., 1776. *A tour in Scotland and voyage to the Hebrides, 1772.* Chester.

Peterson, A., Brisbin, L., 1999. Genetic endangerment of wild red Junglefowl *Gallus gallus?, Bird Conservation International, 9,* Cambridge: Cambridge university press, p. 387–394.

Petkus, M., Balsas, D., Kraniauskas, R., 2021. Joniškės dvaras *Archeologiniai tyrinėjimai Lietuvoje 2021 metais.* Vilnius: Lietuvos istorijos institutas, p. 207–211.

Piličiauskienė, G., 2021. Gyvūnų kaulų tyrimai. Petkus, M., Joniškės dvaro sodybos ūkinio pastato (u.k. 33712) teritorijos, Klaipėdos m. sav., Klaipėdos m., Mokyklos g. 18A, 2021 m. detaliųjų ir žvalgomųjų tyrimų ataskaita (2 tomai) / Marius Petkus.

Poška, T., 2019. T. Daugirdo gatvė 1, *Archeologiniai tyrinėjimai Lietuvoje 2019 metais.* Vilnius: Lietuvos istorijos institutas, p. 221–225.

Poška, T., 2019. Muitinės gatvė 2, *Archeologiniai tyrinėjimai Lietuvoje 2019 metais.* Vilnius: Lietuvos istorijos institutas, p. 225–228.

Poška, T., 2021. Vilniaus senojo miesto ir priemiesčių archeologinės vietovės (25504), Vilniaus senamiesčio (16037) teritorijos, pastatų komplekso (28113) Vilniaus m., Vilniaus m. sav., Aukštaičių g. 2, detaliųjų archeologinių tyrimų 2021 m. ataskaita (2 dalys).

Poška, T., 2021. Aukštaičių gatvė 2, *Archeologiniai tyrinėjimai Lietuvoje 2021 metais.* Vilnius: Lietuvos istorijos institutas, p. 465–470.

Račas, J., 2022. Tyrimai Pilininko namo kieme Vilniuje 2021–2022 m., *Archeologiniai tyrinėjimai Lietuvoje 2022 metais.* Vilnius: Lietuvos istorijos institutas, p. 156–164.

Ragauskienė, R., Karvelis, D., 2009. *Iš Radvilų giminės istorijos: Dubingių kunigaikštystė 1547–1808 m.* Vilnius: Vilniaus pedagoginio universiteto leidykla.

Ragauskienė, R., 2021. *Vilniaus "aukso amžius" miesto gyventojai ir svečiai.* Vilnius: Lietuvos istorijos institutas.

Remenčiūtė, M., 2017. Vilniaus senamiesčio (16073), Vilniaus senojo miesto ir priemiesčių archeologinės vietovės (25504) teritorijos, Vilniaus m. sav., Vilniaus m., Pylimo g. 17, 2017 metų detaliųjų archeologinių tyrimų ataskaita (2 tomai).

Remenčiūtė, M., Girlevičius, L., 2017. Pylimo gatvė 17, *Archeologiniai tyrinėjimai Lietuvoje 2017 metais*. Vilnius: Lietuvos istorijos institutas, p. 427–435.

Ritchie, J., 1920. *The influence of man on animal life in Scotland.* Cambridge: Cambridge University Press.

Robinson T. P., Wint G. W., Conchedda G., Van Boeckel T. P., Ericoli V., Palamara E., Cinardi G., D'Aietti L., Hay S. I., Gilbert M., 2014. Mapping the global distribution of livestock. *PloS one 9(5),* Sant Francisco.

Sadauskas, I., 2017. Radvilų rūmai Puškarnioje, *Archeologiniai tyrinėjimai Lietuvoje 2017 metais*. Vilnius: Lietuvos istorijos institutas, p. 231–236.

Sadauskas, J., Lisauskas, J., 2021. Šauklių ir Šv. Gertrūdos gatvės, *Archeologiniai tyrinėjimai Lietuvoje 2021 metais.* Vilnius: Lietuvos istorijos institutas, p. 296–300.

Sadauskas, J., 2021. Raudonės rezidencinės pilies komplekso (966), Jurbarko r. sav., Raudonė, Pilies g. 1, 2021 m. detaliųjų archeologinių tyrimų ataskaita (5 tomai).

Sadauskas, J., Važnevičius, P., 2021. Raudonės pilies aplinka, *Archeologiniai tyrinėjimai Lietuvoje 2021 metais.* Vilnius: Lietuvos istorijos institutas, p. 180–183.

Sembrzycki, J. K., 2002. *Klaipėdos karališkojo Prūsijos jūrų ir prekybos miesto istorija*. Klaipėda, T.1, p. 77.

Serjeantson, D., 2009. *Birds Cambridge Manuals in Archaeology.* Cambridge: University Press.

Serjeantson, D., 2023. *The archaeology of wild birds in Britain and Ireland.* Cambridge: Oxbow books.

Simms, E., 1979. *The public life of the street pigeon.* London: Hutchinson.

Snow, D., William, P. C., 1998. *The birds of the Western Palearctic. Volume 1: Non-passerines.* Oxford: Oxford University Press.

Songaila, E., Račas, J., 2018. Vilniaus evangelikų reformatų Sinodo pastato ir kitų objektų Reformatų skvere Vilniuje žvalgomieji tyrimai, *Archeologiniai tyrinėjimai Lietuvoje 2018 metais.* Vilnius: Lietuvos istorijos institutas, p. 263–267.

Songailaitė, R., 2020. Klaipėdos senamiesčio (16075) teritorijos, Klaipėdos m. sav., Klaipėdos m., Daržų g. 11B, detaliųjų archeologinių tyrimų 2020 m. ataskaita.

Songailaitė, R., Šiaulinskas, R., 2020. Daržų g. 11b, *Archeologiniai tyrinėjimai Lietuvoje 2020 metais.* Vilnius: Lietuvos istorijos institutas, p. 434–437.

Širvydaitė-Šliupienė, S., 2018. Vilniaus Didžiosios sinagogos liekanų (u. k. 41887), Vilniaus senamiesčio (u. k. 16073), senojo miesto vietos su priemiesčiais (u. k. 25504) teritorijų sklypo Vokiečių g. 13A, Vilniaus m., 2018 metų detaliųjų archeologinių tyrimų ataskaita.

Širvydaitė-Šliupienė, S., Seligman, J., Baubonis, Z., Račas, J., 2018. Vilniaus Didžiosios sinagogos liekanų tyrimai, *Archeologiniai tyrinėjimai Lietuvoje 2018 metais.* Vilnius: Lietuvos istorijos institutas, p. 272–276.

Šmigelskas, R., 2015. Dubingių piliavietės, vad. Pilies kalnu (5361), Molėtų r. sav., Dubingių mstl. detaliųjų archeologinių tyrimų 2014 metais ataskaita.

Šmigelskas, R., 2019. Vilniaus senojo miesto ir priemiesčių archeologinės vietovės (25504) ir Jono Juozapo Tiškevičiaus rūmų (1087) teritorijos, Vilniaus m. sav., Vilniaus m., Žygimantų g. 3, žvalgomųjų archeologinių tyrimų ir archeologinių žvalgymų 2019 m. ataskaita.

Šmigelskas, R., Sadauskas, I., 2019. Žygimantų gatvė 3, *Archeologiniai tyrinėjimai Lietuvoje 2019 metais*. Vilnius: Lietuvos istorijos institutas, p. 354–356.

Tarasova, M., 2021. Vilniaus senojo miesto ir priemiesčių archeologinės vietovės (25504), Vilniaus senamiesčio (16073), Vilniaus evangelikų reformatų sinodo pastato, kitų objektų komplekso (33214) 2021 m. detaliųjų archeologinių tyrimų Pylimo g. 7 ataskaita.

Tarasova, M., Remenčiūtė, M., 2021. Pylimo gatvė 7, *Archeologiniai tyrinėjimai Lietuvoje 2021 metais*. Vilnius: Lietuvos istorijos institutas, p. 491–493.

Tatoris, J., 1994. *Senoji Klaipėda: urbanistinė raida ir architektūra iki 1939 metų*. Vilnius, p. 61–62.

Tetereva, D., Fediajevas, O., 2020. Kapinės Kauno miesto sode, *Archeologiniai tyrinėjimai Lietuvoje 2020 metais*. Vilnius: Lietuvos istorijos institutas, p. 217–222.

Tyrberg, T., 2002. The archaeological record of domesticated and tamed birds in Sweden. *Acta Zoologica*. Cracoviensia, 45, p. 215–231.

Vaitkevičius, G., Valionienė, O., Sarcevičius, S., 2006. Vilniaus archeologijos atlasas. Vilnius: Lietuvos Istorijos Instituto leidykla.

Vaičiūnienė, D., 2000. Kernavės Viršutinio Miesto Tyrinėjimai, *Archeologiniai Tyrinėjimai Lietuvoje 1998 ir 1999 m*. Vilnius: Lietuvos Archeologijos Draugija, p. 131–134.

Vaičiūnienė, D., 2001. Kernavės viršutinis miestas, *Archeologiniai Tyrinėjimai Lietuvoje 2000 m*. Vilnius: Lietuvos Archeologijos Draugija, p. 40–41.

Vaičiūnienė, D., 2002. Kernavės viršutinis miestas, *Archeologiniai Tyrinėjimai Lietuvoje 2001 m*. Vilnius: Lietuvos Archeologijos Draugija, p. 59–60.

Vaičiūnienė, D., 2003. Kernavės piliakalnio III, vadinamo lizdeikos kalnu, aplinka, *Archeologiniai Tyrinėjimai Lietuvoje 2002 m*. Vilnius: Lietuvos Archeologijos Draugija, p. 40–41.

Vasiliauskas, L., Kliaugaitė, V., Širvydaitė-Šliupienė, S., 2019. Sodų gatvė 6, *Archeologiniai tyrinėjimai Lietuvoje 2019 metais*. Vilnius: Lietuvos istorijos institutas, p. 356–359.

Vasiliauskas, L., 2019. Vilniaus senamiesčio (16073) teritorijos, Sodų g. 6, 2019–2020 m. detaliųjų archeologinių tyrimų ir žvalgymų ataskaita.

Vėlius, G., 2005. *Kernavės miesto bendruomenė XIII–XIV amžiuje*. Vilnius: Vilniaus universiteto leidykla.

Vėlius, G., 2019. Tyrimai Kernavės archeologinėje vietovėje, *Archeologiniai Tyrinėjimai Lietuvoje 2019 m*. Vilnius: Lietuvos Archeologijos Draugija, p. 76–79.

Vėlius, G., Vengalis, R., Pilkauskas, M., 2021. Kernavės Aukuro kalno piliakalnio tyrimai, *Archeologiniai Tyrinėjimai Lietuvoje 2021 m*. Vilnius: Lietuvos Archeologijos Draugija, p. 93–97.

Vėlius, G., 2022. Kernavės archeologinės vietovės (37320) 2021 detaliųjų archeologinių tyrimų ataskaita.

Vitkauskienė, B., R., 2006. Ogrody barokowe Kiszków i Radziwłłów w Wilnie na Puszkarni, *Barok. Historia-Literatura-Sztuka. Półrocznik. XIII/I (25)*. Varšuva: Neriton, p. 141–142.

Vitkauskienė, B. R., 2010. Vilniaus pabūklų liejyklos teritorija (Puškarnia) XVI–XVIII a. šaltiniuose. Istoriniai tyrimai, *Miestų praeitis*. T. 2. Vilnius: Lietuvos istorijos institutas.

Vutkin, P., 2021. Alytaus senojo miesto vietos (33722) teritorijos, Alytaus m. sav., Alytaus m., Juozapavičiaus g. 13 ir 17, 2021 m. detaliųjų archeologinių tyrimų ir archeologinių žvalgymų ataskaita.

Vutkin, P., Rimkienė, E., 2021. Juozapavičiaus gatvė 13 ir 17, *Archeologiniai tyrinėjimai Lietuvoje 2021 metais*. Vilnius: Lietuvos istorijos institutas, p. 275–278.

Walker, S. J., Meijer, H. M., 2020. More than food; evidence for different breeds and cockfighting in *Gallus gallus* bones from Medieval and Post-Medieval Norway, *Quaternary International* 543, Amsterdam: Elsevier, p. 125–134.

POULTRY IN MEDIEVAL AND POST-MEDIEVAL LITHUANIA

Aurelija Zagurskytė

Summary

This article discusses bird bones and their remains dating from the 13th to the 20th centuries. from nine Lithuanian cities: Vilnius (14 objects), Kaunas (five objects), Klaipėda (three objects), Trakai (one object), Palanga (one object), Alytus (one object), Kernavės (one object), Jurbarkas (one object), and Molėtai (one object). They can be associated with the inhabitants of Lithuanian cities and their poultry consumption habits.

A total of 1,219 bird bones were examined, which were collected and analysed from twenty-eight sites in Lithuania (table 1; illustration 1). In some of these sites, bird bones formed only a few units, but they had not been previously identified and published in archaeological reports and scientific publications. Most of the bones belonged to the birds of the Galliformes family, the most common among them being chickens (Gallus gallus). Compared to water birds, landfowl were the largest. Geese (Anser anser/fabalis) made up the largest proportion of waterfowl (table 2; table 3).

The main questions and objectives of this article are: the distribution of bird bones and what conclusions can be drawn from it; which bird species is most common; what can be concluded about urban people's diets; whether the birds were used for meat and/or offal; and social differences. This publication examines bird bones dating from the 13th to the 20th century. I will focus on the number of species present in urban areas and the quantity of bones found there. Second, the occurrence of different species in the chronology where it can be determined. Finally, whether the birds were directly fed to the table or kept for their ripening.

The conducted research provides extremely useful information about the use of poultry meat and offal in the territory of Lithuanian cities and in townspeople's settlements in the 13th–20th centuries. In the future, new archaeological research and the discovery of bird bones will shed more light on the use of poultry meat in the daily lives of Lithuanian townspeople.

NAMINIAI PAUKŠČIAI VIDURAMŽIŲ IR NAUJŲJŲ LAIKŲ LIETUVOJE

Aurelija Zagurskytė

Santrauka

Straipsnyje aptariami paukščių kaulai ir jų liekanos datuojamas XIII–XX a. iš devynių Lietuvos miestų: Vilniaus (14 objektų), Kauno (5 objektai), Klaipėdos (3 objektai), Trakų (1 objektas), Palangos (1 objektas), Alytaus (1 objektas), Kernavės (1 objektas), Jurbarko (1 objektas), ir Molėtai (1 objektas). Jas galima sieti su Lietuvos miestų gyventojais ir jų paukštienos vartojimo įpročiais.

Iš viso ištirti 1,219 paukščių kaulai, kurie buvo surinkti ir analizuoti iš dvidešimt aštuonių Lietuvoje esančių objektų (1 lentelė; 1 iliustracija). Kai kuriose iš šių vietovių paukščių kaulai sudarė tik kelis vientetus, tačiau anksčiau jie nebuvo identifikuoti ir skelbti archeologinėse ataskaitose ir mokslinėse publikacijose. Didžiąją kaulų dalį sudarė vištinių (*Galliformes*) šeimos paukščiai, daugiausiai tarp jų – vištų (*Gallus gallus*). Sausumos paukščių, lyginant su vandens, identifikuota daugiausiai. Žąsys (*Anser anser/fabalis*) sudarė didžiausią dalį vandens paukščių (2 lentelė; 3 lentelė).

Pagrindiniai šio straipsnio klausimai ir tikslai yra: paukščių kaulų pasiskirstymo ypatumai bei kokie teiginiai iš to kyla, kuri paukščių rūšis yra labiausiai paplitusi, ką, remiantis tuo, galima spręsti apie miesto žmonių mitybos ypatumus, ar aptariami paukščiai buvo naudojami mėsai ir/ar kitiems subproduktams bei socialiniai skirtumai. Šiame darbe tiriami paukščių kaulai datuojami nuo XIII iki XX a. Dėmesys bus skiriamas miestų teritorijose aptiktų rūšių skaičiui bei kaulų gausumui. Antra, skirtingų rūšių atsiradimas chronologijoje, kur tai įmanoma nustatyti. Galiausiai, ar paukščiai buvo tiesiogiai tiekiami ant stalo, ar laikomi dėl jų subroduktų.

Atlikti tyrimai suteikia labai naudingų žinių apie paukštienos ir subproduktų naudojimą Lietuvos miestų teritorijoje, miestiečių gyvenvietėse XIII–XX amžiais. Ateityje, vykdant naujus archeologinius tyrimus ir aptikus daugiau paukščių kaulų, bus galima dar išsamiau nušviesti paukštienos naudojimą miestiečių kasdieniame gyvenime Lietuvoje.