

The Historical Geography of the Forests of Byelorussia in the Sixteenth Century

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To sixteenth century Byelorussia the forests were of the utmost importance, not only because geographically they covered the greater part of its territory, but also because economically they played a vital role in the life of the country. Conversely the sixteenth century was a period of great significance to the forests. It was a time of economic change and advance, culminating in the second half of the century in what might well be termed upheaval. The *voloka* reform of 1557 transformed the agrarian economy, the social structure and the geography of the Grand Duchy of Lithuania. In the developing economic situation the forests occupied a major place and consequently they were paid more attention by the crown than ever before. As early as 1538 Sigismund I set up a special commission to establish the bounds of royal properties and took the first measures to protect the forests.¹ Documentary evidence of this growing official concern has survived to provide a rich source for the historical geography and economic history of Byelorussia.

The first of the major documents was the perambulation of royal forests, carried out in 1559 by the Sheriff of Mscibohava, Hryhory Bahdanovič Vałovič.² This "Register of recording and surveying the forests and animal crossings in the possession of his royal majesty the Grand Duke of Lithuania" covered 42 individual tracts of forest, noting their boundaries, neighbouring properties, transgressions of the forest limits, rights of entry and, in some cases, the number and dimensions of coverts (*ostupy*) within the forests. Partially as a consequence, no doubt, of Vałovič's report, in 1567 the Forest Decree (*Lesnaja Ustava*) was promulgated.³ This decree established a system of forest husbandry, which as Polujanski has pointed out, remained in operation for almost three centuries until 1840.⁴ The working of

¹) P. Bobrovskij, *Materialy dlja geografii i statistiki Rossii, sobrannnye oficerami general'nogo štaba*, V, *Grodzenskaja gubernija*, 2, St. Petersburg, 1863, p. 405.

²) *Revizija pušč i perechodov zverinych v byvšem velikom knjažestve Litovskom, s prisovokupleniem gramot i privilegij na vchod'je v pušči i na zemli, sostavlenaja starostuju Mstibogovskim Grigorijem Bogdanovičem Vołovičem v 1559 godu*, Vilna, 1867. (Subsequently referred to as RP).

³) *Russkaja Istoričeskaja Biblioteka*, XXX, Moscow, 1914, pp. 622-9. (Subsequently referred to as RIB).

⁴) A. Połujański, *Opisanie lasów Królestwstwa Polskiego z zachodnich guberni Cesarstwa Rosyjskiego pod względem historycznym, statystycznym i gospodarczym*, II, Warsaw, 1854, p. 9.

the Forest Decree in particular tracts of royal forest was illustrated with great clarity and detail in a rather later document, the Ordinance of Royal Forests compiled for Vladislav IV in 1641 by Christofor Belozor, the Marshal of Upita.⁵ Other sources, which although not directly concerned with the forests shed much light upon them, were the cadastres of crown estates, compiled during the *voloka* reform.

In 1960 almost one-third (32.2 per cent) of Byelorussia was forest-covered.⁶ Four centuries earlier the proportion was far higher, as indeed nineteenth century cartographic evidence shows to have been the case a mere hundred years ago. It is not possible however to determine from available evidence the extent of the sixteenth century forests. The maps of the period displayed forest, if at all, more as a concession to artistry than as cartography. Even the detailed perambulation of Vałovič was very limited in its scope. In the first place, it was restricted to forests in the possession of the crown, although it is true that they constituted the greater part of all forests. Secondly the perambulation was incomplete, even in its coverage of royal forests. The report commences with a statement of the general forest bounds, which included a huge area of land in southern Byelorussia and the Ukraine, extending to the Dniepr and the "Wild Fields" of Braslav and Vinnica.⁷ But forty two individual forest areas subsequently described in detail were all confined to the provinces of Žmudź and Troki. No forests were recorded in the provinces of Vilna, Navahradak, Słuck, Kiev, Viciebsk and the Russian *volosti*, although there were extensive crown forests in these provinces. Since Vałovič was commanded to describe "all forests", one can only suspect that the surviving document is incomplete. Indeed the manuscript itself contains references to other royal forests, which were not recorded in the perambulation, for example the Karmiałoŭskaja Žyžmorskaja, Giegužynskaja and Łavaryški forests.⁸ Many of the forests included in the 1641 Ordinance were not mentioned by Vałovič, in particular the group of forests lying along the river Miereč (*modern* Merkys).

Even the boundaries of those forest tracts which were described cannot be mapped with any precision. The majority of the points of reference given by Vałovič were either transient local features, such as trees or cairns, or local place-names, which even if they remain in use today, are not included on modern topographical maps. Nevertheless a reasonable approximation can be established to show the location of the perambulated forests (See map), at least those with a detailed boundary record. For some forests, notably those lying north of the upper Jasielda river, Vałovič omitted a boundary description and merely gave their dimensions, measured by a series of axes through the forest.⁹ Comparison with the modern map

⁵) *Ordinacija korolevskich pušč v lesničestvach byvšogo velikogo knjažestva Litovskogo*, Vilna, 1871. (Subsequently referred to as OKP).

⁶) I. D. Jurkevič, V. S. Gel'tman, 'Lesy Belorusskoj SSR', *Lesy SSSR*, II, Moscow, 1966, p. 139.

⁷) RP, pp. 1-2.

⁸) RP, p. 42.

⁹) *Ibid.*, pp. 22-3.

suggests that Vałovič's measurements were more than a little imprecise; thus he gave Bielavicy to Ždzitava as four Lithuanian miles and Bielavicy to Sielec as five Lithuanian miles, the respective distances on the map being 21 and 14 English miles. Nevertheless, despite all inadequacies, the reconstruction in the map shows clearly the great belt of forest, which stretched from the river Horyn, surrounding Pinsk on all sides, swinging north of Kobryn to the vast Bielaviežskaja Pušča and extending thence northwards through Bielsk Forest and all the western half of Hrodna District, along the west bank of the middle Nioman to Koūna and beyond into the land of Žmudź. One can only regret that it is impossible to reconstitute a similar picture for the remainder of the Lithuanian Grand Duchy.

If the distribution of sixteenth century forests can be only partially known, *a fortiori* one cannot calculate the area even of the royal forests, let alone the total extent. Yet Gorbačevskij attempted just that in his introduction to the printed transcript of the Ordinance of Royal Forests.¹⁰ Assuming, on the basis of the Vałovič survey, that the average circumference of a covert (*ostup*) was $2\frac{1}{2}$ Lithuanian miles, Gorbačevskij computed a total crown forest area of 1,134,770 *desjatiny* (or 222.3 square miles). In fact Vałovič listed coverts in only 17 of the 42 forest tracts; they had between them 230 coverts, for 170 of which no dimensions at all were given. For a further 25 only length and breadth axes were recorded. The average of the 35 coverts with a given circumference was not 27r Lithuanian miles, but 2.96 miles. When in addition the very limited coverage of both 1559 and 1641 surveys is taken into account, it is abundantly clear that Gorbačevskij's figure is wholly meaningless.

The surviving district cadastres throw no further light on the overall distribution of forests, but provide eloquent witness of their ubiquity. In Pinsk District, for example, the three-field arable of almost every village marched at some point with forest. The many out-lying fields were again and again described as "surrounded on all sides" or "surrounded on three sides" by forest, "Niwa — uroczyszczem Ostrów, kthory trzmał Kuzma Duczkowic, ze wszythkich stron miedzy liasem."¹¹ Even in more densely settled and better developed districts, such as that of Bieraście (modern Brest) 30 out of 89 towns and villages had forest adjoining their main fields. Only on the upland parts of Hrodna District were references to forest, or even scrub, almost completely absent. A feature of the present-day land-use map of Byelorussia is the near total clearance of forests from the uplands;¹² the evidence of the sixteenth century cadastres suggests that this clearance had already been accomplished by the time that they were drawn up.

The documentary sources are rather less frustrating in providing a picture of the composition of the forests. Frequently the forest was

¹⁰) OKP, pp. viii-ix.

¹¹) *Piscovaja kniga byvsogo Pinskogo starostva, sostavlenaja po povelenuju korolja Sigizmundava Avgusta v 1561-1566 godach Pinskim z Kobrinskim starostvoju Lavrinom Vojnoju*, I, Vilna, 1874, p. 368 (Subsequently referred to as P).

¹²) *Atlas Belorusskoj Sovetskoj Socialističeskoj Respubliki*, Minsk-Moscow, 1958, pp. 44-5.

distinguished as *bor* or *dubrava*. For example, around Bahuševa village in Pinsk District were no less than 17 different named tracts of *bor*.¹³ Strictly speaking, these terms mean pinewood and oakwood, but it seems very clear that the scribes who compiled the manuscripts used them rather more loosely to mean generally coniferous or generally deciduous forest, probably with pine and oak respectively dominant. Indeed *bor* on occasion seems to have meant any woodland, even of lime trees — "do boru lipova."¹⁴ On the other hand, references to *bor* in the cadastres frequently coincide with references to sandy soil and there is today a very close correlation between sands and the pine vegetation association now known as *bor*. Thus of fourteen entries in the Pinsk cadastre mentioning sands, ten also mention *bor*. At times woodland dominated by other trees was recorded, such as the birchwood (*berezini*) at Maleč in Kobryn District.

Equally frequent were references to individual species of trees. *Dub*, oak, and *sosna*, pine, were mentioned on scores of occasions, especially in boundary descriptions — "do rogu Mylniskiey Dabrowy w Krzywy dąb, od tego dębu ... w Mylnicki borek",¹⁵ "od tey sosny lasem w łuh."¹⁷ An inventory of Areškava in 1599 listed the bee-trees held by the peasants; altogether there were 94 oak trees and 950 pines, with 99 swarms.¹⁸ This 10:1 ratio of pine to oak may well have represented a more universal proportion; at the present time the area forested by pine is 12 times that covered by oak¹⁹ and there is no doubt that selective felling over the centuries has borne more heavily upon the oaks.

Other trees mentioned frequently included lime, "do liasu Dietko-wego y znaku u lipy",²⁰ birch, "gde kopec byl kolo berezy usypan",²¹ "nad brzozowym liasem",²² elm, "u wieza thakze miedzy błothem",²³ willow, "u wierby"²⁴ and ash, "u drugiego jasenja."²⁵ Less common were mentions of spruce, "u jel'ki",²⁶ which in any case approaches its southern limit of distribution in Byelorussia. Hornbeam, which today is fairly common in southern Byelorussia, surprisingly was also infrequently recorded, although it occurred near Kobryn — "na

¹³) P, II, pp. 201-9.

¹⁴) *Dokumenty Moskovskogo archiva Ministerstva Justicii*, I, Moscow, 1897, p. 300. (Subsequently referred to as DMA).

¹⁵) *Revizija Kobrinskoj ekonomii, sostavlennaja v 1563 godu korolevskim revizorom Dmitrijem Sapegoju*, Vilna, 1876, p. 213. (Subsequently referred to as K).

¹⁶) *Akty izdavajemyje Vilenskoj archeografičeskoj komissijej dlja razbora drevnich aktov*, XXV, Vilna, 1898, p. 158. (Subsequently referred to as AVK).

¹⁷) AVK, XXV, p. 201.

¹⁸) AVK, XIV, Vilna, 1888, pp. 644-5.

¹⁹) I. D. Jurkevič, V. S. Gel'tman, *op. cit.*, p. 151.

²⁰) P, II, p. 60.

²¹) DMA, I, p. 155.

²²) *Piscovaja kniga grodnenskoj ekonomii, izdannaja Vilenskoju komissijej dlja razbora drevnich aktov*, I, Vilna, 1881, p. 392. (Subsequently referred to as G).

²³) P, II, p. 198.

²⁴) *Ibid.*, p. 340.

²⁵) DMA, I, p. 281.

²⁶) K, p. 65.

grabovom lese."²⁷ Fir, as one might expect, was rare, but it was found in Podlaš'je (Podlasie) near Saraž in association with other trees, "drzewa roszonego sosnini, iedlini, olszini."²⁸ Inventories of manors often noted furniture and the timber of which it was made; oak, ash and lime all figured in this context.²⁹

Alder and willow were then as now characteristic of the wetter, swampier areas and in such parts, notably Pinsk District, references to them and to willow scrub (*lozy*) were commonplace. Scrub in general (*chvorost'* or *kustarnik*) was widespread in all districts. The term probably covered a number of situations, stunted forest suffering from waterlogging or over-grazing, tracts in process of re-establishing a vegetation cover after forest fires, and also abandoned and over-grown arable. Forest fires no doubt were not unusual occurrences; the Ordinance recorded two coverts in the Bielaviežskaja Forest as having been burnt.³⁰ Scrub was generally used for pasture — "by that village is scrub set aside for pasture"³¹ — and this practice must certainly have hindered natural regeneration of the forest.

When one turns to the economic importance of the forests, first place should surely be given to the exploitation of timber. This was a royal monopoly and as the export of timber and timber products from Danzig, Königsberg and Riga grew during the sixteenth century, so the value of the forests to the Treasury increased. The usual procedure was for the crown to lease the forests to a private undertaker for a fixed period of time, in return for a lump sum. In 1544 Sigismund I granted the Danzig merchant Albrecht Schwarz the right to make timber baulks (*vančosy*), planks (*klepki*) and ash (i. e. for potash) for three years.³² Even earlier in 1522 Hanus Sudorman was permitted to set up "huts and camps" in the Darsuniski and Birstany Forests (See map) for a payment of 50 kopy of *grosy* and the usual tolls on the products.³³ Sigismund August in 1560 placed the entire timber industry of Žmudz' province in the hands of an undertaker called Hanus Skop, while the forests along the Western Dzvina and Dniepr rivers were worked by another, Valenty Iberfel't.³⁴ In 1569 Hryhory Dralnicki was given charge of working the forests north-west of Hrodna — Pieralom, Punszkaja and Niemanajt. Private forest owners could not export their timber themselves, but had to sell it to Skop or the other official entrepreneurs. Vałovič in his perambulation noted a hut set up by Skop for working the Olita Forest, where he had also constructed a new road.³⁵ Vałovič also discovered that in Koūna Forest Skop had been cutting timber for

²⁷) K, p. 295.

²⁸) G, II, Vilna, 1882, p. 456.

²⁹) AVK, XIV, pp. 575, 580.

³⁰) OKP, pp. 189-190.

³¹) G, I, p. 548.

³²) M. V. Dovnar-Zapol'skij, *Gosudarstvennoje chozjajstvo Velikogo Kniazestva Litovskogo pri Jagellonach*, Kiev, 1901, p. 324.

³³) V. I. Pičeta, *Agramaja reforma Sigizmunda-Avgusta v Litovsko-Russkom gosudarstve*, Moscow, 1958, p. 250.

³⁴) M. V. Dovnar-Zapol'skij, *op. cit.*, p. 327.

³⁵) RP, pp. 37-8.

his own private use and that as a result the forest had been laid waste.³⁶

The principal products were *vančosy*, roughly halved or quartered logs, planks, mast timbers, *tarticy* or roof shingles of pine, tar, resin and potash. This last item was made in considerable quantities. An agreement of August 2nd, 1563, witnessed by the deputy sheriff of Pinsk arranged for Šmojl Piševich, Jew of Pinsk, to supply Hryhory Masalski, deputy sheriff of Kobryn and Bluden with 105 *lašti*³⁷ of potash for the price of 1400 Polish *zloty*.³⁸ A surviving portion of a Customs Roll recorded the despatch over a six weeks period of 236 *lašti* of ash and 50 *bočki* (barrels) of potash, from the Grand Duchy to Korolevec (Königsberg).³⁹ No doubt much charcoal was also made in the forest, for scattered throughout them lived bog iron ore prospectors. The Ordinance indeed strictly prohibited the digging of iron ore in the hunting forests, because it diminished feed for the game.⁴⁰ At Kureličy near Pinsk lived the iron miner Jan, who was given just over 70 *morgi* (about 126 acres) of oakwood, presumably for his charcoal requirements. He had to clear and plough the oakwood within four years,⁴¹ but with the strict injunction not to harm the peasants' bee-trees.⁴¹

The forest products were mostly transported by the rivers to the Baltic ports. The goods were valued and levies charged at royal toll stations, notably Koūna on the Nioman and Dunaburg (Daugavpils) on the Western Džvina. Permission given to two undertakers to operate in the Słonim Forests, stipulated that they were to cart the timber to a landing on the river Ščara.⁴² A decree of 1558 lifted the toll on timber and firewood being sent by the river Vilija to the bishop's palace in Vilna.⁴³ The servants of Stytyčava Manor near Pinsk had the duty of sending 12 rafts of timber to Pinsk Castle every year and others in Prykładniki village had to send 20 rafts.⁴⁴

Hardly less important than timber products were furs, the traditional staple of trade in Byelorussia. According to Doūnar-Zapolski, up to the sixteenth century "the store-rooms of the Treasury were filled with furs and partly with cloth from abroad, which had been exchanged with those furs: the quantity of metal coin was insignificant."⁴⁵ Even with the growth of a money-based economy during the sixteenth century, furs remained most valuable, with thousands of skins being exported annually. The forests abounded in a wide variety of game. The Lithuanian Statute of 1529 referred to bison, elk, rein-

³⁶) *Ibid.*, p. 44.

³⁷) About 198 tons.

³⁸) *Belorussija v epochu feodalizma: sbornik dokumentov*, ed. Z. Ju. Kopysskij, M. F. Zaloga, I, S *drevnejšich vremen do serediny XVII veka*, Minsk, 1959, p. 230-1.

³⁹) AVK, XIV, pp. 645-655.

⁴⁰) OKP, p. 13.

⁴¹) P, I, pp. 340-2.

⁴²) M. V. Dovnar-Zapol'skij, *op. cit.*, p. 326.

⁴³) *Akty otnosjaščiesja k istorii južnoj i zapadnoj Rossii*, I, St. Petersburg, 1863, p. 145.

⁴⁴) P, II, pp. 182, 476.

⁴⁵) M. V. Dovnar-Zapol'skij, *op. cit.*, p. 318.

deer, fallow deer, bear, wild horse and mare, wild boar and sow, chamois or wild goat, and lynx.⁴⁶ An inventory of Rečyca village in 1565 referred to the hunting of roe-deer.⁴⁷ The *Voloka* Decree mentioned in addition to these, wolf, fox, wolverine, hare, squirrel and other small game.⁴⁸ Along the rivers beavers were common. As well as furs, the fauna of the forests supplied the royal palaces and manors with meat and King and court with sport. Hunting in the Grand Duchy was highly esteemed and therefore strictly prohibited. Although peasants were allowed to kill wolves and small game on their own land, they were forbidden to kill large game. To do so, or to poach in the royal forests carried the death penalty.⁴⁹ Those entering the forests were forbidden to take dogs with them or to carry boar-spears or other arms, which could be used against the game.⁵⁰

In the rivers and lakes within the forests were many varieties of fish, including sturgeon, carp, perch, roach, ruff and loach. These were caught for the royal palaces and manors. In Pinsk District the inhabitants of Haradzišča and Sošna villages had to draw nets in Lake Haradzišča for the crown⁵¹ and those of Duba and Bieraście were engaged in sturgeon fishing.⁵² Another lake in Kužalickaja Forest of Pinsk District was also a royal fishery.⁵³ In Bieraście (Brest) District were important crown fisheries. Lakes Dzivin and Altuš were each divided into 16 fisheries (*toni*), Lake Łutskoje into 25 and Lake Arechava into 40. Peasants from 175 tenements in eight villages were given the duty of drawing nets in the lakes, in winter two nets to each lake with 12 men to a net and in summer four men to a net, when required. The catch of fish they had to cart "live, salted and dried" to Bieraście Castle.⁵⁴ On the rivers fish were caught by fish traps of stakes (*jezi*) and in Pieraiom Forest lived *jezovniki*, the men who tended such traps.⁵⁵ Fishing surplus to the needs of the crown was rented out. Vałovič listed 21 lakes in Olita and Miereč Forests in the use of Stanisłau Davojna, the Sheriff of Babrujsk.⁵⁶ In Pieraiom Forest there were 14 lakes rented to Davojna, to the Governor of Kiev and to a third landowner.⁵⁷ The rent to the Treasury for the Olita lakes was 80 *kopy* of *groši* a year and that for the lakes of Hrodna Forest 100 *kopy*.⁵⁸

A further major economic use of the forests lay in bee-keeping and the production of honey and beeswax. These too were important exports; the Customs Roll cited above recorded 330 *lašti*, or some

⁴⁶) *Statut Velikogo Knjažestva Litovskogo 1529 goda*, ed. K. I. Jablonskis, Mińsk, 1960, p. 104.

⁴⁷) DMA, I, p. 158.

⁴⁸) RIB, XXX, p. 576.

⁴⁹) *Ibid.*

⁵⁰) *Statut Velikogo ...*, *op. cit.*, p. 105.

⁵¹) P, I, pp. 146, 168.

⁵²) P, II, pp. 294, 376.

⁵³) RP, p. 12.

⁵⁴) DMA, I, p. 328.

⁵⁵) RP, p. 53.

⁵⁶) *Ibid.*, p. 38.

⁵⁷) *Ibid.*, p. 56.

⁵⁸) M. V. Dovnar-Zapol'skij, *op. cit.*, p. 323.

600 tons, of beeswax being sent to Königsberg over a period of six weeks. The King's bee-keepers gathered the honey and wax from the crown bee-trees, while peasants had to surrender half the yield from their bee-trees. A bee-tree was one with a natural or artificial hollow for a bees' nest. By the 1567 Forest Decree the Forester, the noble appointed to oversee each forest tract, was obliged to ensure that the bee-trees had swarms. In Pales'je Bailiwick of Bierascie District almost every village had a number of *verny* or *lezivy*, duties to gather honey. Usually there were several persons to each *verna* and from four to 32 *verny* in a village. Altogether there were 264 *verny*, each of which was required to give two *ručki* of honey, or half a *vedro* Bierascie measure, making an annual yield of 132 *vedra* in all.⁵⁹ The bee-trees were carefully protected, as the warning to the Kureličy iron ore miner emphasized. By the 1529 Statute, anyone engaged in clearing the forest was prohibited from harming bee-trees, under pain of fine. Nor might he plough closer to a bee-tree than the distance he could reach with the stick used to drive the oxen.⁶⁰

The forest not only provided the crown with commodities for export, but also supplied food to royal establishments — meat, fish and honey. From them the manors and castles obtained their needs of wood for fuel, building, fencing, coopering and general carpentry. Several villages in Kobryn District had an annual obligation to cart four loads of timber per peasant holding to Kobryn Castle, in return for the use of pasture or hayland in the King's forest.⁶¹ In all 1012 cartloads were taken to Kobryn each year. In Bierascie District every peasant holding in the forested Pales'je Bailiwick owed three cartloads a year, unless they were engaged in the fisheries;⁶² with two other villages lying west of the river Buh, they provided Bierascie Castle with 1457 cartloads of wood. Often crown manors had tracts of forest set aside specifically to cater for their requirements of wood. For example, Paľaviec Manor north of Bierascie had 810 *morgi*, over 1450 acres.⁶³

The King, his Treasury, castles and manors were not the only beneficiaries of the forest. The peasants of the royal estates gained a very significant addition to their income from their right of entry (*vchod*) to the crown forests. This permitted them to gather dead wood for building, firewood for fuel, bast, brushwood for fencing and wood for other domestic uses, but not for sale.⁶⁴ Cutting standing timber was very strictly forbidden, however. The peasants could also cut hay and pasture their animals in the forest, fish in the rivers and maintain bee-trees. The 1044 bee-trees of Areškava village witnessed the value of this last benefit. Women and children were allowed to gather mushrooms, berries, hops and "all forest fruits in all our forests."⁶⁵ The cadastre for Pinsk District made particular

⁵⁹) DMA, I, pp. 323-7.

⁶⁰) *Statut Velikogo ...*, *op cit.*, pp. 105,108.

⁶¹) For example, K, pp. 41, 54.

⁶²) DMA, I, p. 329.

⁶³) *Ibid.*, p. 441.

⁶⁴) RIB, XXX, p. 576.

⁶⁵) *Ibid.*

note of the continuance of these ancient rights: "The peasants of Pasinicy remain in their ancient rights of entry to the forest across the river Jasielda, bee-tree, hay-cutting, fishing and other privileges, which they have enjoyed to this time."⁶⁶ The right of entry was accompanied by right of access; the same passage continued, "and the Lord Michał Borzabahaty may not bar them from crossing the lands of his Mutkovičy estate by free and ancient paths into the swamp and forest, on foot and with their livestock, but he must allow them by ancient custom."

During the earlier part of the sixteenth century, the right of entry was widely acquired by land-owners of the nobility and gentry, indeed by all inhabitants in Žmudź province. At the *sejm* of 1554 the King confirmed the right to all who held it, on condition that the forest and game were not harmed,⁶⁷ but three years later the *Voloka* Decree restricted the right to inhabitants of crown estates.⁶⁸ However in spite of the decree, persons on private lands apparently were able to retain entry rights, because Vałovič made careful note of such persons. Thus the peasants of the Archimandrite of Żydzičyn had the right of entry to Sterbielskaja Forest,⁶⁹ peasants of a number of private land-owners, including the Governors of Vilna and Troki had entry right to Kaūniacina Forest.⁷⁰ Even as late as the Ordinance of 1641 these private rights survived; 23 land-owners were recorded as having the right of entry to the Bielaviežskaja Forest.⁷¹

By no means the least economic significance of the Byelorussian forests was as a source of employment. Many peasants obtained their livelihood, that is to say their holdings of arable, in return for carrying out various duties in the forests. In those four districts, for which cadastres of Sigismund August survive (Bieraście, Hrodna, Kobryn and Pinsk), seven per cent of all arable tenements laid out under the three-field agrarian reform were granted for such duties — that is 745 holdings in all. In Birstany town and its adjacent villages amidst the forests of the Njoman left bank, 22 per cent of all holdings were for forest services.⁷²

First there were those concerned with hunting, the *strelcy* or huntsmen, the grooms and the dog-keepers or kennelmen. In Hrodna District, with its major castle and extensive hunting grounds, no less than 84 holdings were given to huntsmen, 39 to kennelmen and 36 to grooms. In some villages the entire population was engaged in these occupations, as in Bielakozy where all the inhabitants were grooms, under a senior groom, the *desjatnik* or decurio.⁷³ At Ošniki, all were kennelmen,⁷⁴ at Ščarbovičy and half a dozen other villages all were

⁶⁶) p. I, p. 274.

⁶⁷) M. V. Dovnar-Zapol'skij, *op. cit.*, p. 321.

⁶⁸) RIB, XXX, p. 584-5.

⁶⁹) RP, p. 4.

⁷⁰) *Ibid.*, p. 15.

⁷¹) OKP, pp. 189-190.

⁷²) AVK, XXV, pp. 109-112.

⁷³) G, I, p. 571.

⁷⁴) G, I, p. 143.

employed as huntsmen.⁷⁵ Three neighbouring villages of Bieraście District, with 104 holdings, were given over wholly to grooms.⁷⁶ Both huntsmen and grooms were also liable for military service in time of war. A special category was that of the beaver hunters, who lived along the rivers, notably the river Muchaviec.⁷⁷ As well as their holdings, they received every fifth beaver for themselves. Other peasants exploited other forest resources, the fish and honey. In Bieraście District 175 holdings were given to fishermen and 37 in Hrodna District. Scattered throughout all the forests lived the bee-keepers (*bortniki* or *podlazniki*), tending the crown's own bee-trees.

A key group of employees was composed of the woodwards or rangers (*osočniki*). They were the conservators, who carried out the system of forest husbandry established by the Forest Decree of Sigismund August. In Hrodna District 133 holdings in 14 villages were granted to woodwards, free of all other taxes and obligations. Valovic recorded their presence in all save two of the forests which he surveyed; in those two Skirstamonskaja and Jurbarskaja, there were no woodwards "from ancient time" and Valovic therefore nominated woodwards for them, "realizing that without woodwards or watch in those forests there was harm to (the property of) his royal majesty."⁷⁸

The duties of the woodwards imposed by the Forest Decree were made still more specific in the Ordinance, as for example in the statement of obligations of the woodwards of Azierskaja, Stryjeŭskaja and Salackaja Forests, which lay north-east of Hrodna (See map): "Each (senior woodward) must ride around his own sector as often as possible to protect it from all harm to both tree and game; to no-one, without the receipt of the Lord Forester, must he give any dead wood, and even less green timber; and every quarter he must make a report to the Forester, in the presence of the King's Master of the Hunt (*Myslivec*), on game killed for the needs of his royal majesty and any found dead anywhere and equally on the felling of trees and on any other damage if there should be any; in this the senior woodwards must conduct themselves truthfully and impartially and conceal nothing from the Forester, under pain of paying for loss in the forest if this be caused by his negligence and of deprivation of his responsibility. As regards the other woodwards, of whom we selected 79 and gave each a half-holding of land, they are obliged together with the senior woodwards to watch over the forest, build bridges in the forest, repair roads to the coverts and clear tracks for snares around the coverts and, when and where ordered, to present themselves at the hunt, one from each half-holding, not sending the old or young, but stout and capable fellows, as we originally selected. These woodwards must undertake cartage for the royal hunt when required, repair the royal Stryjevičy Manor, cart timber, build with the carpenter on the bailiff's instructions, repair bridges on the highways with other

⁷⁵) G, I, pp. 75-6.

⁷⁶) DMA, I, p. 253.

⁷⁷) *Ibid.*, p. 255; K, pp. 48-9, 47, 87.

⁷⁸) RP, p. 60.

inhabitants of that forest area, and strictly watch and prohibit anyone from making new *morgi* (i. e. arable) in the forest, or clearing hayland, or entering the forest with dogs or arms."⁷⁹

The Forester, referred to in the quotation, was a noble appointed by the crown to oversee a particular *lesničestvo*, or forest tract. His terms of reference were similarly specified in the Ordinance, as in the instructions to the Forester of Rudnik Forest, south of Vilna: "First of all the Lord Forester must know the boundaries of the Forest within his authority, must oversee them and often investigate that none of the neighbours has seized royal forest, or damaged the boundaries, or caused harm to trees or game, or made bee-trees, or cleared new *morgi* and that no-one without specific right should assume to himself entry to the Forest. And if any should lay claim to whatsoever hayland, lake or bee-tree in the Forest, it rests upon him to inquire under what pretext and by what right he does so and how great they are, and to bring all this to the notice of the King. Not a single standing tree, suitable for building, must the Forester give to anyone, nor must he permit it even for the requirements of the manor and even less for his own needs, without special order and the permission of the King; for dead timber, both standing and fallen, he himself is obliged to issue a receipt and to watch that no-one ever, without his authority, carries away trees from the Forest. And for better order, he is obliged every quarter, together with the senior woodwards, in the presence of the King's Master of the Hunt, to make a report both on game killed for the King and on game that has died and to enter all this in a book. He is to try both senior and ordinary woodwards for concealing anything from the report to the Master of the Hunt, and to punish them according to the offence. By all measures he must prohibit the cutting of new roads through the Forest and especially through the coverts. No tar, ash, resin, nor any other products may be made in the Forest, without special royal permission; especially he must forbid diggings for iron ore in the coverts, because by the digging of iron, the hayland is spoiled, resulting in diminished feed for the game, and the game wanders off. And since the peasants of Matsielancy live amidst the coverts of Rudnik Forest and cause much harm to it, therefore the Forester is required to move them out and resettle them in another suitable place, and to care for their transference, to allow them the usual tax relief."⁸⁰

These instructions coincided closely with those first issued in the Forest Decree, which also commanded the Forester to see that the bee-trees had bees' nests, to give an account of beavers caught for the King and to prohibit the making of fish traps in lakes and rivers. He also had responsibility for taverns within his area and for the collection of the alcohol tax.⁸¹ In some smaller forest tracts there was no Forester; instead one of the huntsmen was appointed as "Forest Watch", for which he was given three extra holdings.⁸² A "Forest

⁷⁹) OKP, pp. 83-4.

⁸⁰) OKP, pp. 12-13.

⁸¹) V. I. Pičeta, *op. cit.*, p. 268.

⁸²) *Ibid.*, p. 270.

Watch" was recorded in Małyje Ściepaniški village of Hrodna District.⁸³

There could be no doubt that there was great need for such a system of woodwards. The perambulation and the cadastres all contained abundant references to trespasses by neighbouring private land-owners and their peasants and indeed by the royal peasants themselves. In Sterbielskaja Forest Vałovič reported that Prince Roman Sanguškovič hunted and killed game in the King's covert.⁸⁴ In the Jurbarskaja Forest on the border of Prussia, the woodwards reported that the Prussian inhabitants killed game and caused great harm.⁸⁵ Others illegally exploited timber. Apart from the reference to Hanus Skop cutting timber for himself previously cited, Valovic noted that in Černharad Forest Prince Borzabahaty was making potash.⁸⁶ In 1569 the King issued a strong warning, as it had come to his notice that his subjects were secretly burning ash in the Hrodna Forests; this practice was strictly forbidden.⁸⁷

Many land-owners had villages, or established new villages, right beside the royal hunting grounds "to the harm of the forest" (*ku škode pušči*), presumably by the theft of timber and killing of game. "The village Sušyčna of the Father Superior of Volodimer stands amid the coverts themselves, to the harm of the forest and of the game of his royal majesty."⁸⁸ Vałovič listed fourteen villages and individual households in the forests south-west of Hrodna, all of which were sited "to the harm of the forest."⁸⁹ In the adjoining Knyčyn Forest the noble Peter Faličovskij had newly settled no less than thirteen villages; five of them completely surrounded the King's Popielev Covert.⁹⁰ Three privately owned manors and the royal village of Bombienskaje were located beside the coverts of Olita Forest.⁹¹ In Birštany Forest Prince Jaroslav had settled three villages.⁹² It was such villages that, like Matsialancy in Rudnik Forest, the Foresters were empowered to transfer to more convenient locations by the Forest Decree. Particular attention was paid to persons living on or near "game crossings" (*perechod zverinyj*). These were areas left waste to permit game to move from one forest to another. For example an important game crossing at Mosty Žalavaty linked the Bielaviežskaja Forest eastwards with Łyskava Forest and the other forests on the upper Jasiel'da. In Pinsk District out-lying fields of Daviačoravičy village were "abandoned for the passage of game."⁹³ Valovic however was chiefly concerned to record these crossings, which were threatened by the proximity of villages or farms. A

⁸³) G, I, p. 196.

⁸⁴) RP, p. 4.

⁸⁵) *Ibid.*, p. 61.

⁸⁶) *Ibid.*, p. 3.

⁸⁷) M. V. Dovnar-Zapol'skij, op cit., p. 326.

⁸⁸) RP, p. 4.

⁸⁹) RP, pp. 31-2.

⁹⁰) *Ibid.*, p. 34.

⁹¹) *Ibid.*, pp. 37-8.

⁹²) *Ibid.*, p. 40.

⁹³) P, I, p. 376.

crossing of Rumšyskaja Forest on the Nioman above Koūna was spoilt by villages newly founded along the Nioman and, in particular, the village of Sylancy, set up eight years earlier.⁹⁴

More harmful still than the illegal killing of game and cutting of timber, was the seizure and ploughing up of the royal forest by private land-owners. Vałovič discovered in Kaūniacina Forest north of Pinsk that the land-owner Fiadziuška had seized for himself much crown land and settled five persons on it.⁹⁵ The woodwards of Zahryvieckaja Forest told Vałovič that the land-owner Abrazcoū had seized much forest and settled eleven of his people and in the same forest the people of the Troki archimandrite had made large transgressions.⁹⁶ Particularly numerous and serious transgressions had been made in the Pieravałockaja Forest. Its bee-keepers reported to Vałovič that a number of neighbouring land-owners had ploughed up royal forest, cut down bee-trees and barred the King's bee-keepers from entry, even ill-treating them. Some had been doing so for the past ten years⁹⁷ Similar complaints were made by the woodwards of Łyskava, Olita, Rumšyskaja, Koūna, Mierec and Pieralom Forests. The district military commander of Pinsk held land in Pareč'je village without any documents to show his right; his peasant, Andrej Vukolic of Čamierny village, bought 10 *pruti* of land from royal peasants for 40 sheaves of rye "and from this field he enters royal oakwood and has ploughed up a field of 19 morgi."⁹⁸ According to Gruševskij, one purpose of the precise measurement of arable under the *voloka* reform was to prevent this large scale independent enlargement at the expense of the forest.⁹⁹

In some areas, where the land was suitable for arable, the *voloka* Decree of 1557 legally permitted the bailiffs to measure out holdings in the forest, to settle people on them and to grant them a tax relief for five or six years and up to ten years, while they cleared the land and brought it into cultivation.¹⁰⁰ The whole of Bulskaja Forest was described by Vałovič as "ploughed into fields and measured in *voloki* (holdings)."¹⁰¹ There were a number of these "forest *voloki*" in the Vilkijskaja Forest; some were empty, that is not yet settled, others were in the use of a group of boyars.¹⁰² More "forest *voloki*" were to be found in Kobryn District, 22 near Chydry village¹⁰³ and 50 at Zales'je. The latter however were recorded as very bad and sandy and there was no site for a settlement.¹⁰⁴ No doubt for this reason, when a new inventory of Kobryn District was made in 1597, thirty

⁹⁴) RP, p. 42.

⁹⁵) *Ibid.*, p. 15.

⁹⁶) *Ibid.*, pp. 15-16.

⁹⁷) *Ibid.*, pp. 18-20.

⁹⁸) P, II, p. 572.

⁹⁹) A. S. Gruševskij, *Pinskoje Poles'je. Istoričeskie očerki*, II, *Turov, Gorodok i Pinsk v sostave V. K. Litovskogo. Pinskoje starostvo k. Bony XIV-XVI vv.*, Kiev, 1903, p. 166.

¹⁰⁰) RIB, XXX, p. 574.

¹⁰¹) RP, p. 18.

¹⁰²) *Ibid.*, p. 45.

¹⁰³) K, p. 81.

¹⁰⁴) *Ibid.*, pp. 100-1.

years after the cadastre, only 27¹/₂ of the 50 holdings had been taken up.¹⁰⁵ In other places, not only were holdings marked out in the forest, but also the village site and anyone who wished could take up a holding and house-plot, receiving tax relief while he brought it into cultivation and constructed his house. Such a birth of a new village was recorded in Pinsk District at Vielašnica Vola, "which is newly divided out into holdings in oakwood of Suničny Bor locality and a freedom from payment for seven years is given to those who would take them up."¹⁰⁶ A similar situation was found in the same district at Jažvinka near Matoł, where eight holdings were marked out in pinewood and an eight year relief from taxes granted.¹⁰⁷ The modern map suggests that the opportunity was grasped, for it marks a small village Jažvinka in that location.

Such new villages and their fields, carved out of the forest, were commonplace. In Bierascie District the two villages of Ramiatava and Mokavicy were given four and three year tax reliefs respectively, because they were newly established "on a green root" (*na syrom koreniu*).¹⁰⁸ At Vola Bakinnaja all but one of the 25 holdings had been taken up, but the fields were described as still unploughed and a two year relief was allowed.¹⁰⁹ In Kobryn District the two villages of Kobcieva and Ščarčejeva in the forest near the river Lasnaja were both "on a green root", enjoying tax concessions.¹¹⁰ By the time of the 1597 inventory they had been joined by two more new villages in the same neighbourhood, Žabina and Zahuzava.¹¹¹ There were many other examples of newly founded royal villages and the Valovic perambulation demonstrated that private land-owners were equally active in setting up new settlements.

In addition to the losses inflicted on the forest by the process of establishing new villages, further damage was caused by the extension of the arable of existing villages. The great upheaval of the *voloka* agrarian reform often brought about considerable enlargement of the arable. The new boundaries frequently included some forest within them. "Since in the simplification of the boundaries of the clearing of Zaboravcy much still unploughed oakwood and pinewood was included, therefore in order to plough that oakwood, to them all one third of the tax payment is remitted for three years."¹¹² In other cases the peasants increased their farmland by clearing out-lying fields (*zastenki*), such as that at Hutava in Pinsk District where there was one *morg* or arable field and two *morgi* of oakwood; the oakwood carried a three year freedom from payment to allow it to be ploughed up.¹¹³ The rate of such clearance was often rapid; Kazišča village in the Kobryn survey of 1563 had one small out-lying

¹⁰⁵) AVK, XIV, p. 574.

¹⁰⁶) P, I, p. 292.

¹⁰⁷) P, II, p. 40.

¹⁰⁸) DMA, I, pp. 298, 432.

¹⁰⁹) *Ibid.*, pp. 367-8.

¹¹⁰) K, pp. 38, 40.

¹¹¹) AVK, XIV, pp. 562, 574.

¹¹²) P, I, p. 326.

¹¹³) *Ibid.*, p. 394.

field of three *morgi*, located in an area of forest measuring 97 *morgi*.¹¹⁴ Thirty years later all 100 *morgi* were ploughed up and, in addition, six more big outlying fields totalling 520 *morgi*.¹¹⁵

In conclusion one can stress the very considerable economic role of the forests in sixteenth century Byelorussia. Their abundance of timber, furs and beeswax made a direct contribution to the royal Treasury as export staples. The needs of crown establishments for wood, meat, fish and honey were satisfied and the surplus could be sold. The inhabitants of the King's estates enjoyed all the benefits of the right of entry and many of them made their living from the exploitation or conservation of the forests. Nevertheless, valuable as forest was, arable was no less valuable. Clearing, both legally sanctioned and illicit, was removing considerable areas of woodland. The attack on the Byelorussian forests, which has persisted into our own times, in the sixteenth century was well under way.¹¹⁶

¹¹⁴) K, p. 35.

¹¹⁵) AVK, XIV, p. 560.

¹¹⁶) The author would like to express his thanks to Miss C. Hill, who drew the map for this article.