Love Letters to Bare Bones: A comparison of two types of evidence for the use of animals in medieval Novgorod

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Introduction

The comparison of different sources of evidence is a regular theme of the study of the medieval period not least because of the often-contradictory nature of the available archaeological and historical data. With regard to the study of the domestic economy and the relationship between humans and the animal kingdom, this theme has been noted and pursued by a number of recent authors (e.g. Albarella 1999; Coy 1996; Dyer 1997).

This paper considers two distinct sources of evidence recovered from medieval Novgorod and its hinterland. The first is the environmental evidence recovered by the excavation of sites within the town (early 11th to mid-15th century) and its surrounding hinterland (8th to 11th century). This evidence comprises mostly the animal bone remains.

The second is from the so-called birch-bark 'documents' or 'letters' found on excavations within Novgorod that date from the late 10th to 15th centuries. These record the everyday concerns of the townsfolk and traders who wrote laconic messages and letters to each other using the paper equivalent of its day, birch-bark. To date (July 2001), 915 individual documents or fragments of documents have been found during the past 50 years of excavation within Novgorod (the first one was discovered on the Nerevsky excavation on 26 July 1951). Examples of what they refer to include tribute and payments due or paid; commercial instructions and political reports; concerns over legal matters; complaints from peasants; instructions from land-owners; messages written by both men and women; practice alphabets and drawings by children; love letters; instructions to artisans or relatives; records of commissions to artisans; texts of prayers and even incantations to ward off fevers. They occur predominantly in 11th to 14th century deposits, becoming infrequent by the late 15th century with the greater use of paper (Yanin, 1992, 71).

Archaeological background

Novgorod is one of the most intensively and continuously studied urban sites in northern Europe. Systematic archaeological excavations began in 1932 and have continued almost every year since then, apart from the early to mid-1940s. The excellent preservation of organic and inorganic material, including the structural remains of streets, property boundaries and buildings, has made it possible to study many aspects of medieval town life that are simply not available to archaeologists elsewhere. Equally important, the well-preserved structural remains of timber streets and buildings have enabled the accurate dating of deposits through the extensive use of dendrochronology.

This unique survival combined with the excavation of a number of large, open-area sites since the early 1950s, means that the potential to reconstruct the layout and development of the town and to study the activities of its

inhabitants is without parallel. In addition, over the last 50 years, excavations have recovered many examples of birch-bark letters: unique written documents of the medieval period. These give further insights into the everyday activities of the people of the medieval town and indicate a level of secular literacy previously thought impossible.

The survival of this evidence, together with the devotion of many Russian scholars to the study of Novgorod, has meant that a large number of inter-related research topics are being addressed. These include the origins of early medieval settlement in Novgorod and its surrounding area; early town layout; changes in property size and layout over time; workshops and craft specialization; the exploitation of the local and regional environment; provisioning of the inhabitants; trade and exchange; and various issues raised by the birch-bark letters themselves, such as who were the inhabitants of the medieval town (for a recent account of some of these topics in English, see Brisbane and Gaimster 2001).

Archaeology of the hinterland sites

The sites in Novgorod's hinterland are vitally important to the study of the emergence of the town and as such are inextricably linked into the investigation of the impact of the Vikings on trade and town development. In this respect it may be justifiably claimed that this leads to questions relevant to the wider issue of the origins of European urbanism itself. This region (see Figure 1), centred on the fertile soil of the Lake Ilmen Basin and the upper Volkhov River, was the centre of Slavonic settlement at the end of the first millennium AD (Nosov, 1992, 5).

Sites from this period in the immediate vicinity of Novgorod (i.e. within a 20 km radius) number around fifty, many of which have their origins in the mid-late 8th, 9th or 10th century. These include sites such as Kholopii Gorodok, 14 km to the north of Lake Ilmen (8 km north of Novgorod). This was a fortified settlement on a low rise, 5-7 m above the flood plain, which even today becomes an island for several months in the spring following the thaw. This temporary island quality of many of these sites obviously added to their defensive capabilities. Finds from here include scythes, axes, fragments of hoes, horse bits, and bronze penannular bracelets typical of those found in Norway, Sweden and Finland. There is also a large bronze bell, similar to ones found at Birka. Coin finds include 22 dirhams (AD 811 is the latest in the hoard) and 4 Sassanian drachmas, all serve to indicate the wide ranging trading contacts of the people who used the river systems of NW Russia during this period (Nosov, 1992, 19-24).

One of the hinterland sites to have been investigated in recent years is that known as Georgii, located on the east bank of the Veryazha River, a tributary of Lake Ilmen, about 12 km SW of Novgorod. Cited on the northern part of a low hill, it too turns into an island during springtime. Here some 30 m of earthen rampart have been excavated by Nosov (1992, 16-19). He demonstrated that the bank was 12 - 14 m wide at its base with a substantial ditch outside. However, in its first phase in the 9th century, it was undefended, the defences being added in the 10th century.

Of all the sites within the hinterland of Novgorod, perhaps the most important and well studied is that of Ryurik Gorodishche (hereafter Gorodishche). This hillfort, on the east bank of the Volkhov and only 2 km from what later becomes Novgorod, dominates the local topography by commanding the point where the Volkhov flows out of

Lake Ilmen. It dates from the 9th century (based on C-14 and dendrochronology dates as well as coin finds) and contains 9th century brooches similar to ones from Birka (Nosov 1992, 25-65). An enclosed area of approximately one hectare on the hill top was probably defended at an early date in site's occupation. However, soon after the late 9th century, if not before, occupation extends beyond this enclosed area and spreads over some four to seven hectares.

Later the site became the residence of the princes of Novgorod, who moved to Novgorod in the early 11th century and occupied the area opposite the kremlin on the east side of the Volkhov. The first prince to reside here was called Yaroslav Vladimirovich, and he gave his name to the area still known as Yaroslav's Court within the town. This, however is not the end of the importance of Gorodishche as the princes moved back to Gorodishche around 1100 due to the increasing power in Novgorod of the *boyars* (aristocratic land owners) and the *posadnik* (originally the prince's representative but later the elected head of the Novgorod state). Throughout the following centuries the prince's palace was maintained at Gorodishche, along with associated administrative and domestic buildings and craft workshops. An important church (the Church of the Annunciation) was built here in 1103. This was only the second large stone church to be built in the Novgorod area, the first being St Sophia (built 1044-1050), the cathedral church of Novgorod.

Archaeology within the town

The specific results of archaeological investigations work within the town have been summarized elsewhere (e.g. Thompson 1965; Brisbane 1992; Brisbane and Gaimster 2001), but a short precise is included here in order to give a context for the study of the faunal remains. Figure 2 is a plan of the town with the location of the excavations.

The traditional date for the foundation of Novgorod according to the Primary Russian Chronicle is AD 859. However there is no archaeological evidence for settlement before the early to mid 10th century. The first settlement is located on four or five low hills on either side of the Volkhov and gradually these merged to form the town which is bisected by the Volkhov flowing south to north. Each of these original foci of settlement become known as 'ends' or quarters of which Nerevsky, Lyudin and Slavensky have all produced evidence of 10th century occupation. The other two, Plotnitsky and Zagorodsky Ends, appear to be somewhat later. Even when the whole area became occupied and is eventually enclosed by a bank and ditch, the ends were still important administrative areas, which held their own *veche* (meeting) and administered specific areas of land outside Novgorod. This last fact is relevant to the extent and organisation of exploitation of domestic and wild animals from the surrounding countryside.

On the western side of the town where the cathedral church of St Sophia is located, a rampart with wooden palisade was constructed, enclosing some 12 hectares. This became the town kremlin. Unusually for a medieval Russian town, this was the base for the Archbishop and not the Prince, who resided either on the eastern side of the town or at Gorodishche. The outer rampart surrounding both the eastern and western sides of the town was constructed in the late 12th century enclosing a massive 200 hectares (500 acres). Communication across the river was carried out presumably first by vessel and later by bridge (the first reference to a bridge crossing the Volkhov and connecting the two sides of the town appears in a document of 1133).

The medieval street pattern of Novgorod is well-documented on early maps and these have been confirmed by archaeological investigations. The modern day street pattern bears no resemblance to this earlier plan as the town was comprehensively re-designed in the late 18th century under the decree of Catherine the Great.

Turning to specific archaeological investigations, for the last twenty-eight field seasons, the Novgorod Archaeological Research Centre has been carrying out excavations at the Troitsky site within the Lyudin End, immediately to the south of the kremlin on the western side of the Volkhov. The total area excavated here now stands at approx. 6350 sq. m, most of which has been excavated down to natural (a depth of between 4 and 4.2 m of medieval deposits at this site). In the medieval period, the Lyudin End was crossed by five E-W streets leading down to the River Volkhov, two of which fall within the excavation area, as does the main medieval N-S street known as the Highway, which runs through the middle of the site heading towards the kremlin.

Excavations on the Troitsky site have been extremely productive. For instance, on Troitsky site XII a very large property with an area of nearly 1400 sq. m was evidently an administrative centre. The range of artefacts deriving from the area distinguishes it from ordinary town properties. Excavations in 1998 revealed the fact that in the mid-12th century the town court was located there. An ensemble of administrative buildings was uncovered as well as a spacious paved area. The largest concentration yet found in Novgorod of over 100 birch-bark documents has been collected from the site. The texts deriving from one construction level refer to different conflicts requiring a trial. Many of them are addressed to the main functionaries of the court, namely the prince and the *posadnik*. In 1999 in 11th century deposits underlying this complex, birch-bark letters referring to tax collecting together with 34 wooden cylinder locks were found. These locks were used to seal sacks containing tribute obtained by tax collectors. In some instances the names of addressees of the letters are identical to those marked on the wooden locks.

The animal bone evidence

The waterlogged deposits of Novgorod provide superb preservation conditions for animal bones, although they have rarely been collected systematically during the long period of excavation. Tsalkin (1956) provided a summary of the mammal bone evidence from Russian medieval sites including data from sites in Novgorod. Sychevskaya (1965) provided a list of fish remains identified from the earlier excavations. Since 1993 animal bones have been collected by hand from some of the Troitsky excavation sites (Maltby & Hamilton-Dyer 2001). Preservation conditions at the site of Gorodishche are more variable but they do include some well-sealed waterlogged deposits dating to the 9th-10th centuries. These deposits have been extensively sieve-sampled for bones and other materials in addition to hand excavation.

Work on identifying and recording material from both Novgorod and Gorodishche and other sites in the Novgorod region continues but examination of samples of over 10,000 bone fragments mainly from Troitsky sites IX-XI in Novgorod and over 13,000 from Gorodishche have produced evidence for the species listed in Tables I, II and III. These derive from contexts dating between the 9th and 10th centuries at Gorodishche and the 10th-16th centuries at Novgorod, although most material studied from the Troitsky sites pre-dates 1400.

Table I: Mammal Species identified from recent excavations in Novgorod and Gorodishche

Domesticated Mammals	**Wild Mammals**
Cattle	Wild Boar*
Sheep	Bear*
Goat	Fox*
Pig	Hedgehog*
Horse	Rat*
Dog	Wolf^
Cat	Stoat^
	Field Vole^
	Elk
	Beaver
	Squirrel
	Hare
	Reindeer (worked antler objects only)
	Red Deer (worked antler objects only)

* not found at Gorodishche; ^not found on Troitsky sites IX-XI, Novgorod

Table II: Bird Species identified from recent excavations in Novgorod and Gorodishche

Domestic Fowl (chicken)
Goose (probably mainly domestic)
Mallard/domestic duck
Medium-sized ducks (cf. pochard, widgeon, garganey)
Small ducks (mostly teal)
Swan
Capercaillie
Black Grouse
Partridge
Wood pigeon
Eagle (cf. white-tailed)
Raven
Jackdaw

Crane*
Stork*
Heron*
Woodcock*
Wader cf. Snipe
Great-crested Grebe*
Cormorant*
Gull (cf. black-headed)*
Tawny Owl*
Buzzard*
Hobby*
Kite*
Hen Harrier*
Sparrowhawk*
Goshawk*
Crow*

* not found at Gorodishche

Table III: Fish Species identified from recent excavations in Novgorod and Gorodishche

Fish

Zander
Cyprinids (including bream, roach, dace/chub, and ide)
Pike
Wels
Perch
Whitefish
Sturgeon*
Common eel*

* not found at Gorodishche

Discussion of the animal bone evidence

Amongst the hand-collected material from the spits from Troitsky sites X-XI examined to date, over 98% of the identified mammal bones belong to domestic species. These include cattle (69%), pig (17%), sheep/goat (7%), horse (3%) and dog (2%) (Maltby and Hamilton-Dyer 2001). Although biased by retrieval practices and differential preservation, the dominance of cattle is clear and there can be little doubt that beef was by far the most important source of meat, particularly when carcass size is taken into account. Beef was commonly supplemented by pork, and both goats and sheep were exploited for meat albeit seemingly in much smaller quantities. There is little evidence for human consumption of horsemeat, although the presence of broken horse bones and the occasional butchery mark does suggest their carcasses were sometimes processed.

The Gorodishche excavations have provided similar biases towards domestic mammals. Of the 3,140 bones identified, 98% belong to domestic mammals, with cattle (50%) again the most common but with pig (34%) much better represented. Indeed in one area of the site, pig bones outnumber cattle. The reasons for this variability lie in a combination of spatial variation in disposal of carcass waste and in the fact that sieving has enabled more small pig bones to be recovered than on the Novgorod sites (Maltby and Hamilton-Dyer (2001). Sheep/goat (4%) was poorly represented in the generally earlier deposits at Gorodishche, and was outnumbered by horse (8%).

The wild mammal species listed in Table 1 therefore represent less than 2% of the identified mammal bones from both sites. They include several species most likely to have been mainly exploited for their skins, including beaver, squirrel and bear. Of these, only beaver bones appear in most assemblages from Novgorod. Only the claws (3rd phalanges) of bears have been discovered in Novgorod. Only one squirrel bone has been identified from recent Novgorod excavations. Eleven were identified from Gorodishche, again probably reflecting more efficient retrieval. This is also reflected by the higher number of hare bones (1%) retrieved from there.

Similarly, bird bones are likely to be under-represented in hand-collected material. They usually provided less than 5% of the identified species in the Troitsky assemblages. Although quite a wide range of species has been identified, most bones belong to domestic and various species of wild duck and domestic fowl, the latter possibly becoming more common in later deposits (Maltby and Hamilton-Dyer 2001). Other food species include large

species, such as capercaillie, black grouse, swan, stork, crane and heron. Many of the geese may have been domestic birds. Smaller gamebirds such as partridge and woodcock are also present in small numbers. The presence of hawks suggests the keeping of birds used for sport. Other species may have been scavengers, although eagles may, for example, have been exploited for feathers. Gorodishche has produced a rather more restricted range of species (see Table II), despite sieving. This may reflect a greater diversity of exploitation of birds in Novgorod, particularly in later medieval deposits (Hamilton-Dyer, at press).

Sieving experiments in Novgorod showed conclusively that fish were significantly under-represented in hand-collected material and biased towards the bones of larger pike and zander (Maltby and Hamilton-Dyer 2001). Sieving of the Gorodishche samples provided a large fish assemblage and identified fish bones provide 46% of the total number of bones identified. Such a high percentage of fish may also be expected if similar sampling was carried out in Novgorod. Cyprinids (carp family) and perch were also recovered. Examination of material from earlier excavations in Novgorod has produced a list of 23 species (Sychevskaya 1965). However, the impression from the Troitsky excavations and from Gorodishche is that the vast majority of the species represented could be locally available in the River Volkhov and Lake Ilmen. Bones of imported and/or prestige fish such as the sturgeon and whitefish have been rarely recovered.

Finally, it is worth noting that floats, sinkers, and other objects related to fishing are found throughout all chronological phases on nearly all excavated properties, indicating the widely spread nature of this activity.

The evidence from birch-bark documents

As stated above, this synthesis of the birch-bark documents is based on the remains of 915 documents found to date (July 2001), some of which are complete but many are fragmentary. These have been researched and published by Zalisniak and Rybina, whose work is extensively cited here, especially Rybina (2001).

References in birch-bark documents to domesticated and wild mammals and birds

Many of the birch-bark documents refer to domestic animals, horse being the most common one. Horses are mentioned in 32 letters deriving from 11th to 15th century deposits. Among other domestic animals cows are mentioned a few times with regard to different matters, including as a tribute. The words for heifer and dry cow are also encountered. The latter is referred to in a 13th century letter as a part of *pogorodye*, a duty imposed on towns. References to goat's hair and kid's leather occur in documents of the latter 14th century. The term *vyzhlya* (a hound) is encountered only once.

The names of fur-bearing animals are diverse. Squirrel is the most common one, mentioned in many texts dating from the 12th to the 15th centuries. However, the exact number of documents referring to squirrels is difficult to determine, since the term *bela* could mean either a squirrel or money and it is not always clear from the context which was meant. Beaver is referred to in five documents from the turn of the 12/13th centuries onwards, and the word for a one-year-old beaver is also found. Marten is mentioned in seven letters of the 14/15th centuries, others being arctic fox (12th century), fox (turn of the 12/13th centuries), otter (13th century), sable (13th century), seal (14th century), wolverine (14th century) and hare (12th century). Fur-bearing animals were an item of tribute or rent from

the northern lands dependent on Novgorod *boyar* estates. Several documents refer to fur as an item of trade. For example, text No. 420, written in the 13th century, records the sale of forty beavers for ten silver *grivnas* equal to two kg of silver. On several occasions, hides of domestic and wild animals are mentioned as items of trade or household belongings, including those of sheep (15th century), calf, elk (turn of the 12/13th centuries), deer (12th century and again in the 14th century) and bear (13th century and again in the 14th century).

Names of birds associated with the collection of tribute occur three times, the earliest letter being a 12th century document mentioning black grouse. Two 14th century birch-bark texts with reference to tribute collection mention hunting birds: falcon and probably the most valuable species of falcons, gyrfalcon.

References in the birch-bark documents to fish

Fish occurs more frequently than other food in birch-bark texts of the 12th to 15th centuries, which was evidently due to the developed fishing industry in Novgorod.

References to fish first appear in birch-bark documents of the 12th century. However, in most birch-bark documents of the 12th and 13th centuries, the names of the species of fish are not given, the exception being a 12th century letter featuring white fish. Most commonly encountered are generic words meaning fish (both processed and unprocessed). It is not until the 14th century that these collective terms are superseded by the names of actual species of fish, such as salmon, bream, pike, white fish, salmon-trout and sturgeon (see Table IV).

Obviously, these fish do not represent the whole range of fish species in the rivers and lakes of the territory of Novgorod. As all the names of fish species that are mentioned in the birch-bark documents refer to the collection of tribute, those species were the ones preferred and deliberately selected as a means of payment.

As a tribute, fish emerge for the first time in a letter of the mid-12th century. By the 14th century, in the developed economy of the *boyar* estates, valuable species of fish apparently became an item of payment in kind, which was collected from dependent people and subsequently sold. Occasionally letters refer to specific varieties of processed fish: dried fish, mildly salted fish and strongly salted fish. Different fishing equipment referred to includes local types of fish traps *versha* and *yunda*, as well as fish measures known as *lendom*.

Table IV: Fish species referred to in birch-bark documents and the date range for these references

	11th C.	**11/12th**	**12th C.**	**12/13th**	**13th C.**	**13/14th**	**14th C.**	**14/15th**	**15th C.**
FISH:									
fish	-	-	2	1	1	-	5	-	-
salmon	-	-	-	-	-	-	5	-	-
bream	-	-	-	-	-	-	-	1	-
pike	-	-	-	-	-	-	-	1	-
white fish	-	-	1	-	1	-	2	-	-
trout-salmon	-	-	-	-	-	-	1	-	-
sturgeon	-	-	-	-	-	-	1	-	-

Comparisons of the two types of evidence

Comparisons of the zooarchaeological and birch-bark document evidence again demonstrate that, where both are available, documentary and archaeological evidence should be combined in the analysis of the exploitation of and cultural attitude to animals. The evidence from Novgorod provides a good illustration that neither approach individually provides the complete picture. This should not be seen in a negative light. Indeed, it is the contrast between the impressions gained from the two approaches that is the most illuminating.

To take the evidence of mammals, of the 18 species represented in the birch-bark documents, the following six have not been found in the recent extensive excavations on the Troitsky site in Novgorod: marten, sable, arctic fox, seal, otter and wolverine. It is also worth noting that in an earlier study Tsalkin (1956, 175) identified only eight bones each of marten and fox in a sample of over 37,000 animal bones from earlier excavations in Novgorod. As can be immediately seen, not only are all six of these wild animals, but they are also all valued for their fur. Similarly, the contrast between the frequency to references to squirrels in the birch-bark documents and their rarity even in sieved samples from recent excavations should be noted. The trapping and skinning of these animals would have taken place at some distance from the town, sometimes hundreds of kilometers away, leaving much of the animal bone evidence behind. Occasionally bones show evidence of the processing of wild animals, for instance cut-marks indicating skinning which have been noted on beaver. In addition there is evidence for the use of certain parts of wild animals, such as bear claws, as trinkets, amulets, necklace pieces, etc.

However, it is likely that most furs would have been brought to Novgorod with few, if any, bones attached. Skinning would have taken place, and bones would have been deposited elsewhere. Indeed it could be argued that the few bones of beaver, squirrel and other fur-bearing mammals found in Novgorod and Gorodishche represent wildlife captured locally and processed for skins (and meat) at these settlements. In contrast, archaeological evidence for the import of furs from further afield has almost disappeared archaeologically, apart from in the birch-bark documents.

Amongst the birds mentioned in the birch-bark documents, there has been no bone evidence found of either falcon or gyrfalcon from recent excavations at the Troitsky or Gorodishche sites. The gyrfalcon is the largest and most highly prized of the falcons, but is not a common bird (Hamilton-Dyer, at press). Its absence from the bone assemblage, which is largely derived from kitchen and butchery waste, is unsurprising. In addition, its present day distribution is confined largely to the north of Novgorod – again, like the fur bearing animals mentioned above, suggesting that its capture took place in the vast lands controlled by Novgorod that lay predominantly to the north and north east of Novgorod itself.

Of the fish, the most noteworthy absence from the archaeological evidence is salmon, despite the fact that it occurs as a named tribute in birch-bark documents of the 14th century. While the reason for this absence is not certain, it is most likely due to the fact that salmon was an uncommon, high status fish, worthy of noting in birch-bark documents. It therefore had importance as a form of tribute, enhanced by its relative rarity compared to the

abundant, everyday and unremarkable fish of the River Volkhov and Lake Ilmen, such as zander, perch and eel, which are not specifically mentioned in birch-bark documents.

These is in effect a negative correlation between the frequency of fish identified in the bone assemblages and those mentioned specifically in the birch-bark documents. The most common local fish in the bone assemblages are either absent from the documents (zander, perch) or mentioned only once in the documents examined thus far (pike, bream). Fish likely to have been imported via long-distance trade occur disproportionately commonly in the documents compared with their rarity or absence in the bone assemblages (salmon; whitefish; sturgeon).

For the smaller species, the non-occurrence of certain types of small mammal, fish and bird may be the result of recovery techniques that militate against the recovery of small bones. However, the limited sieving experiments in Novgorod and the more routine sieving of deposits at Gorodishche have produced little evidence of these species. Even if new species are identified in future analysis of Novgorod assemblages, it seems unlikely that they will form more than a rare addition to the species list.

It is also worth noting some other species that occur commonly in the bone assemblages, but are absent from the birch-bark documents. These include chicken and pig, although a recent birch-bark discovery mentions pork 'ribs'. Presumably these animals were not noteworthy, nor of a high enough status to be recorded in lists of tribute, nor otherwise remarked upon by writers, despite a strong possibility that both chickens and pigs were commonly kept within household properties in Novgorod.

Exploitation of domestic mammals

The archaeological evidence shows that the residents of the Lyudin End of Novgorod and in the settlement of Gorodishche relied largely upon domestic mammals for their meat. Beef predominated but pork was also commonly consumed. Meat from goat and sheep was less frequently eaten. The birch-bark documents offer little information about the meat diet and references to cattle are not especially common. However, the reference to a dry cow does complement the archaeozoological mortality and sexing data, which suggest that cattle may also have been quite important for their diary produce. Calf and sheepskins are mentioned in the documents, but not especially frequently compared with wild species. Investigations have begun into the identification of leather products and offcuts in Novgorod and it is expected that these will be dominated by cattle hides (Serjeantson, 1989). In contrast, horses are the most commonly mentioned species in the birch-bark documents but only appear infrequently in the archaeological deposits. This is hardly surprising if they were not utilised for meat. In addition, horses were high status animals valued for riding in particular. Their importance lay in the realms of communications, trade, sport and warfare. This importance is reflected in the frequency of their inclusion in documents that largely served the elite.

Conclusions and future research

This paper has shown the complementary nature of the two types of evidence considered here. Sometimes the animal bone evidence confirms the documentary evidence, but mostly it indicates clearly the butchery, consumption and disposal of everyday animals, while the birch-bark documents record the more exotic species.

Many of those recorded in the birch-bark documents also bare testament to the importance of the exploitation of wild species, especially those connected with the fur and pelt trade that was so crucial to the Novgorod economy throughout the medieval period and beyond (Veale, 1966).

Future research, built upon a long-standing international collaborative project, will be examining sites beyond Novgorod's immediate hinterland. This will include an area known as Beloozero, which lies over 400 km north-east of Novgorod on the extreme edge of its territory. Here the evidence for certain wild species (e.g. beaver) is expected to be found in large numbers located at settlement sites where the initial processing, skinning and pelt removal took place. By comparing the evidence from both far and near hinterland sites with that from Novgorod itself a better understanding of animal exploitation/husbandry and its relationship to craft production, trade and diet should be possible.

Finally, this comparative analysis demonstrates that a fuller understanding of the complexity of production and consumption patterns can be obtained by integrating documentary sources and archaeological evidence and not by viewing them as separate and seemingly conflicting snapshots of the past.

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